

Application Form

www.co.sanmateo.ca.us/planning

PLN: 2017-00296

BLD:

Applicant/Owner Information

Applicant: Jennifer Jacinto/ TAG RE Partners

Mailing Address: 680 Walnut Street

San Carlos, CA

Zip: 94070

Phone, W: 6508048850

H:

E-mail Address: jen@tagpartners.com

FAX:

Name of Owner (1): Bahram & Zohreh Abolmoulki

Name of Owner (2):

Mailing Address: 680 Walnut Street

Mailing Address:

San Carlos, CA

Zip: 94070

Zip:

Phone, W: 4154201661

Phone, W:

H:

H:

E-mail Address: babolmoulki@yahoo.com

E-mail Address:

Project Information

Project Location (address):

0 Columbus St.

Assessor's Parcel Numbers: 47 -- 275 -- 50

Zoning: R1 S-17 DP/CD

Parcel/lot size: 6,026

SF (Square Feet)

List all elements of proposed project (e.g. access, size and location, primary and accessory structures, well, septic, tank)

Construction of a new 3,026 square foot 2 story home on a vacant lot in El Granda. Property is located on the SE corner of Isabella Ave and Columbus St. Southerly facing sloped lot. Due to slope garage will be placed in the front of the house. 285 cubic yards of cut is expected for the construction of the foundation and driveway. Several trees will be removed because they are in the footprint of development.

Describe Existing Site Conditions/Features (e.g. topography, water bodies, vegetation):

Vacant lot with several trees and scrub. Property is located on the SE corner of Isabella Ave and Columbus St.

Describe Existing Structures and/or Development:

New construction of a 3,056 square foot 2-story home with 3 bedrooms, 3.5 bathrooms and a 2-car garage on a 6,026 vacant lot. 285 cubic yards of cut is expected for the foundation and to strip the topsoil for construction.

Signatures

We hereby certify that the information stated above and on forms, plans and other materials submitted herewith in support of the application is true and correct to the best of our knowledge. It is our responsibility to inform the County of San Mateo through our assigned project planner of any changes to information represented in these submittals.

Owner's signature: *Bahram Abolmoulki*

Owner's signature: *Zohreh Abolmoulki*

Applicant's signature: *Jennifer Jacinto*

Application for Design Review by the County Coastside Design Review Committee

County Government Center • 455 County Center • Redwood City CA 94063
Mail Drop PLN 122 • 650 • 363 • 4161 • FAX 650 • 363 • 4849

Permit #: PLN

Other Permit #:

Applicant:

Name: Jennifer Jacinto/ TAG RE Partners

Address: 680 Walnut St.

San Carlos, CA

Zip: 94070

Phone, W: 6508048850

H:

Email: jen@tagrepartners.com

Owner (if different from Applicant):

Name: Bahram & Zohreh Abolmoluki

Address: 680 Walnut St.

San Carlos, CA

Zip:

Phone, W:

H: 4154201661

Email: babolmoluki@yahoo.com

Architect or Designer (if different from Applicant):

Name: Christian Ruffat

Address: 406 LA JOLLA AVE., SAN MATEO, CA

Zip: 94403

Phone, W: 6502188161

H:

Email: chisruffat@yahoo.com

Project location:

APN: 47275050

Address: 0 Columbus St.

El Granada

Zip: 94018

Zoning: R1

Parcel/lot size: 6,026

sq. ft.

Site Description:

☒ Vacant Parcel

☐ Existing Development (Please describe):

PROPERTY IS LOCATED ON SE CORNER OF
ISABELLA AVE. + COLUMBUS ST. GRASSY SLOPE
ARE SOUTHWESTERLY FACING SLOPE LOT.

Project:

☒ New Single Family Residence: 3,056 sq. ft

☐ Addition to Residence: sq. ft

☐ Other: sq. ft

Additional Permits Required:

☐ Certificate of Compliance Type A or Type B

☐ Coastal Development Permit

☐ Fence Height Exception (not permitted on coast)

☐ Grading Permit or Exemption

☐ Home Improvement Exception

☐ Non-Conforming Use Permit

☐ Off-Street Parking Exception

☐ Variance

Describe Project:

NEW CONSTRUCTION OF A 2-STORY HOME
WITH 3 BEDROOMS, 3.5 BATH AND
2-CAR GARAGE.

Fill in Blanks:

Material

Color/Finish

Check if
matches
existing

(If different from existing, attach sample)

a. Exterior walls	<u>stucco</u>	<u>pigeon grey</u>	☐
b. Trim	<u>wood</u>	<u>white (charitably fair)</u>	☐
c. Windows	<u>wood</u>	<u>black</u>	☐
d. Doors	<u>wood</u>		☐
e. Roof	<u>composite shingle</u>	<u>peanut grey</u>	☐
f. Chimneys	<u>none</u>	<u>none</u>	☐
g. Decks & railings	<u>stainless steel</u>	<u>silver/grey (powder coated)</u>	☐
h. Stairs	<u>wood (cedar)</u>	<u>pigeon grey</u>	☐
i. Retaining walls	<u>—</u>		☐
j. Fences	<u>none</u>		☐
k. Accessory buildings	<u>none</u>		☐
l. Garage/Carport			☐

To approve this application, the County must determine that this project complies with all applicable regulations including the required findings that the project does conform to the standards and guidelines for design review applicable to the location of the project pursuant to Section 6565.10.

☐ (optional) Applicant's Statement of project compliance with standards and guidelines (check if attached).

I hereby certify that the information stated above and on forms, plans, and other materials submitted herewith in support of the application is true and correct to the best of my knowledge. It is my responsibility to inform the County of San Mateo through my assigned project planner of any changes to information represented in these submittals.

B.A. Alaluluki
Owner:

[Signature]
Applicant:

Zohreh Alaluluki

07/14/17
Date:

07/20/17
Date:

Environmental Information Disclosure Form

JUL 20 2017

PLN
BLD

PLN2017-00296

Project Address: 0 Columbus St., El Granada, CA 94020

Name of Owner: Bahram & Zohreh Abolmoluki

Address: 3312 Melendy Drive, San Carlos,
CA 94070 Phone: 4154201661

Assessor's Parcel No.: 47 — 275 — 50

Name of Applicant: Jennifer Jacinto/ TAG Re Partner

Address: 680 Walnut St., San Carlos

Zoning District: R1 / S-17 / DR

CA 94070 Phone: 6508048850

Existing Site Conditions

Parcel size: 6,026

Describe the extent and type of all existing development and uses on the project parcel, including the existence and purpose of any easements on the parcel, and a description of any natural features on the project parcel (i.e. steep terrain, creeks, vegetation).

Construction of new single family residence

Construction of new single family residence

Environmental Review Checklist

1. California Environmental Quality Act (CEQA) Review

Yes	No	Will this project involve:
☐	☒	a. Addition to an existing structure > 50% of the existing area OR > 2,500 sq. ft?
☐	☒	b. Construction of a new multi-family residential structure having 5 or more units?
☐	☒	c. Construction of a commercial structure > 2,500 sq.ft?
☒	☐	d. Removal of mature tree(s) (≥ 6" d.b.h. in Emerald Lake Hills area or ≥ 12" d.b.h. in any residential zoning district)? If yes, how many trees to be removed? 1
☒	☐	e. Land clearing or grading? If yes, please state amount in cubic yards (c.y.): Excavation: 285 c.y. Fill: 0 c.y.
☐	☒	f. Subdivision of land into 5 or more parcels?
☐	☒	g. Construction within a State or County scenic corridor?
☐	☒	h. Construction within a sensitive habitat?
☐	☒	i. Construction within a hazard area (i.e. seismic fault, landslide, flood)?
☐	☒	j. Construction on a hazardous waste site (check with Co. Env. Health Division)?

Please explain all "Yes" answers:

1 TREE WITH POOR CONDITION HAS BEEN REMOVED. (SEE ATTACHED PERMIT)
GRADING - CUTTING A FEW CUBIC YARDS TO PREPARE FOR
FOUNDATION; WE NEED TO REMOVE 12 INCHES MINIMUM OF TOPSOILS
STRIP ALL EXISTING GRASS, ORGANICALLY CONTAMINATED SOIL, ROOTS &
LOOSE OR SOFT SOIL IN THE AREAS OF PLANNED DEVELOPMENT, INCLUDING
ALL CONCRETE SLAB & DRIVEWAYS.

Signature required on reverse →

2. National Marine Fisheries Rule 4(d) Review

Yes	No	Will the project involve:
☐	☒	a. Construction outside of the footprint of an existing, legal structure?
☐	☒	b. Exterior construction within 100-feet of a stream?
☐	☒	c. Construction, maintenance or use of a road, bridge, or trail on a stream bank or unstable hill slope?
☐	☒	d. Land-use within a riparian area?
☐	☒	e. Timber harvesting, mining, grazing or grading?
☐	☒	f. Any work inside of a stream, riparian corridor, or shoreline?
☐	☒	g. Release or capture of fish or commerce dealing with fish?

Please explain any "Yes" answers:

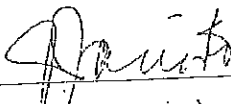
3. National Pollutant Discharge Elimination System (NPDES) Review

Yes	No	Will the project involve:
☐	☒	a. A subdivision or Commercial / Industrial Development that will result in the addition or replacement of 10,000 sq. ft. or more of impervious surface? If yes, Property Owner may be required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures, to reduce the discharge of stormwater pollutants. Please consult the Current Planning Section for necessary forms and both construction and post-construction requirements.
☐	☒	b. Land disturbance of 1 acre or more of area? If yes, Property Owner must file a Notice of Intent (NOI) to be covered under the statewide General Construction Activities Storm Water Permit (General Permit) prior to the commencement of construction activity. Proof of coverage under State permit must be demonstrated prior to the issuance of a building permit.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and the facts, statements and information presented are true and correct to the best of my knowledge and belief. If any of the facts represented here change, it is my responsibility to inform the County.

Signed:


(Applicant may sign)

Date:

07/20/17

COUNTY OF SAN MATEO
PLANNING AND BUILDING

County Government Center
455 County Center, 2nd Floor
Redwood City, CA 94063
650-363-4161 T
650-363-4849 F
www.planning.smcgov.org

March 2, 2018

Jen Jacinto
680 Walnut Street
San Carlos, CA 94070

Prev.
Decision letter

Dear Ms. Jacinto:

SUBJECT: Coastside Design Review and Grading Permit for a New Residence
Columbus Street, El Granada
APN 047-275-050; County File No. PLN 2017-00296

Staff has completed its review of your application for a staff-level Coastside Design Review Permit and Grading Permit to allow the construction of a new 2,428 sq. ft. two-story single-family residence, including an attached 437 sq. ft. two-car garage located on a legal 6,026 sq. ft. parcel. The project includes the removal of seven significant trees and involves 285 cubic yards (c.y.) of excavation and 0 c.y. of fill. The project is located on an undeveloped parcel within the R-1/S-17/DR/CD (Single-Family Residential/Design Review/Coastal Development) Zoning District. Staff has reviewed the project for compliance with the S-17 development standards and found that the project complies. Staff has found this project to be exempt from a Coastal Development Permit because it conforms to Section 6328.5(e) of the County Zoning Regulations and is located within the designated Single-Family Residence Categorical Exclusion Area.

The grading permit application has been reviewed and preliminarily approved by the Department of Public Works, the Building Department, the Planning Department, and the Geotechnical Department. Public notification for this project was sent out to property owners within 300 feet of the subject property on January 25, 2018. The comment period for this project began on January 25, 2018 and ended on February 8, 2018. No comments were received during this time.

At its meeting on February 8, 2018, the San Mateo County Coastside Design Review Committee (CDRC) considered the project and found it to be compliant with the Design Review Standards for One-Family and Two-Family Residential Development in the Midcoast (Section 6565.20 of the San Mateo County Zoning Regulations) and recommended approval based on the following findings:

- a. Section 6565.20 (D) ELEMENTS OF DESIGN; 1. Building Mass, Shape, and Scale;
a. Relationship to Existing Topography; Standard (1): The project's design does an excellent job of stepping the house down the 18% grade in three levels to reduce the building's apparent bulk and to harmonize with the existing topography.
- b. Section 6565.20 (D) ELEMENTS OF DESIGN; 1. Building Mass, Shape, and Scale;
b. Neighborhood Scale; Standard (1): The home respects the scale of the neighborhood through its roof design, building dimensions, design style, and wall articulation that are proportional and complementary to other homes in the neighborhood.



- c. Section 6565.20 (D) ELEMENTS OF DESIGN; 2. Architectural Styles and Features;
d. Garages; Standard (1): The design of the garage employs decorative garage doors, articulation of the front garage façade, and a variety of materials and ornamentation that are consistent with the home's architectural style and add visual interest.
- d. Section 6565.20 (F) LANDSCAPING, PAVED AREAS, FENCES, LIGHTING, AND NOISE;
4. Lighting; Standard (c) Exterior lighting is limited to only four lights and is designed to illuminate only the driveway and the exterior rear stairs.

Based on the plans, application forms, and accompanying materials submitted, and staff's review of applicable policies of the General Plan, and the Land Clearing and Grading Ordinance Code, staff has **approved** the Coastside Design Review and Grading Permit applications subject to the following findings and conditions of approval.

FINDINGS

Staff found that:

For the Environmental Review

- 1. This project is exempt from environmental review pursuant to the California Environmental Quality Act (CEQA), Section 15303, Class 3(a), relating to the construction of a single-family residence in a residential zone.

For the Design Review

- 2. The project has been reviewed under and found to be in compliance with the Design Review Standards for One-Family and Two-Family Residential Development in the Midcoast, Section 6565.20, of the San Mateo County Zoning Regulations, specifically elaborated as follows:
 - a. The addition is located to minimize the impact on existing views to and from neighboring homes (Section 6565.20(C)2b).
 - b. As proposed and conditioned, the proposed materials and details make the project compatible with various architectural styles of the neighborhood. Condition No. 2 requires specification sheets for the front door to match the garage doors, a casement window for the kitchen, and recessed soffit lighting in the front porch canopy, among other details.
 - c. The proposed architectural style is compatible with the residence and the established style of the neighborhood (Section 6565.20(D)2).
 - d. The proposed materials, such as light and varied stone on the garage, wood railing with metal pickets for the front entry walkway, and utilizing grey and brown tones for the siding and trim make the project compatible with the existing neighborhood design context (Section 6565.20(D)4).

For the Grading Permit

3. That the granting of the permit will not have a significant adverse effect on the environment. This project has been reviewed and preliminarily approved by the Planning Department, the Department of Public Works, the Building Department, and the Geotechnical Department for compliance with regulations. The project, as proposed and conditioned, can be completed without significant impacts to the environment.
4. The project conforms to the criteria of Chapter 8, Division VII, San Mateo County Ordinance Code, including the standards referenced in Section 9296. Planning Staff, the Geotechnical Section, and the Department of Public Works have reviewed the project and have determined its conformance to the criteria of Chapter 8, Division VII, San Mateo County Ordinance Code, including the standards referenced in Section 9296 and the San Mateo County General Plan, timing of grading activity, implementation of erosion and sediment control measures, and dust control measures.
5. That the project is consistent with the General Plan. The subject site has a General Plan land use designation of Medium Density Residential within an urban area. The proposed residence remains consistent with the allowed density and use of the designation. As proposed and conditioned, the project complies with General Plan Policy 2.23 (*Regulate Excavation, Grading, Filling, and Land Clearing Activities Against Accelerated Soil Erosion*) and Policy 2.17 (*Erosion and Sedimentation*) because the project includes measures and conditions to control and address each of these items.

CONDITIONS OF APPROVALCurrent Planning Section

1. The project shall be constructed in compliance with the plans approved by the Community Development Director and as reviewed by the Coastside Design Review Committee on February 8, 2017. Any changes or revisions to the approved plans shall be submitted to the Design Review Officer for review and approval prior to implementation. Minor adjustments to the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with the approval. Alternatively, the Design Review Officer may refer consideration of the revisions to the Coastside Design Review Committee, with applicable fees to be paid.
2. The applicant shall demonstrate compliance with the following requirements on the plans submitted for a building permit, as stipulated by the Coastside Design Review Committee:
 - a. Provide a specification sheet for the front door, to include color and one light band to match the garage doors.
 - b. Provide a material sample for the driveway pavers, to include permeable and a color that complements the stone veneer of the garage.
 - c. Provide a specification sheet for the garage doors, to include translucent glass windows across the top.
 - d. Remove the clipped roof at the front elevation on the garage.

- e. Use a recessed soffit light in the front porch canopy.
 - f. Use a wood railing with metal pickets for the front entry walkway.
 - g. On the garage, use stone up to the plate line on the front; wrap the stone around each side of the same distance (30 inches max.); and use a darker stone of varied stone size (such as field ledge stone; El Dorado Stone).
 - h. Use a 5026 casement window for the kitchen window on the right elevation.
 - i. For the exterior stairs at the rear of the house, use a larger apron at the intermediate landing and thicker/taller stringers.
 - j. Remove Zone 1 and Zone 2 from Sheet H1 (Hydrozone plan) at the bottom of the property.
 - k. Pull the Arbutus Marina (AR) tree on the right side closer to the front property line.
 - l. Replace the Arbutus Marina (AR) tree on the left elevation with an evergreen shrub with green foliage.
 - m. Replace the artificial turf with ground cover.
3. The applicant shall provide "finished floor elevation verification" to certify that the structure is actually constructed at the height shown on the submitted plans. The applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site.
- a. The applicant shall maintain the datum point so that it will not be disturbed by the proposed construction activities until final approval of the building permit.
 - b. This datum point and its elevation shall be shown on the submitted site plan. This datum point shall be used during construction to verify the elevation of the finished floors relative to the existing natural or to the grade of the site (finished grade).
 - c. Prior to Planning approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades.
 - d. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).
 - e. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is

equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.

- f. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.
4. The applicant shall include the approval letter on the top pages of the building plans.
5. The exterior color samples submitted to the CDRC are approved. Color verification shall occur in the field after the applicant has applied the approved materials and colors but before a final inspection has been scheduled.
6. This permit shall be valid for five years from the date of this letter in which time a building permit shall be issued and a completed inspection (to the satisfaction of the Building Inspector) shall have occurred within 180 days of issuance. This permit may be extended by one 1-year increment with submittal of an application for permit extension and payment of applicable extension fees sixty days prior to the expiration date.
7. The Grading Permit shall be issued concurrently with a Building Permit for the new single-family residence. If the Grading Permit (issued as the "hard card" with all necessary information filled out and signatures obtained) has not been issued within this time period, this approval will expire. No grading, vegetation, or tree removal activities shall commence until all permits have been issued. An extension of this approval will be considered upon written request and payment of applicable fees 60 days prior to expiration.
8. No grading shall be allowed during the winter season (October 1 to April 30) or during any rain event to avoid potential soil erosion unless prior written request by the applicant is submitted to the Community Development Director in the form of a completed Application for an Exception to the Winter Grading Moratorium, at least two (2) weeks prior to the projected commencement of grading activities, stating the date when grading will begin for consideration and approval is granted by the Community Development Director.

The site is considered a Construction Stormwater Regulated site. Any grading activities conducted during the wet weather season (October 1 to April 30) will require monthly erosion and sediment control inspections by the Building Inspection Section, as well as prior authorization from the Community Development Director to conduct grading during the wet weather season.

9. Prior to the issuance of the grading permit "hard card," the applicant shall submit a dust control plan for review and approval by the Planning Department. The plan, at a minimum, shall include the following measures:
 - a. Water all construction and grading areas at least twice daily.
 - b. Cover all trucks hauling soil, sand, and other loose material, or require all trucks to maintain at least 2 feet of freeboard.

- c. Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
10. Per San Mateo County Ordinance Section 9296.5, all equipment used in grading operations shall meet spark arrester and firefighting tool requirements, as specified in the California Public Resources Code.
 11. The applicant shall include an erosion and sediment control plan to comply with the County's Erosion Control Guidelines on the plans submitted for the building permit. This plan shall identify the type and location of erosion control measures to be installed upon the commencement of construction in order to maintain the stability of the site and prevent erosion and sedimentation off-site.
 12. Prior to the beginning of all construction, the applicant shall implement the approved erosion and sediment control plan and tree protection plan, which shall be maintained throughout the duration of the project. The goal is to prevent significant trees, as defined by San Mateo County's Significant Tree Ordinance, Section 12,000, from injury or damage related to construction activities. The goal is also to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:
 - a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and the use of passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.
 - b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.
 - c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges, to storm drains and watercourses.
 - d. Using sediment controls or filtration to remove sediment when dewatering site and obtaining all necessary permits.
 - e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
 - f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
 - g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
 - h. Performing clearing and earth moving activities only during dry weather.
 - i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

- j. Limiting construction access routes and stabilizing designated access points.
 - k. Avoiding tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
 - l. The contractor shall train and provide instruction to all employees and subcontractors regarding the construction Best Management Practices.
 - m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.
13. The engineer who prepared the approved grading plan shall be responsible for the inspection and certification of the grading as required by Section 9297.2 of the Grading Ordinance. The engineer's responsibilities shall include those relating to non-compliance detailed in Section 9297.5 of the Grading Ordinance.
14. All grading and erosion and sediment control measures shall be in accordance to the plans prepared by MacLeod and Associates, dated December 15, 2017, and approved by the Department of Public Works and the Current Planning Section. Revisions to the approved grading plan shall be prepared and signed by the engineer, and shall be submitted to the Department of Public Works and the Planning Department, concurrently, prior to commencing any work pursuant to the proposed revision.
15. It shall be the responsibility of the applicant's engineer to regularly inspect the erosion control measures and determine that they are functioning as designed and that proper maintenance is being performed. Deficiencies shall be immediately corrected.
16. For the final approval of the Grading Permit, the applicant shall ensure the performance of the following activities within thirty (30) days of the completion of grading:
- a. The engineer shall submit written certification to the Department of Public Works and the Geotechnical Section that all grading has been completed in conformance with the approved plans, conditions of approval, and the Grading Ordinance.
 - b. All applicable work during construction shall be subject to observation and approval by the geotechnical consultant. Section II of the Geotechnical Consultant Approval form must be submitted to the County's Geotechnical Engineer and the Current Planning Section.
17. Erosion Control and Tree Protection Inspections are required prior to the issuance of a building permit for grading, construction, and demolition purposes, as the project requires the protection of Significant trees. Once all review agencies have approved the Building Permit, the applicant will be notified that an approved job copy of the Erosion Control and Tree Protection Plans is ready for pick-up at the Planning counter of the Planning and Building Department. Once the Erosion Control and Tree Protection measures have been installed per the approved plans, please contact Jeremiah Pons, Building/Erosion Control Inspector, at 650/599-1592 or jpons@smcgov.org, to schedule a pre-site inspection. A \$144.00 inspection fee will be added to the building permit for the inspection. If the initial pre-site inspection is not approved, an additional inspection fee will be assessed for each

required re-inspection until the job site passes the Pre-Site Inspection, or as determined by the Building Inspection Section.

18. Seven (7) significantly sized trees are permitted to be removed per the approved plan set. The applicant shall plant a total of nine (9) trees using at least 15-gallon size stock for the trees removed. Re-plantings shall occur, per the landscape plan, prior to the final building inspection for the new house.
19. Installation of the approved landscape plan is required prior to final inspection. An inspection final by the Planning Department will be added to the building permit. The applicant shall submit photo verification to the Planning and Building Department of the approved and installed landscape plan.
20. At the building permit application stage, the project shall demonstrate compliance with the Water Efficient Landscape Ordinance (WELO) and provide the required forms. WELO applies to new landscape projects equal or greater than 500 sq. ft. A perspective checklist is available as a compliance option for projects under 2,500 sq. ft. The following restrictions apply to projects using the prescriptive checklist:
 - a. Compost: The project must incorporate compost at a rate of at least (4) cubic yards per 1,000 sq. ft. to a depth of 6 inches into the landscape area (unless contraindicated by a soil test).
 - b. Plant Water Use (Residential): Install climate adapted plants that require occasional, little, or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water.
 - c. Mulch: A minimum 3-inch layer of mulch should be applied on all exposed soil surfaces of planting areas, except areas of turf or creeping or rooting groundcovers.
 - d. Turf: Total turf area shall not exceed 25% of landscape area. Turf is not allowed in non-residential projects. Turf (if utilized) is limited to slopes not exceeding 25% and is not used in parkways less than 10 feet in width. Turf, if utilized in parkways, is irrigated by sub-surface irrigation or other technology that prevents overspray or runoff.
21. All new power and telephone utility lines from the street or nearest existing utility pole to the main dwelling and/or any other structure on the property shall be placed underground.
22. No site disturbance shall occur, including any vegetation/tree removal or grading, until a building permit has been issued.
23. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360).
24. To reduce the impact of construction activities on neighboring properties, comply with the following:

- a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.
- b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.
- c. The applicant shall ensure that no construction-related vehicles impede through traffic along the right-of-way on Columbus Street. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which to not impede safe access on Columbus Street. There shall be no storage of construction vehicles in the public right-of-way.

Building Inspection Section

25. The project requires a building permit and grading permit.
26. The project shall be designed and constructed according to the currently adopted and amended California Building Standards Code, which at the time of this review is the 2016 version.

Department of Public Works

27. Prior to the issuance of the Building permit or Planning permit (for Provision C3 Regulated Projects), the applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Department of Public Works for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off of the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Department of Public Works for review and approval.
28. Prior to the issuance of the building permit or planning permit (if applicable), the applicant shall submit a driveway "Plan and Profile", to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20%) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.
29. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. The applicant shall contact a

Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

30. Prior to the issuance of the Building Permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance #3277.

Coastside Fire Protection District

31. Fire Department access shall be to within 150 ft. of all exterior portions of the facility and all portions of the exterior walls of the first story of the buildings as measured by an approved access route around the exterior of the building or facility. Access shall be a minimum of 20 ft. wide, all weather capability, and able to support a fire apparatus weighing 75,000 lbs. Where a fire hydrant is located in the access, a minimum of 26 ft. is required for a minimum of 20 ft. on each side of the hydrant. This access shall be provided from a publicly maintained road to the property. Grades over 15% shall be paved and no grade shall be over 20%. When gravel roads are used, it shall be Class 2 base or equivalent compacted to 95%. Gravel road access shall be certified by an engineer as to the material thickness, compaction, all weather capability, and the weight it will support.
32. All buildings that have a street address shall have the number of that address on the building, mailbox, or other type of sign at the driveway entrance in such a manner that the number is easily and clearly visible from either direction of travel from the street. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON-SITE). New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. Residential address numbers shall be at least six feet above the finished surface of the driveway. An address sign shall be placed at each break of the road where deemed applicable by the Coastside County Fire Department. Numerals shall be contrasting in color to their background and shall be no less than 4 inches in height, and have a minimum 3/4-inch stroke. Remote signage shall be a 6" x 18" green reflective metal sign.
33. Any chimney or woodstove outlet shall have installed onto the opening thereof an approved (galvanized) spark arrestor of a mesh with an opening no larger than 1/2 inch in size or an approved spark arresting device. Maintain around and adjacent to such buildings or structures a fuelbreak/firebreak made by removing and cleaning away flammable vegetation for a distance of not less than 30 feet and up to 100 feet around the perimeter of all structures or to the property line, if the property line is less than 30 feet from any structure. This is not a requirement nor an authorization for the removal of live trees. Remove that flammable portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe, or within 5 feet of any portion of any building or structures. Remove that dead or dying portion of any tree which extends over the roof line of any structure.
34. As per San Mateo County Building Standards and Coastside Fire District Ordinance Number 2016-01, the applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on a metal upright. All areas that are accessible for storage purposes shall be equipped with fire sprinklers including closets and bathrooms. The only exception is small linen closets less than 24 square feet with full depth shelving. The plans

for this system must be submitted to the San Mateo County Planning and Building Department or the City of Half Moon Bay. A building permit will not be issued until plans are received, reviewed, and approved. Upon submission of plans, the County or City will forward a complete set to the Coastside Fire District for review. The fee schedule for automatic fire sprinkler systems shall be in accordance with Half Moon Bay Ordinance No. 2006-01. Fees shall be paid prior to plan review.

35. Installation of underground sprinkler pipe shall be flush and visually inspected by the Fire District prior to hook-up to riser. Any soldered fittings must be pressure tested with trench open.
36. Exterior bell and interior horn/strobes are required to be wired into the required flow switch on your fire sprinkler system. The bell, horn/strobe and flow switch, along with the garage door opener, are to be wired into a separate circuit breaker at the main electrical panel and labeled.
37. All fire conditions and requirements must be incorporated into your building plans, prior to building permit issuance. It is your responsibility to notify your contractor, architect, and engineer of these requirements.
38. A statement that the building will be equipped and protected by automatic fire sprinklers must appear on the title page of the building plans.
39. An approved Automatic Fire Sprinkler System meeting the requirements of NFPA-13D shall be required to be installed for your project. Plans shall be submitted to the San Mateo County Building Department for review and approval by the authority having jurisdiction.
40. As per the California Building Code, State Fire Marshal regulations, and Coastside Fire District Ordinance 2016-01, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hardwired, interconnected, and have battery backup. These detectors are required to be placed in each new and reconditioned sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may be battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final.
41. Add a note to the plans that smoke alarm/detectors are to be hardwired, interconnected, or with battery backup. Smoke alarms to be installed per the manufacturer's instruction and NFPA 72.
42. Add note to plans: Escape or rescue windows shall have a minimum net clear openable area of 5.7 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall not be more than 44 inches above the finished floor.
43. Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to the plans.
44. As per the 2016 CBC, Section 406.1.4, a one-hour occupancy separation wall shall be installed with a solid core, 20-minute fire rated, self-closing door assembly with a smoke

gasket between the garage and the residence. All electrical boxes installed in rated walls shall be metal or protected.

45. As per Coastside Fire District Ordinance 2016-01, the roof covering of every new building or structure, and materials applied as part of a roof covering assembly, shall have a minimum fire rating of Class "B" or higher as defined in the current edition of the California Building Code.
46. Per the Coastside Fire District Ordinance 2016-01, the 2016 California Fire Code, and the Public Resources Code 4291: A fuelbreak of defensible spaces is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. In SRA (State Responsible Area), the fuelbreak is 100 feet or to the property line. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 to 10 feet above the ground. New trees planted in the defensible spaces shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity. Remove that portion of any existing tree, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure.
47. The applicant must have a maintained asphalt surface road for ingress and egress of the fire apparatus. The San Mateo County Department of Public Works, the Coastside Fire District Ordinance 2016-01, and the California Fire Code shall set road standards. As per the 2016 CFC, deadend roads exceeding 150 feet shall be provided with a turnaround in accordance with Half Moon Bay Fire District specifications. As per the 2007 CFC, Section Appendix D, road width shall not be less than 20 feet. Fire access roads shall be installed and made serviceable prior to combustibles being placed on the project site and maintained during construction. Approved signs and painted curbs or lines shall be provided and maintained to identify fire access roads and state the prohibition of their obstruction. If the road width does not allow parking on the street (20-ft. road) and on-street parking is desired, an additional improved area shall be developed for that use.
48. Fire apparatus access roads to be an approved all weather surface. Grades 15% or greater to be surfaced with asphalt, or brushed concrete. Grades 15% or greater shall be limited to 150 feet in length with a minimum of 500 feet between the next section. For roads approved less than 20 feet in width, 20-ft. wide turnarounds shall be on each side of the 15% or greater section. No grades over 20%. (Plan and Profile required). CRC 503.
49. As per the 2016 CFC, Appendices B and C, a fire district approved fire hydrant (Clow 960) must be located within 500 feet of the proposed single-family dwelling unit measured by way of drivable access. As per the 2016 CFC, Appendix B, the hydrant must produce a minimum fire flow of 1,000 gallons per minute at 20 pounds per square inch residual pressure for 2 hours. Contact the local water purveyor for water flow details.
50. Contact the Fire Marshal's Office to schedule a Final Inspection prior to occupancy and Final Inspection by a Building Inspector. Allow for a minimum of 72-hour notice to the Fire Department at 650/573-3846.

Coastside County Water

51. The Coastside County Water District records confirm that there is one 5/8" (20gpm) uninstalled Non Priority water service connection assigned to APN 047-275-050. The current owner of said water service connection(s) on record with the District is: Abolmoluki Bahram.
52. Before issuance of a building permit, the District will need to evaluate a complete set of building plans to determine if the water service capacity available is adequate for this development and complies with all district regulations.

This approval may be appealed by the applicant or any aggrieved party on or before **5:00 p.m., March 16, 2018**, the tenth business day following this action by the Community Development Director. An appeal form, including a statement of grounds for the appeal and accompanied by the applicable filing fee of \$616.35, must be submitted to the Planning and Building Department.

Further information may be obtained by calling Laura Richstone, Project Planner, at 650-363-1829 or by email at lrichstone@smcgov.org.

To provide feedback, please visit the Department's Customer Survey at the following link: <http://planning.smcgov.org/survey>.

STEVE MONOWITZ
COMMUNITY DEVELOPMENT DIRECTOR, By:

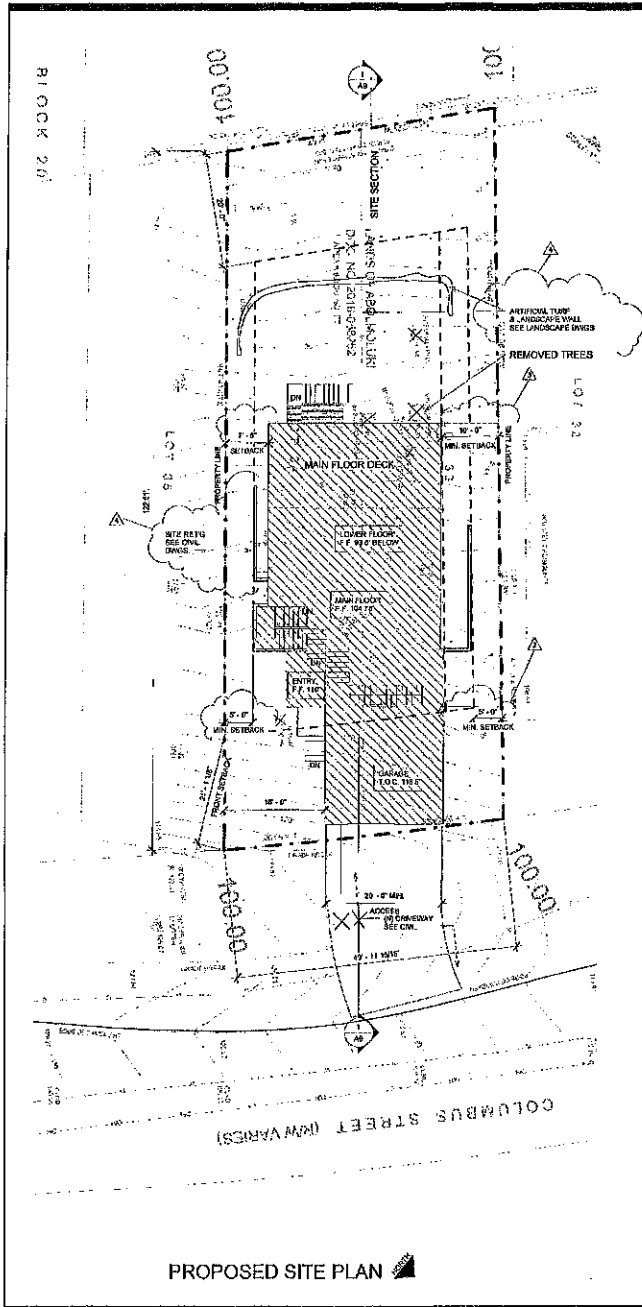


Melissa Ross, Senior Planner

MAR:LAR:jlh – LARCC0098_WJN.DOCX

cc: Coastside County Fire
Coastside Water District
Coastside Design Review Committee
Building Inspection Section
Department of Public Works

Prev. Approved Plans



PLANNING DATA

GROSS LOT AREA = 6026 SF
 ZONING S-17 COMBING DISTRICT (MID COAST)
 ALLOWABLE FLOOR AREA = 3193.78 SF

PROPOSED FLOOR AREAS

MAIN LEVEL = 1081 SF
 LOWER LEVEL = 1281 SF
 LIVING SUBTOTAL = 2362 SF
 FRONT PORCH = 25 SF
 GARAGE = 437 SF
 TOTAL = 2824 SF

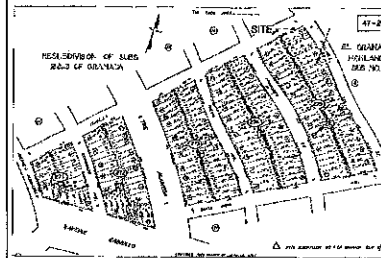
FLOOR AREA RATIO = 46.86%

SETBACKS

FRONT = 20'
 SIDES COMBINED TOTAL OF 35' = 5' MIN.
 REAR = 20'

PARCEL COVERAGE 35% MAX. = 2109.1 SF
 PROPOSED COVERAGE = 2074 SF 34.4%
 HEIGHT LIMIT = 28'

LOCATION MAP



SITE PLAN NOTES

1. SEE CIVIL DRAWINGS FOR ALL SITE GRADING ETC. TYPICAL.



RESIDENTIAL DESIGN SOLUTIONS

406 LA JOLLA STREET
 SAN MATEO, CA 94403
 (650) 218-8161
 CHRISRUFFAT@YAHOO.COM
 BUSINESS LIC. # 48803

ABOLMOLUKI RESIDENCE

APN 047-275-050
 COLUMBUS ST.
 EL GRANADA, CA.

DESCRIPTION	DATE	BY
PLANNING	8-24-17	CR
PLANNING 2	9-25-17	CR
PLANNING 3	12-15-17	CR
PLANNING 4	1-2-18	CR

RECEIVED

JAN - 6 2018
 San Mateo County
 Planning Division

DATE 12/15/17 Drawing Number

Scale 1" = 10'-0"

Project Number AB33

A1

96200-1102N17A



COASTSIDE FIRE PROTECTION DISTRICT

1001 MARSH STREET • SAN MATEO, CA 94403

TEL: (650) 275-0550
FAX: (650) 275-0551

August 15, 2017

Jim Jacinto
600 Walnut Street
San Carlos, CA 94020

Dear Applicant,

After reviewing the planning application for a new Single Family Residence with an attached garage at 0 Columbus Street, Alameda's Parcel Number 047-275-050 in El Granada (San Mateo County, Parcel No. T100017-00000) I offer the following comments/conditions, which will be applied to this project:

Your building plans have been conditionally approved subject to the following conditions completed prior to a final inspection by the fire department. It is your responsibility to make contact with the fire department if you do not understand any of the following project conditions.

- Smoke Detectors which are hard wired. As per the California Building Code, State Fire Marshal regulations, and Coastal Fire District Ordinance 2016-01, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hard wired, interconnected, and have battery backup. These detectors are required to be placed in each new and remodel sleeping area and in a central location in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final.
- Add note to place smoke detector box to be hardwired, interconnected, and with battery back-up. Smoke alarms to be installed per manufacturer's instructions and NFPA 72.
- Add note: Storage or storage windows shall have a minimum net clear opening area of 5.7 square feet, 5.7 sq. ft. allowed at grade. The minimum net clear opening height dimension shall be 24 inches. The net clear opening height dimension shall be 20 inches. Height of sill height shall be not more than 44 inches above the finished floor.

0 Columbus St E2 plan.docx

If road width shall not be less than 20 feet. The access roads shall be installed and made drivable prior to construction being placed on the project site and maintained during construction. Approved signs and painted curbs or lines shall be provided and maintained to identify fire access roads and state the prohibition of their construction. If the road width does not allow making on the street, the road, and driveway, surface, it should be a different, approved, area shall be developed (See B11206).

- Fire apparatus access roads to be an approved all weather surface. Grades 15% or greater to be surfaced w/ asphalt, or finished concrete. Grades 15 % or greater shall be limited to 150 ft. in length with a maximum of 300 ft. between the first section. For roads approved less than 20 ft., 20 ft. wide sections shall be on each side of 15% or greater section. No grades over 20%. (Plan and profile required) CFC 503
- Fire Hydrants: As per 2016 CFC, Appendix D and C, a fire district approved fire hydrant (flow 500) must be located within 200 feet of the proposed single-family dwelling unit measured by way of drivable access. As per 2016 CFC, Appendix D the hydrant must produce a minimum fire flow of 1,000 gallons per minute at 20 pounds per square inch residual pressure for 2 hours. Contact the local water purveyor for water flow details.
- Automatic Fire Sprinkler System: As per San Mateo County Building Standards and Coastal Fire District Ordinance Number 2016-01, the applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pull head on a metal upright. All areas that are accessible fire storage purposes shall be equipped with fire sprinklers including closets and subroofs. The only exception is small linen closets less than 24 square feet with 10ft depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Division or the City of El Granada. A building permit shall not be issued until plans are received, reviewed and approved. Upon submittal of plans, the County or City will forward a complete set to the Coastal Fire District for review. The fee schedule for automatic fire sprinkler systems shall be in accordance with Half Moon Bay Ordinance No. 2006-01. Fees shall be paid prior to plan review.
- Installation of underground sprinkler pipe shall be finished and visually inspected by Fire District prior to hook-up to meter. Any required findings must be presented with each open.
- Receptor bell and interior head/strobes are required to be wired into the approved fire switch on your fire sprinkler system. The bell, strobe/robe and flow switch, along with the garage door opener are to be wired into a separate circuit breaker at the main electrical panel and labeled.

0 Columbus St E2 plan.docx

- Identify recessed windows in each bedroom and verify that they meet all requirements. Add this to plans.
- Occupancy Separation: As per the 2016 CFC, Section 405.1.1, a two-hour occupancy separation wall shall be installed with a solid core, 90-minute fire rated, self-closing door assembly of smoke guard between the garage and the residence. All electrical boxes installed in road walls shall be metal or protected.
- Address Numbers: As per Coastal Fire District Ordinance 2016-01, building identification shall be conspicuously posted and visible from the street. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMMENCEMENT OF CONSTRUCTION BEING PLACED ON SITE). The house numbers for permanent address signs shall be 4 inches in height with a minimum 3/4-inch stroke. Each house number shall be internally illuminated and facing the direction of access. Illuminated height of bottom of address sign shall be greater than or equal to 6 feet from finished grade. When the building is served by a long driveway or is otherwise obscured, a 4 inch by 18 inch green reflective metal sign with 3 inch reflective fluorescent letters number to 99-999 911 or equivalent shall be placed at the entrance from the nearest public roadway. See Fire Ordinance for standard sign.
- Roof Coverings: As per Coastal Fire District Ordinance 2016-01, the roof covering of every new building or structure, and materials applied as part of a roof covering assembly, shall have a minimum fire rating of Class "A" or higher as defined in the current edition of the California Building Code.
- Vegetation Management: The Coastal Fire District Ordinance 2016-01, the 2016 California Fire Code and Public Resources Code 4291.
 - A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 50 feet and may be required to a distance of 100 feet or to the property line. In SRA (State Responsibility Area) the fuel break is 100 feet or to the property line.
 - Trees located within the defensible space shall be pruned to remove dead and dying portions, and limited up to 10 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or in maturity.
 - Remove that portion of any existing tree, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure.
- Fire Access Roads: The applicant must have a maintained, unpaved surface road for ingress and egress of the applicant. The San Mateo County Department of Public Works, the Coastal Fire District Ordinance 2016-01, and the California Fire Code shall set road standards. As per the 2016 CFC, dead-end roads exceeding 150 feet shall be provided with a turnaround in accordance with Half Moon Bay Fire District specifications. As per the 2007 CFC, Section Appendix

0 Columbus St E2 plan.docx

0 Columbus St E2 plan.docx

D R S RESIDENTIAL DESIGN SOLUTIONS

406 LA JOLLA STREET
SAN MATEO, CA 94403
(650) 218-8161
CHRIS@RDFAT@YAHOO.COM
BUSINESS LIC. # 46803

ABOLMOLUKI RESIDENCE

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

	DESCRIPTION	DATE	BY
REVISIONS			
1			
2			
3			
4			
5			

DATE 12/15/17 Drawing Number
Scale A1.2
Project Number
AB03



RESIDENTIAL DESIGN SOLUTIONS

405 LA JOLLA STREET
SAN MATEO, CA 94403
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BUSINESS LIC. # 48803

ABOLMOLUKI RESIDENCE

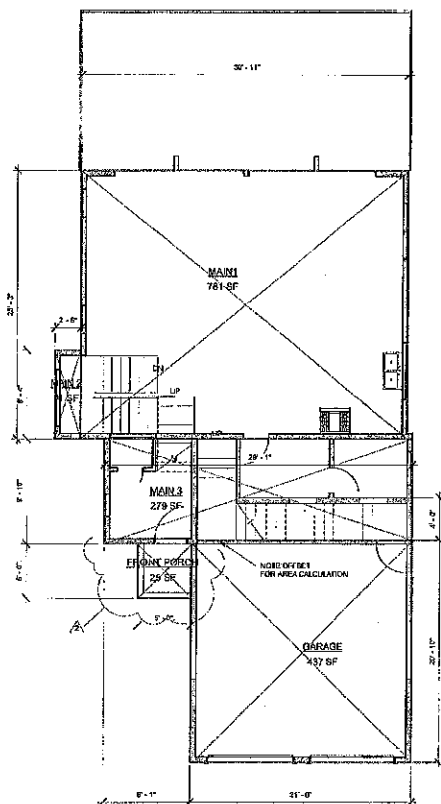
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COLUMBUS ST.
EL GRANADA, CA.

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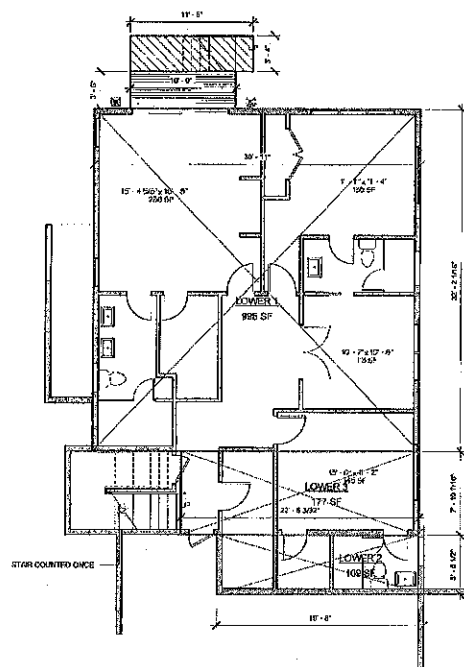
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PLANNING 2 9-20-17 CR

DATE 12/18/17 Drawing Number
Scale 3/16" = 1'-0"
Project Number
A003

A1.5

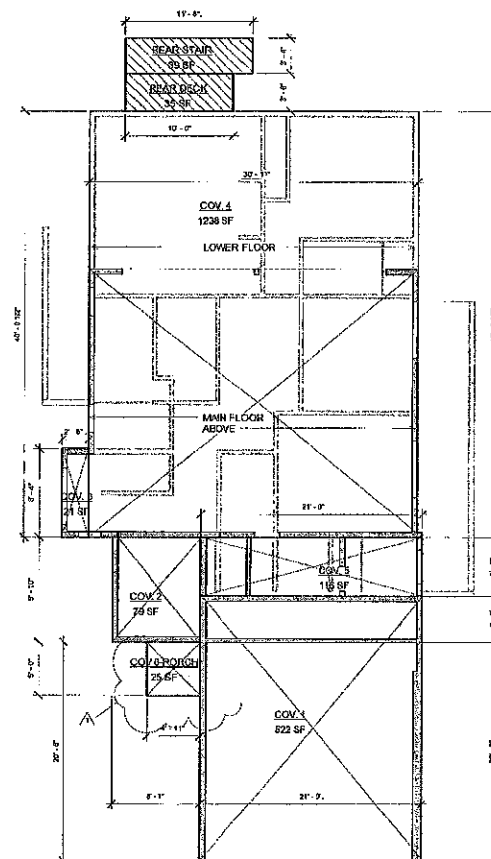


MAIN FLOOR AREAS



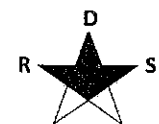
GROSS BUILDING AREA		
Area	Size	Name
28 SF	8'X6'	FRONT PORCH
437 SF	21'X20'10"	GARAGE
995 SF	30'11"X32'2"	LOWER 1
1008 SF	19'8"X50'6"	LOWER 2
1008 SF	26'8"X37'10"	LOWER 3
761 SF	30'4"X25'3"	MAIN1
279 SF	2'5"X6'4.75"	MAIN2
279 SF	29'1"X9'8"	MAIN3
2024 SF		

LOWER FLOOR AREAS



LOT COVERAGE

LOT COVERAGE		
Area	Size	Name
28 SF	8'X6'	COV. 6 PORCH
522 SF	21'X24'10"	COV. 1
79 SF	8'2"X9'10"	COV. 2
75 SF	20'X36'4"	COV. 3
1238 SF	30'11"X40'4"	COV. 4
110 SF	21'X5'8"	COV. 5
35 SF	10'X3'8"	REAR DECK
30 SF	11'8"X3'4"	REAR STAIR
2074 SF		



RESIDENTIAL DESIGN SOLUTIONS

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BUSINESS LIC. # 48803

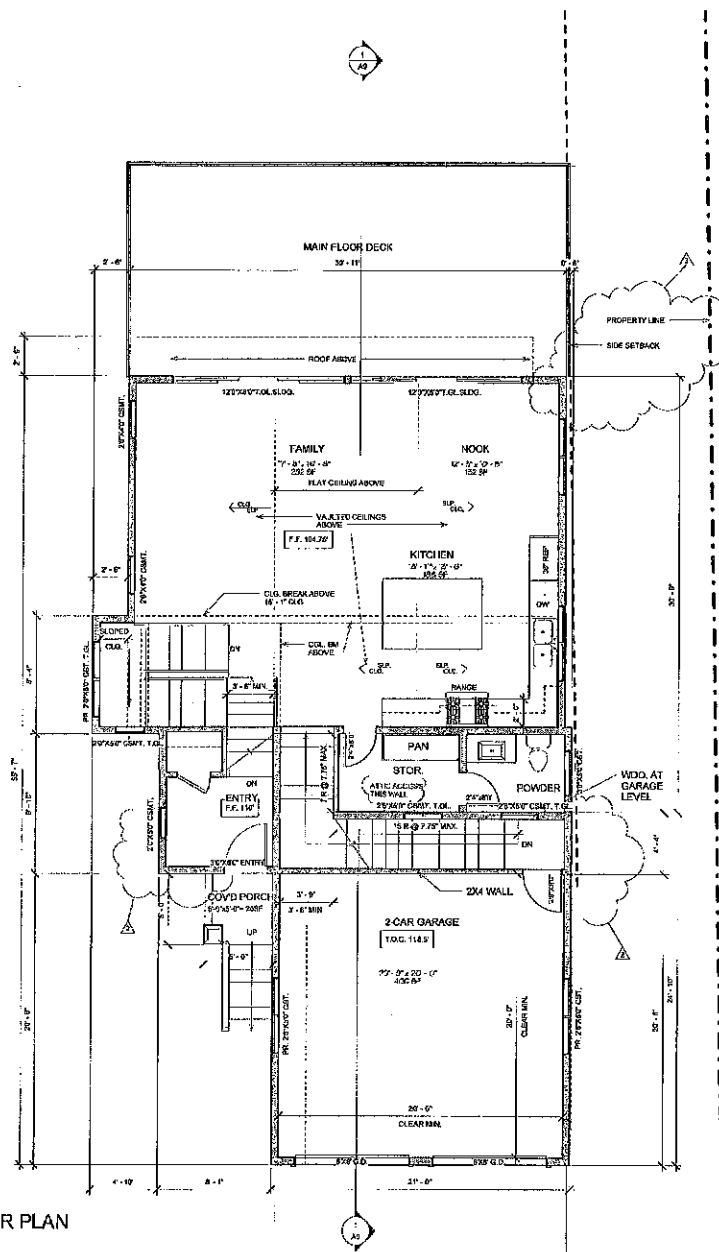
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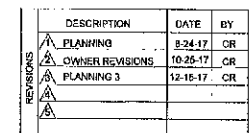
APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

DESCRIPTION	DATE	BY
PLANNING 1	8-24-17	CR
PLANNING 2	9-25-17	CR
PLANNING 3	12-16-17	CR

DATE 12/16/17 Drawing Number
Scale 1/4" = 1'-0" A2
Project Number
AB03

MAIN FLOOR PLAN

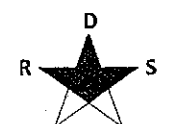




DATE
12/15/17

Scale
1/4" = 1'-0"

Project Number
A003



**RESIDENTIAL
DESIGN SOLUTIONS**

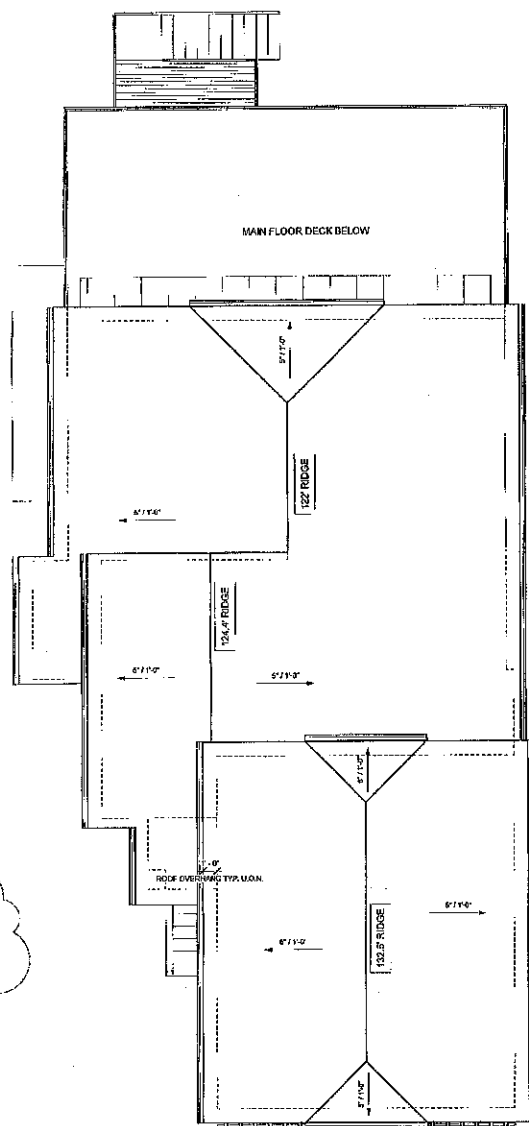
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BUSINESS LIC. # 48803

ABOLMOLUKI
RESIDENCE

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

	DESCRIPTION	DATE	BY
REVISIONS	1 PLANNING 2	9-25-17	GR

DATE 12/15/17 Drawing Number
Scale 1/4" = 1'-0" **A4**
Project Number
AB03



BENCHMARK ELEVATION
GARAGE T.O.C. 118.5'

ROOF PLAN



RESIDENTIAL DESIGN SOLUTIONS

406 LA JOLLA STREET
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(650) 719-8161
CHNSRUFFAT@YAHOO.COM
BUSINESS LIC. # 48803

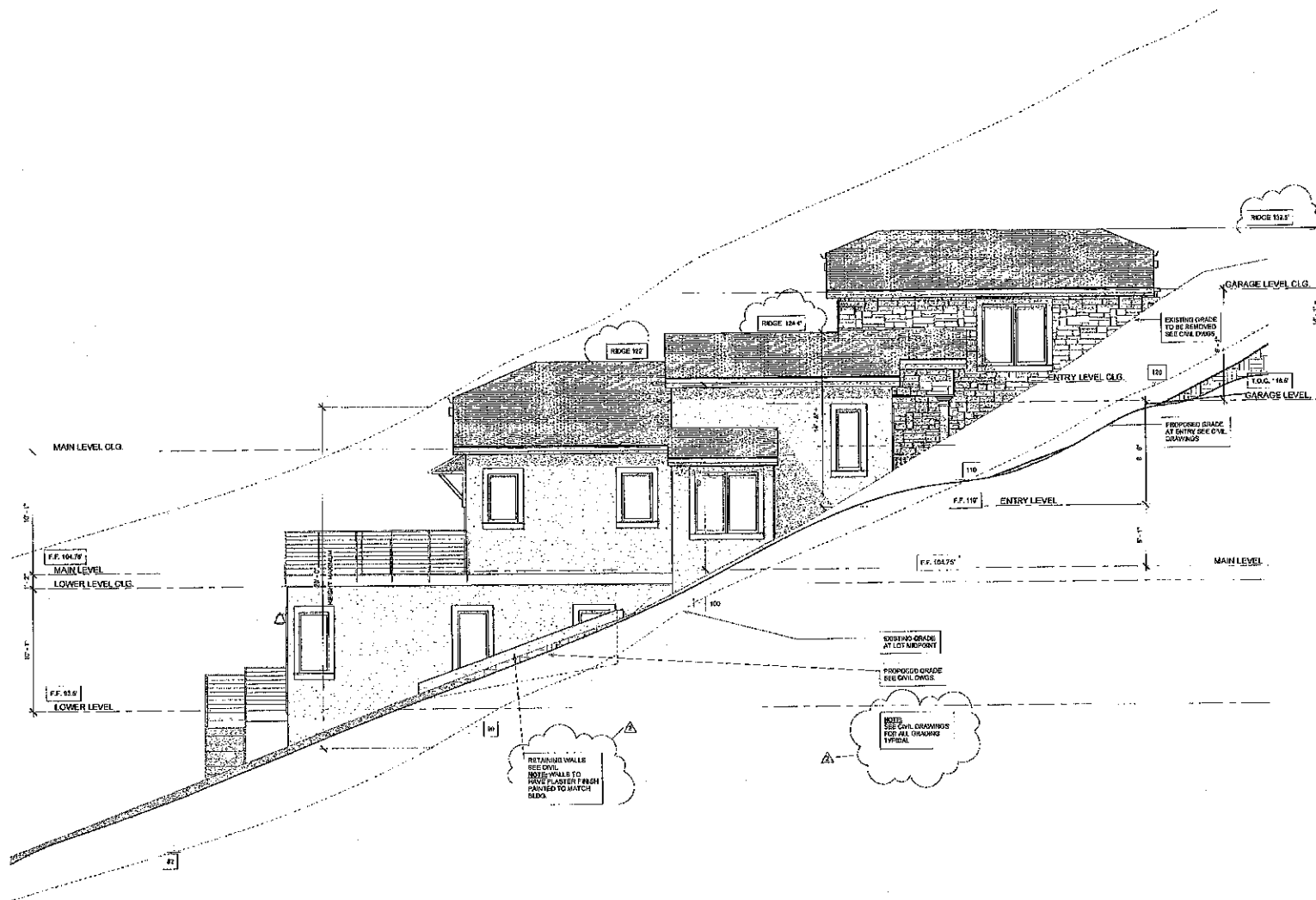
ABOLMOLUKI
RESIDENCE

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

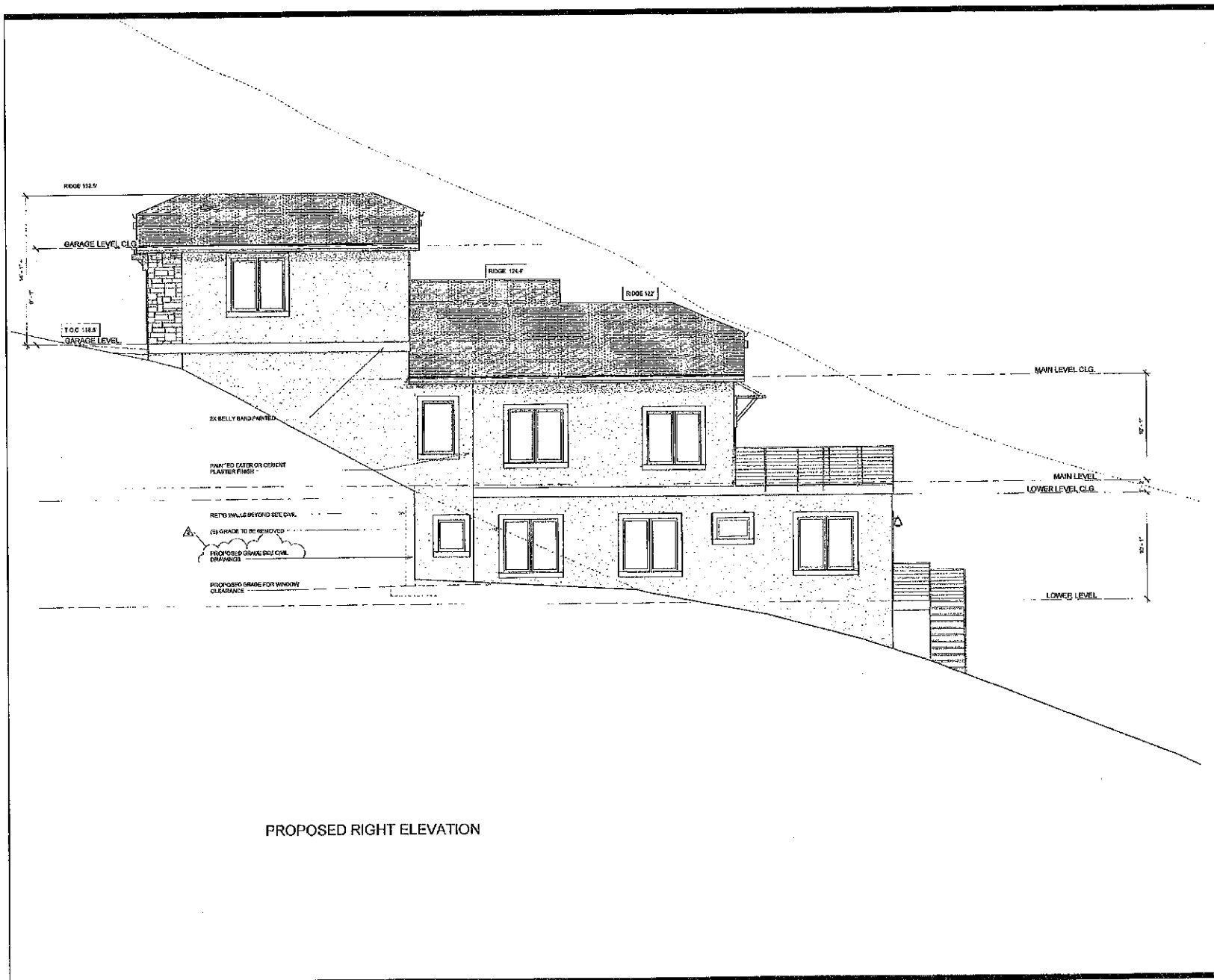
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PLANNING 8-24-17 CR

DATE 12/16/17 Drawing Number
Scale 1/4" = 1'-0" **A6**
Project Number
AB03



PROPOSED LEFT ELEVATION



PROPOSED RIGHT ELEVATION



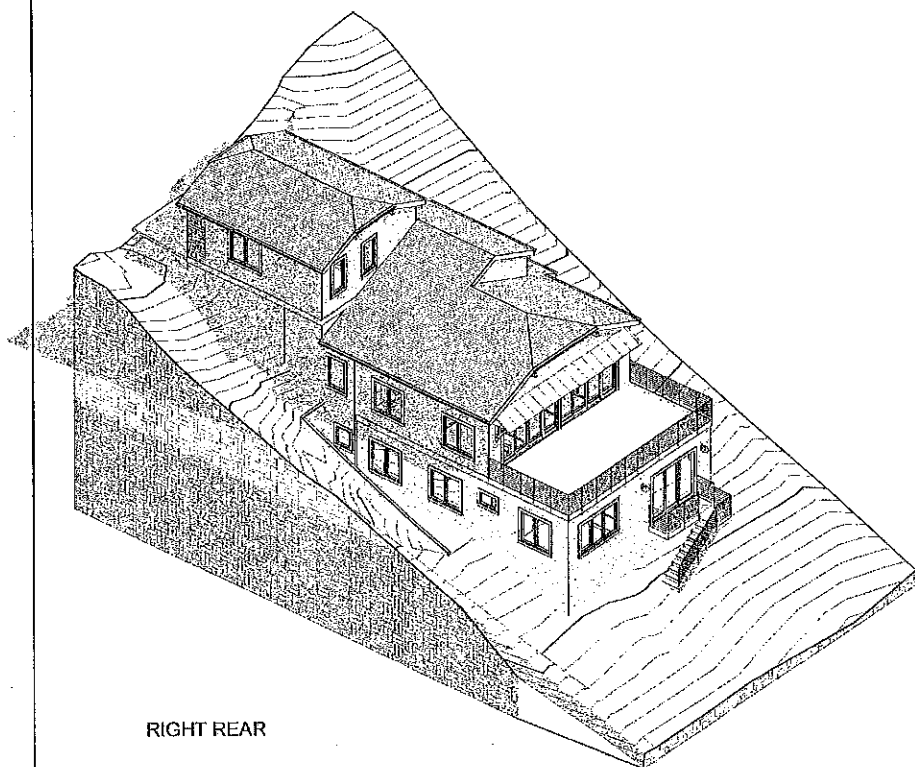
405 LA JOLLA STREET
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(650) 218-8161
CHR-SRUFFAT@YAHOO.COM
BUSINESS LIC. # 48803

ABOLMOLUKI
RESIDENCE
APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

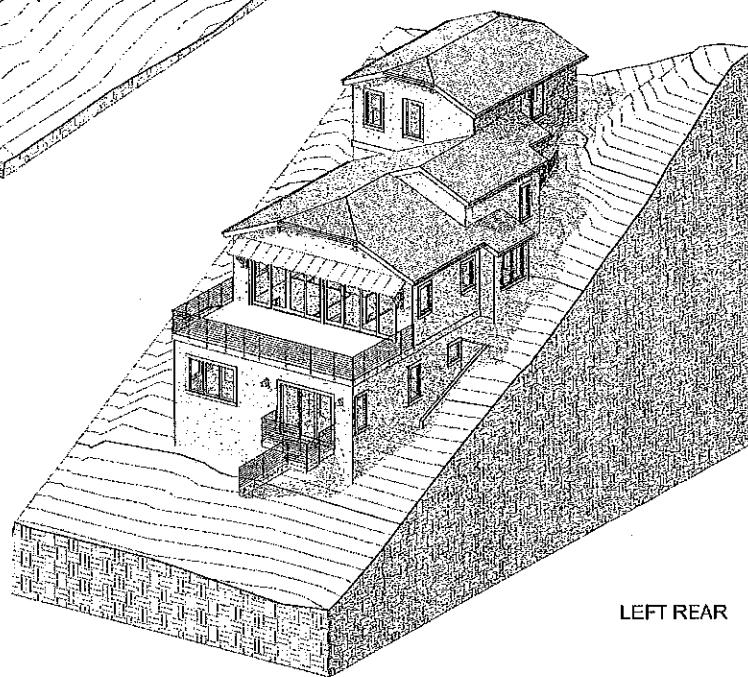
REVISIONS	DESCRIPTION	DATE	BY
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4			

PLANNING 8-24-17 CR

DATE 12/15/17 Drawing Number
Scale 1/4" = 1'-0" **A7**
Project Number
A003



RIGHT REAR



LEFT REAR



**RESIDENTIAL
DESIGN SOLUTIONS**

405 LA JOLLA STREET
SAN MATEO, CA 94403
(650) 218-8161
CHRISRUFFAT@YAHOO.COM
BUSINESS LIC. # 48803

ABOLMOLUKI
RESIDENCE

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

	DESCRIPTION	DATE	BY
REVISIONS	1		
	2		
	3		
	4		

DATE
12/15/17

Scale

Drawing Number

A8

Project Number
A803



RESIDENTIAL DESIGN SOLUTIONS

406 LA JOLLA STREET
SAN MATEO, CA 94403
(650) 218-8161
CHRISRUFFAT@YAHOO.COM
BUSINESS LIC. # 45803

ABOLMOLUKI
RESIDENCE
APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

DESCRIPTION	DATE	BY
PLANNING	8-24-17	CR

SITE SECTION 1 - 1

DATE 12/15/17 Drawing Number
Scale 1/4" = 1'-0"
Project Number A9
A803

BLACK MAP 42

GRADING QUANTITIES:

	OUT (C.Y.)	FILL (C.Y.)
GARAGE PAD	10 C.Y.	0
BUILDING PAD	220 C.Y.	0
NEW DRIVEWAY	45 C.Y.	0
YARD GRADING	10 C.Y.	0
TOTAL	285 C.Y.*	0
EXPORT = 285 C.Y.*		

UTILITY NOTE:

THE UTILITIES EXISTING ON THE SURFACE AND SHOWN ON THIS GRADING HAVE BEEN LOCATED BY FIELD SURVEY. ALL UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE FROM RECORDS OF THE VARIOUS UTILITY COMPANIES AND THE SURVEYOR/ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR THEIR COMPLETENESS, INDICATED LOCATION, OR SIZE. RECORD UTILITY LOCATION SHOULD BE CONFIRMED BY EXPOSING THE UTILITY.

SURVEY NOTE:

THE EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN WAS TAKEN FROM A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY LAND SURVEYING, INC., DATED SEPTEMBER 2004, JOB NO. 0597-15.

GENERAL NOTES:

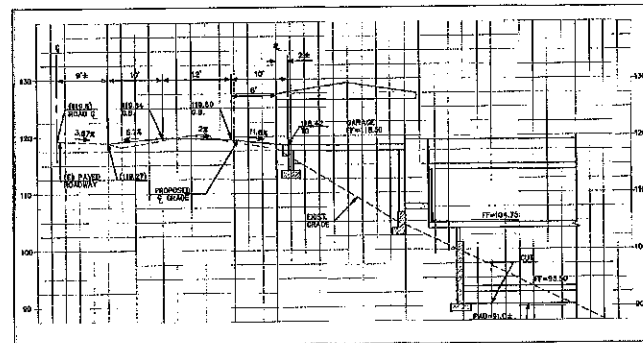
1. ALL MATERIALS SHALL BE FURNISHED BY AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN APPLICABLE, ALL CONSTRUCTION MATERIALS AND METHODS SHALL COMPLY WITH THE ORDINANCES, SPECIFICATIONS AND STANDARDS OF THE COUNTY OF SAN MATEO, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) PRIOR TO START OF CONSTRUCTION. PHONE (800) 542-2444.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTING ANY EXCESS MATERIAL OR SUPPLYING MATERIAL FOR DEFICIENCIES TO BRING DRIVEWAY AND BUILDING PADS TO REQUIRED GRADE.
5. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, GRADING, ETC., AND TO AVOID ABRUPT OR APPARENT CHANGES IN CROSS SLOPES, LOW SPOTS OR HAZARDOUS CONDITIONS.
6. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL WORK SHOWN ON THIS PLAN.
7. ALL STORM DRAIN PIPES SHALL BE PVC SDR 35 WITH DEEP AND SPIGOT HUBS OR GASKET JOINTS PER ASTM D3034 OR BETTER.

GRADING PLAN LEGEND:

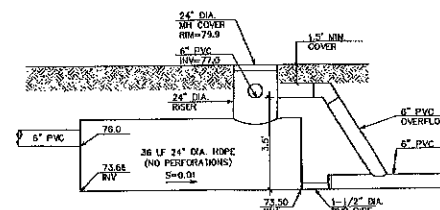
BS	BOTTOM OF STEP
COTD	CLEAROUT TO GRADE
DS	DOWNSPOUT
FF	FIRST FLOOR
FG	FIRST GRADE
FL	FLOWLINE
FP	FIRST PAVE
GB	GRADE BREAK
GV	INVERT
IS	TOP OF ORATE
IS	TOP OF STEP
IS	TOP OF WALL
IS	WATER METER
IS	WATER SEWER LINE
IS	WATER LINE
IS	NEW CONTOUR
IS	NEW STORM DRAIN LINE
IS	NEW DRAIN INLET
IS	SWALE
IS	SURFACE RUNOFF FLOW DIRECTION
IS	EXIST. TREE TO BE REMOVED
IS	EXIST. GRADE

SURVEY LEGEND:

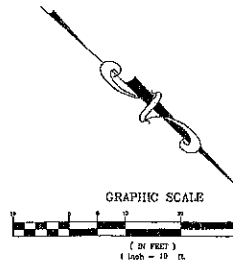
BS	BOTTOM OF STEP
COTD	CLEAROUT TO GRADE
DS	DOWNSPOUT
FF	FIRST FLOOR
FG	FIRST GRADE
FL	FLOWLINE
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IS	NEW CONTOUR
IS	NEW STORM DRAIN LINE
IS	NEW DRAIN INLET
IS	SWALE
IS	SURFACE RUNOFF FLOW DIRECTION
IS	EXIST. TREE TO BE REMOVED
IS	EXIST. GRADE



A DRIVEWAY PROFILE
SCALE (VERTICAL & HORIZONTAL): 1"=10'

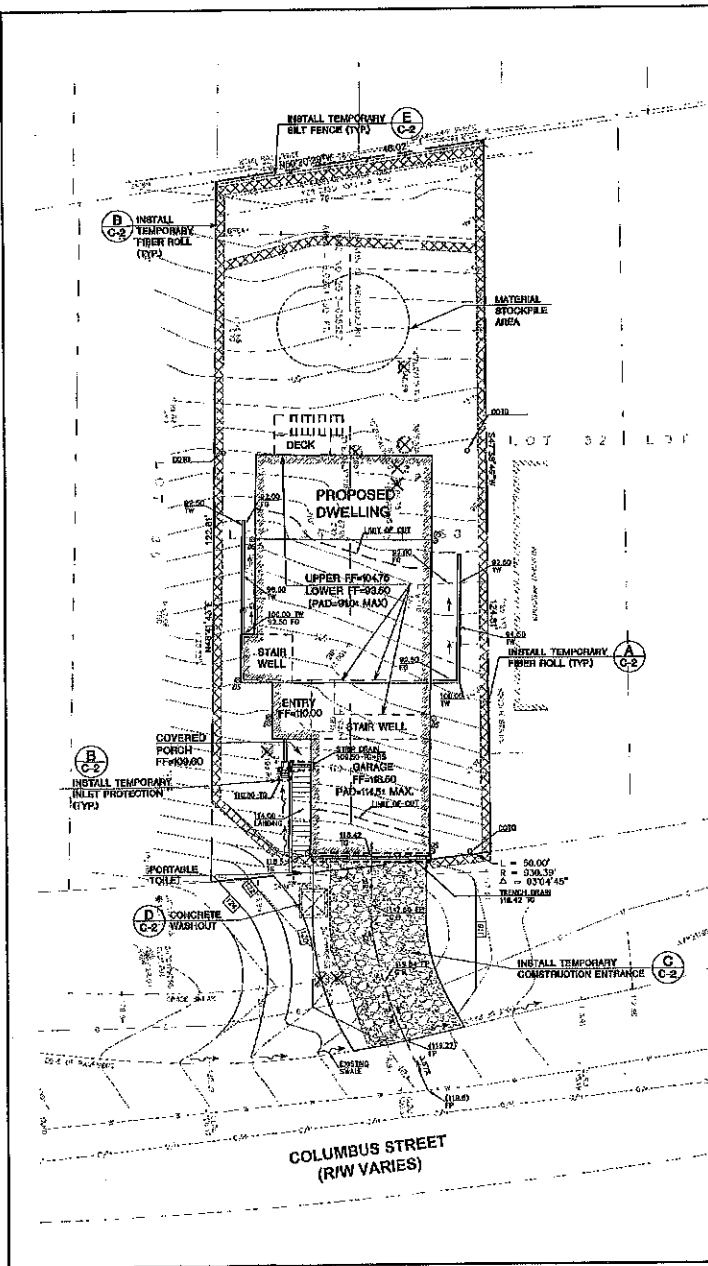


B DETENTION PIPE DETAIL
SCALE: NOT TO SCALE

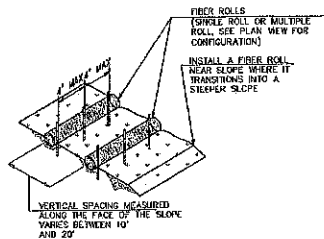
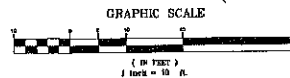


PREPARED FOR:	THE ARJANNI GROUP
PROJECT:	PRELIMINARY GRADING & DRAINAGE PLAN
LOCATION:	COLUMBUS STREET, ALBANY, NY 12212-1212
DATE:	07/12/17
DRAWN BY:	DAK
DESIGNED BY:	VPO
CHECKED BY:	SON
SCALE:	1"=10'
DATE:	07/12/17
DRAWING NO.:	4452-GRAD
SHEET:	1 OF 2

MACLEOD AND ASSOCIATES
CIVIL ENGINEERING - LAND SURVEYING
565 CENTER STREET - SAN CARLOS, CA 94070 (925) 593-5500
UNINCORPORATED - SAN MATEO COUNTY, CALIFORNIA

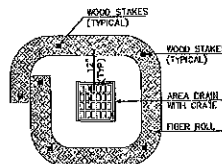


LEGEND:
 ✂ EXISTING TREES TO BE REMOVED



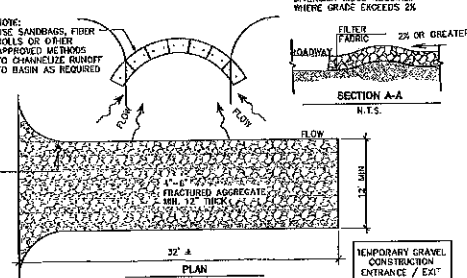
A FIBER ROLL DETAIL

SCALE: NOT TO SCALE



B DRAIN INLET PROTECTION DETAIL

SCALE: NOT TO SCALE



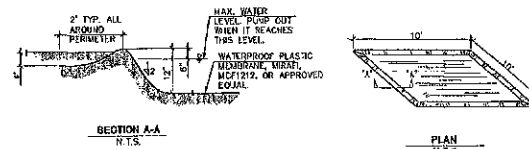
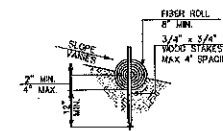
C CONSTRUCTION ENTRANCE DETAIL

SCALE: NOT TO SCALE

EROSION CONTROL NOTES:

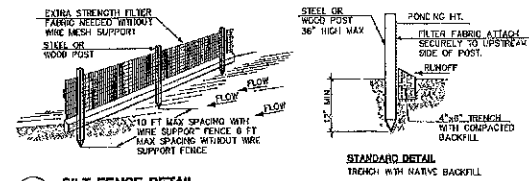
1. THE INTENT OF THE EROSION CONTROL PLAN IS TO MINIMIZE ANY WATER QUALITY IMPACTS IN THE FORM OF SEDIMENT POLLUTION TO MAIN CREEK & TRIBUTARIES.
2. A CONSTRUCTION ENTRANCE WILL BE INSTALLED PRIOR TO GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE CONSTRUCTION ENTRANCE. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDICTION DEMANDS, AND REPAIR OF ANY MEASURES USED TO TRAP SEDIMENTS.
3. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH THE USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
4. THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE OPERABLE DURING THE RAINY SEASON, OCTOBER 1 TO APRIL 15. BY OCTOBER 1, GRADING AND INSTALLATION OF STORM DRAINAGE AND EROSION AND SEDIMENT CONTROL FACILITIES WILL BE COMPLETED. NO GRADING WILL OCCUR BETWEEN OCTOBER 1 AND APRIL 15 UNLESS AUTHORIZED BY THE CITY REPRESENTATIVE.
5. DURING THE RAINY SEASON, ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED TO PREVENT A BUILDUP OF SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAINAGE SYSTEM.
6. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL FIELD MANUAL, OF THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, 4TH EDITION, DATED AUGUST 2002 OR LATER EDITION.

NOTE: INSTALL FIBER ROLL ALONG A LEVEL CONTOUR



D TEMPORARY CONCRETE WASHOUT DETAIL

SCALE: (NOT TO SCALE)



E SILT FENCE DETAIL

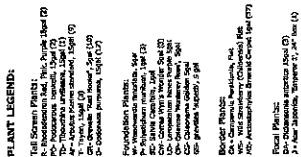
SCALE: (NOT TO SCALE)

SAN MATEO COUNTY STANDARD NOTES:

1. EROSION CONTROL POINT OF CONTACT CONTRACTOR: THE ARMANI GROUP
 EMAIL: jarm@armgroup.com
 (415) 560-4000
2. PREPARE CLEARING AND EARTH-MOVING ACTIVITIES ONLY DURING DRY WEATHER. MEASURES TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO EARTH-MOVING ACTIVITIES AND CONSTRUCTION.
3. STABILIZE ALL DENuded AREAS AND MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY BETWEEN OCTOBER 1 AND APRIL 30.
4. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.
5. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVED CUTTING WASTES, PAINTS, COLOURS, PETROLEUM PRODUCTS, CHEMICAL, WASH WATER OR SEDIMENTS AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
6. AVOID CLOSING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED AND TREATED.
7. LIMIT AND THE APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.
8. LIMIT CONSTRUCTION ACCESS ROUTES TO STABILIZED, DESIGNATED ACCESS POINTS.
9. LIMIT CONSTRUCTION ACCESS ROUTES TO STABILIZED, DESIGNATED ACCESS POINTS.
10. AVOID TRACKING DIRT OR OTHER MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS.
11. TRAIN AND PROMOTE INSTRUCTION TO ALL EMPLOYEES AND SUBCONTRACTORS REGARDING THE WATERSHED PROTECTION MAINTENANCE STANDARDS AND CONSTRUCTION BEST MANAGEMENT PRACTICES.
12. THE AREAS DELINEATED ON THE PLANS FOR PARKING, LOADING, STORAGE ETC., SHALL NOT BE EXPOSED OR "RUN OVER".
13. CONSTRUCTION SITES ARE REQUIRED TO HAVE EROSION CONTROL MATERIALS ON-SITE DURING THE "OFF-SEASON".
14. DUST CONTROL IS REQUIRED YEAR-ROUND.
15. EROSION CONTROL MATERIALS SHALL BE STORED ON-SITE.
16. USE OF PLASTIC SHEETING BETWEEN OCTOBER 1st AND APRIL 30th IS NOT ACCEPTABLE, UNLESS FOR USE ON STOCKPILES WHERE THE STOCKPILE IS ALSO PROTECTED WITH FIBER ROLLS CONTAINING THE BASE OF THE STOCKPILE.
17. THE TREE PROTECTION SHALL BE IN PLACE BEFORE ANY GRADING, EXCAVATING OR GRUBBING IS STARTED.

PREPARED FOR:	THE ARMANI GROUP
EROSION AND SEDIMENTATION CONTROL PLAN	COLUMBUS STREET A.P.N. 047-275-050 UNINCORPORATED SAN MATEO COUNTY CALIFORNIA
DRAWN BY:	C.H.
REVIEWED BY:	W.P.
CHECKED BY:	D.H.
DATE:	07/15/17
DRAWING NO.	4462-GRAD
SHEET	2 OF 2

C-2



This is a WELO Compliant Landscape:

Compost: (4) peat, ports to a depth of 6" to all planted areas.

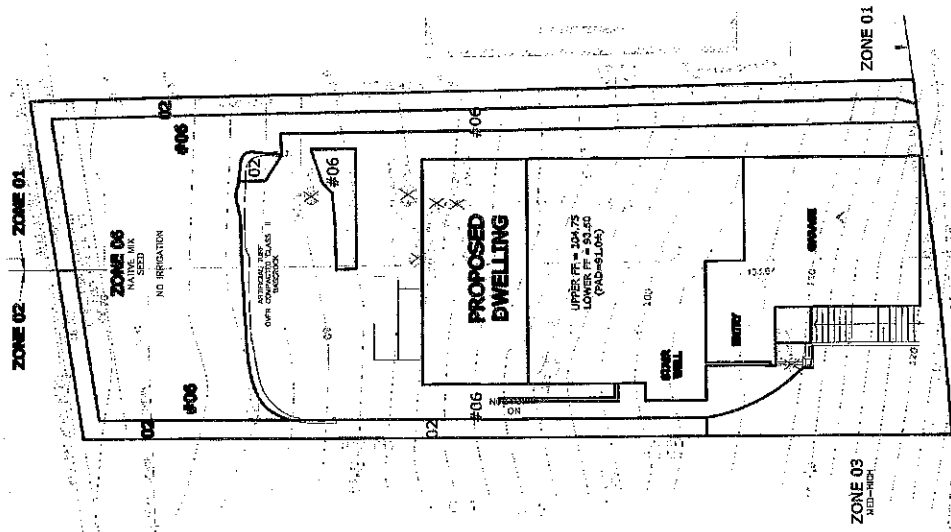
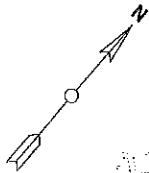
Plant Water Used: Again covered planted plants that require additional, also on summer water (average WUCOL plant factor) for 72% of the plants tested.

Methods: 3 layers of mulch in all supposed soil portions of planting areas.

Test: (Soil Ratio): Test bed area does not contain 25% of the substrate area.

Landscape Water Matters: A landscape (water) covered (covered) water body can be installed and maintained by the owner.

A weather based irrigation computer will be used to control the irrigation system.



WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filed out by the project applicant and it is a required element of the landscape architectural plan for all projects requiring a Landscape Architectural Plan.

Reference: Employment (E) or (S) or (C)	Plant Name	Plant Type	Plant Size	Plant Spacing	Plant Density	Plant Area	Plant Volume	Plant Weight	Plant Cost
Regular Landscape Areas									
Special Landscape Areas									

ETAF Calculations

ETAF = Total Area x ETAF Factor

ETAF Factor = (Plant Area x Plant Density) / (Plant Volume x Plant Weight)

ETAF Factor = (1161 x 1.161) / (1161 x 1.161) = 1.0

ETAF Calculations

ETAF = Total Area x ETAF Factor

ETAF Factor = (Plant Area x Plant Density) / (Plant Volume x Plant Weight)

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ETAF Factor = (Plant Area x Plant Density) / (Plant Volume x Plant Weight)

ETAF Factor = (1161 x 1.161) / (1161 x 1.161) = 1.0



APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

Scott Soden
Artscapes Landscape Design
Phone: 650-839-1704
Cell 650-823-5624

REVISION TABLE	DESCRIPTION
NUMBER	DATE
1	01/06/2018

DATE: 01/06/2018
SCALE: 1/8" = 1'0"
HYDROZONE PLAN
H-1

DRIP IRRIGATION SYSTEM:

Consists of Pressure Reducing Valve, Y-Filter, Hydraulic Anti-Siphon Valve, 1/2" Tubing with 1/2" Gaskets, 1/2" Gaskets, & 1" Gaskets only.

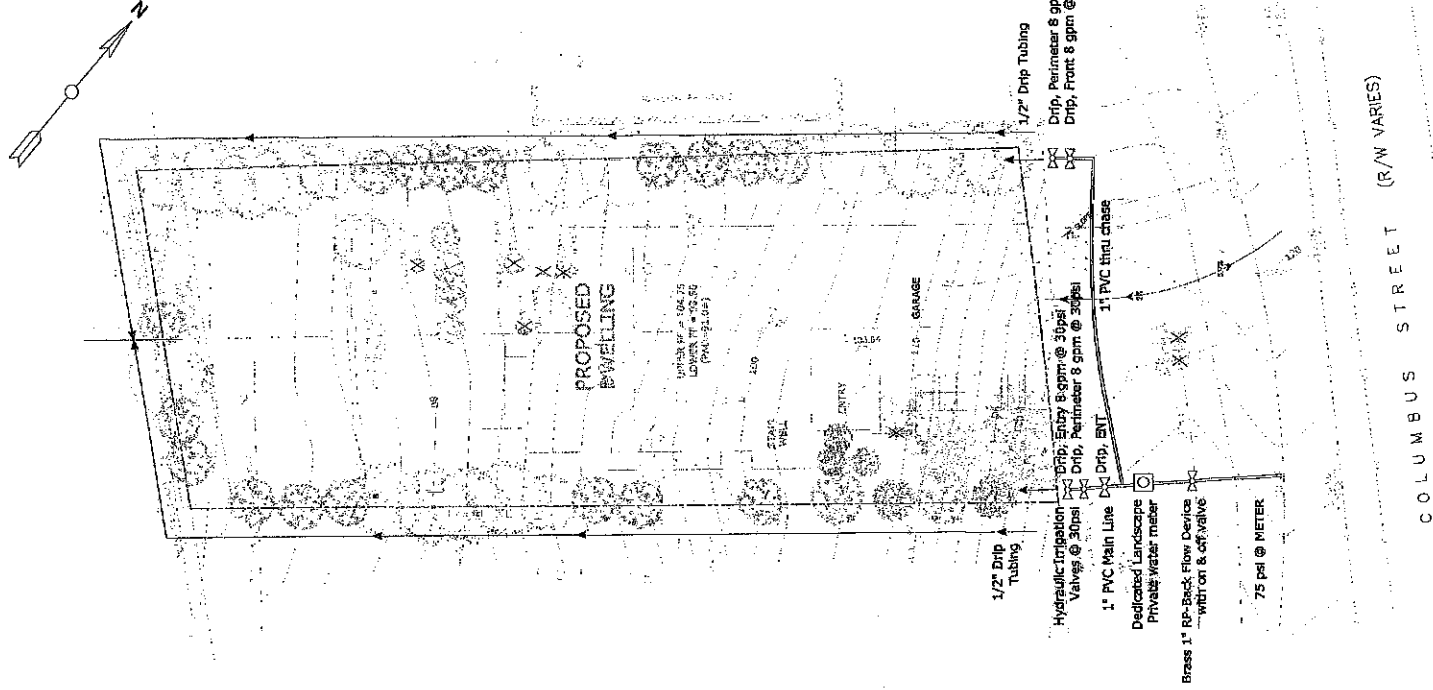
NO MICRO-SPRAYS SHALL BE USED ON THIS SYSTEM.

Drip Emitters shall be placed up-slope of the plants.

Watering Schedule shall be 1 hour, three times per week, divided into (4) intervals of 15 minute duration to prevent water run-off.

This is a WELCO Compliant Landscape:

- Compost: (4) Y03 / 1,000 PZ to a depth of 6" to All Potted Areas.
- Plants: Use those listed on the landscape plan that require occasional, little or no summer water (average WUCOLS plant factor 0.5) for 75% of the plants used.
- Mulch: 2" layer of mulch on all exposed soil surfaces of Potted Areas.
- Turf: (See Note). Total turf area does not exceed 25% of the landscape area.
- Landscape Water Meter: A Landscape Water Meter shall be installed and shall be maintained by the owner.
- A weather-based irrigation controller shall be used to control the irrigation system.



APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

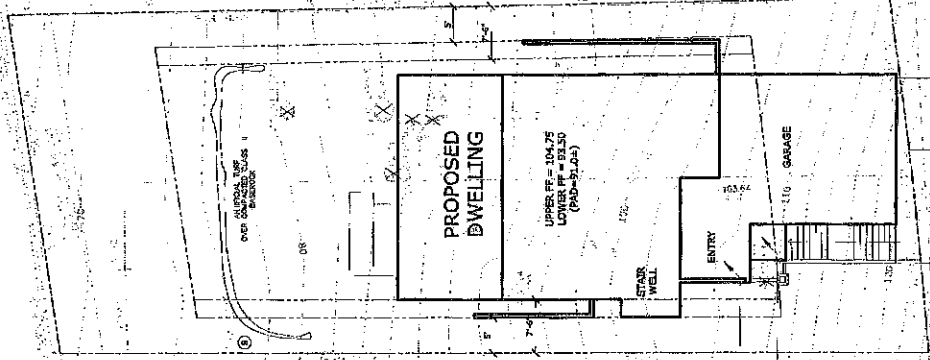
Scott Soden
Architectural Design
Phone 650-338-7704
Cell 650-823-5824

NUMBER	DATE	REVISION	DESCRIPTION

DATE:
01/05/2018

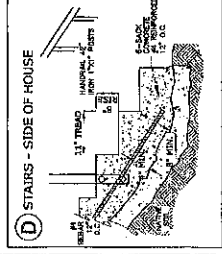
SCALE:
1/8" = 1'0"

IRRIGATION
PLAN
I-1



X
- TREES TO BE
REMOVED

COLUMBUS STREET (R/W VARIES)



Artscapes Landscape Design & Construction
340 Arlington Road, Richmond City, CA
License #72422

[illegible]

Scott Soden
Artscapes Landscape Design
Phone: 650-839-1704
Cell 650-823-5824

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.





Total Lot Area: 6,026 sq ft
 Structures:
 Landscaped Area: 2,700 sq ft
 Landscaped Area: 3,326 sq ft
 Landscaped Area: B.O.W.: 0 sq ft
 Total Landscaped Area: 3,326 sq ft
 Total Impervious Landscaped Area: 1,270 sq ft
 Total Impervious Landscaped Area: 2,056 sq ft (includes parking spaces)

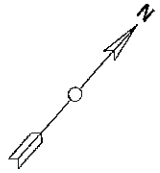
Total Front Perimeter:
 Front Perimeter:
 720 ft (Paved Driveway & Walk Sidings)
 Total Impervious:
 109 ft (Sidewalk, Paved & Driveway Sidings)

Total Back Perimeter:
 Total Back & Side Landscaped: 80 sq ft
 Total Back & Side Landscaped: 80 sq ft
 Back Paved:
 80 sq ft Walk Siding
 Back Impervious:
 0 sq ft

Total Hardscape coverage: 977 sq ft
 Total Landscaped Area: 3,326 sq ft
 = % Covered: 28% = 24%
 810 sq ft permeable = 24% permeable



COLUMBUS STREET (R/W VARIES)



REVISION TABLE	
NUMBER	DATE
1	01/05/2018
2	01/05/2018
3	01/05/2018
4	01/05/2018
5	01/05/2018
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98	01/05/2018
99	01/05/2018
100	01/05/2018

DATE: 01/05/2018

SCALE: 1/8" = 1'0"

TOPOGRAPHY PLAN

T-1

Scott Soden
Artscapes Landscape Design
Phone: 650-839-1704
Cell 650-823-5824

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COLUMBUS ST.
EL GRANADA, CA.

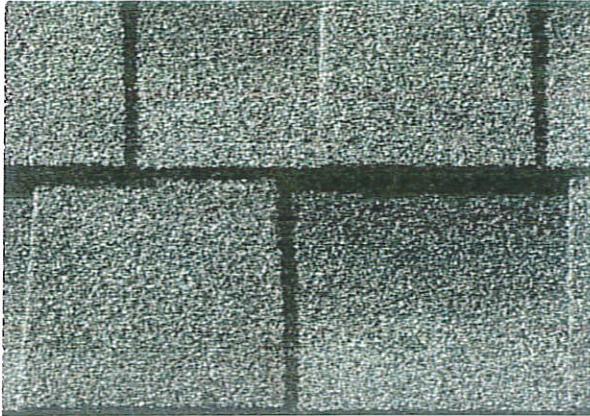


APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

GARAGE DOOR & WOOD TRIMS
GALVESTON GRAY AC-27



ROOFING - GAF COMP. SHINGLES TIMBERLINE HD IN PEWTER
GRAY



SIDING - PAINTED CEMENT PLASTER BM PIGEON GRAY



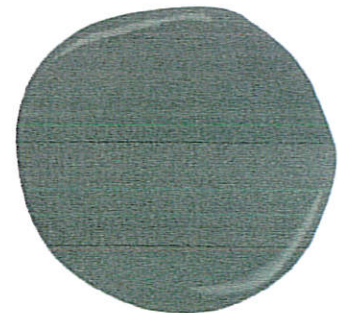
NATURAL STACKED STONE VENEER
PANELS IN WHITE OAK SPLITFACE



WINDOW & DOOR /TRIM -
BM CHANTILLY LACE OC-65



WINDOWS & DOORS KOLBE & KOLBE
SATIN BLACK



COLOR AND MATERIALS



406 LA JOLLA STREET
SAN MATEO, CA 94403
(650) 218-8161
CHRISRUFFAT@YAHOO.COM
LIC. # 48803

DATE

12/15/17

RECEIVED

DEC 19 2017

Project Number

AB03

2017-00211

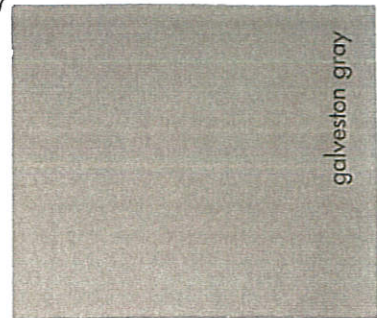
San Mateo County
Planning Division

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

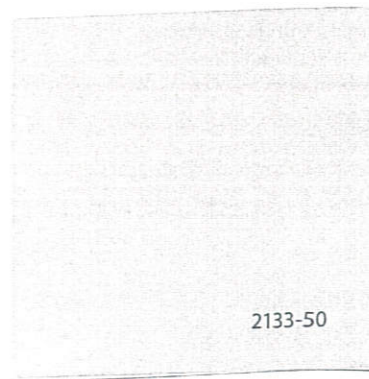
ROOFING - GAF COMP. SHINGLES TIMBERLINE HD IN PEWTER GRAY



GARAGE DOOR & WOOD TRIMS
GALVESTON GRAY AC-27



SIDING - PAINTED CEMENT PLASTER BM PIGEON GRAY



NATURAL STACKED STONE VENEER
PANELS IN WHITE OAK SPLITFACE



WINDOW & DOOR /TRIM -
BM CHANTILLY LACE OC-65

WINDOWS & DOORS KOLBE & KOLBE
SATIN BLACK



COLOR AND MATERIALS

D
R S

**RESIDENTIAL
DESIGN SOLUTIONS**

406 LA JOLLA STREET
SAN MATEO, CA 94403
(650) 218-8161
CHRISRUFFAT@YAHOO.COM
LIC. # 48803

DATE

12/15/17

RECEIVED

DEC 19 2017

Project Number San Mateo County
Planning Division

AB03 01N2017-00296

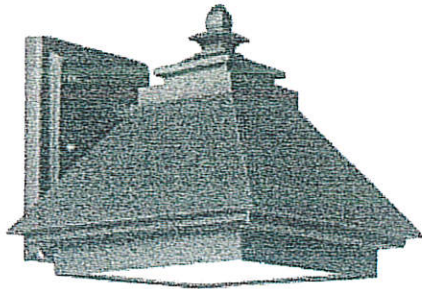
PLN2017-00296



Capital Lighting Fixture Company
5359 Rafe Banks Drive, Flowery Branch, GA, 30542-2768
TF: 800.323.3257 | P: 770.965.7238 | F: 770.965.7254
www.capitalightingfixture.com

JUL 20 2017

Waco County
Public Works Department



Collection: Dark Sky

1 Light Wall Lantern

9092BB

10"W x 8.25"H x 11"D

Burnished Bronze

Specs

Description

1 Light Wall Lantern

Collection

Dark Sky

Finish Description

Burnished Bronze

Fixture Material

Cast Aluminum

Glass

Acid-Washed Glass Lens

Lamping

1-100 Watt Medium

Voltage

120V

Certification

UL Listed, Rated for Wet Environments.

Back Plate Junction Top

3.26"

Back Plate Length

7.66"

Back Plate Width

5.72"

Center/Top

3"

Center/Bottom

5.25"

About

Designed in Atlanta. Manufactured in China.

Category

Outdoor

Style

Classic

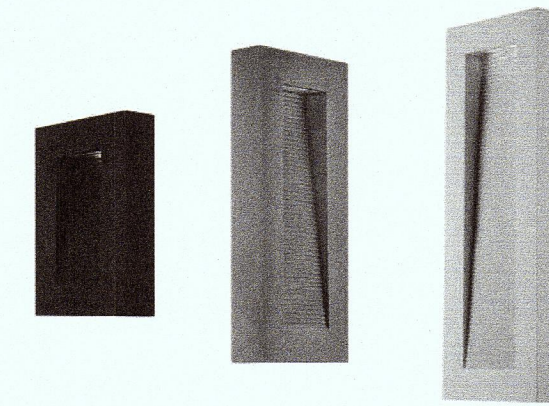
Light Source

Incandescent

Room List

Exterior

URBAN - model: WS-W11
LED Outdoor Sconce Luminaire



Fixture Type: BRONZE
Catalog Number:
Project: ABOLMOLUKI RESIDENCE
Location: EL GRANADA

PRODUCT DESCRIPTION
Line urban renewal, the Urban sconce gives new life to the conventional step baffle. Form follows function in this simplified indirect wall sconce. Clean styling and robust LED performance are combined in this modern dark sky luminaire.

- FEATURES**
- ETL & cETL listed for wet locations. IP65
 - Instant light and down light
 - Low profile design
 - Replaceable LED module
 - 277V option available (special order)
 - 50,000 hour potential life
 - Color Temp: 3000K
 - CRF: 85

SPECIFICATIONS

Construction: Aluminum.
Power: No driver or transformer required.
Light Source: High output LED.
Dimming: Dims to 10% with an electronic low voltage (ELV) dimmer.
Mounting: Mounts directly to junction box.
Finish: Black (BK), Bronze (BZ), Graphite (GH), White (WT).
Standards: ETL & cETL listed. ADA compliant. Dark Sky friendly. IP65. Wet location.

ORDER NUMBER

Model	Height	Width	# of LEDs	LED Lumens	Photometric Lumens	Finish
WS-W11	10"	10"	12W	3	720	370
WS-W11	16"	10"	16W	4	860	490
WS-W11	22"	22"	20W	5	1200	610

WS-W11 - -

Example: WS-W1116-GH
For 277V special order, add an "S" before the finish: WS-W1116S-GH

REPLACEMENT GLASS

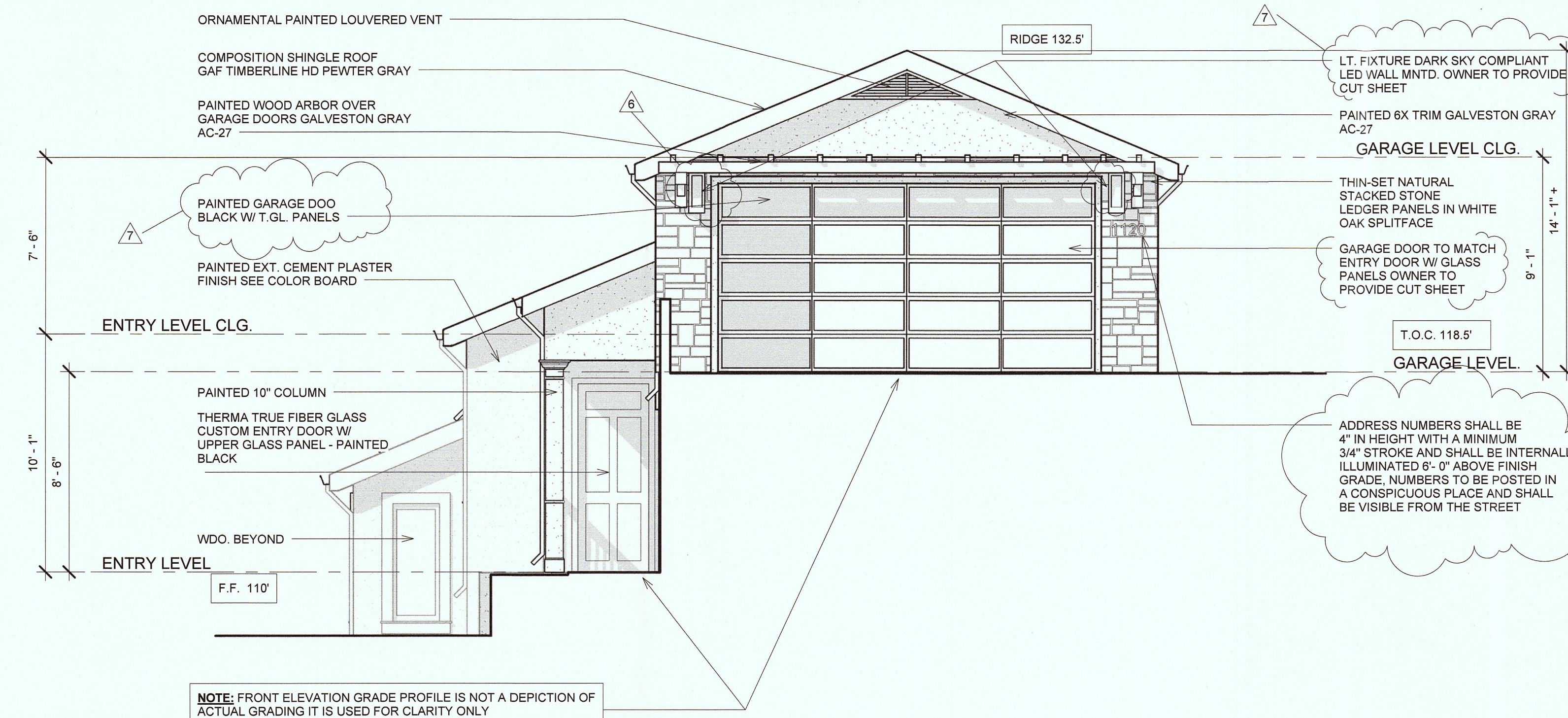
Model	Fixture	Description
RPL-GLA-1110-01	WS-W1110	Top Lens
RPL-GLA-1110-02	WS-W1110	Bottom Lens
RPL-GLA-1116-01	WS-W1116	Top Lens
RPL-GLA-1116-02	WS-W1116	Bottom Lens
RPL-GLA-1122-01	WS-W1122	Top Lens
RPL-GLA-1122-02	WS-W1122	Bottom Lens

Back Plate Dimensions:

Model	Dimension
WS-W1110	10"L x 7"W x 2"H
WS-W1116	16"L x 7"W x 2"H
WS-W1122	22"L x 8"W x 2"H

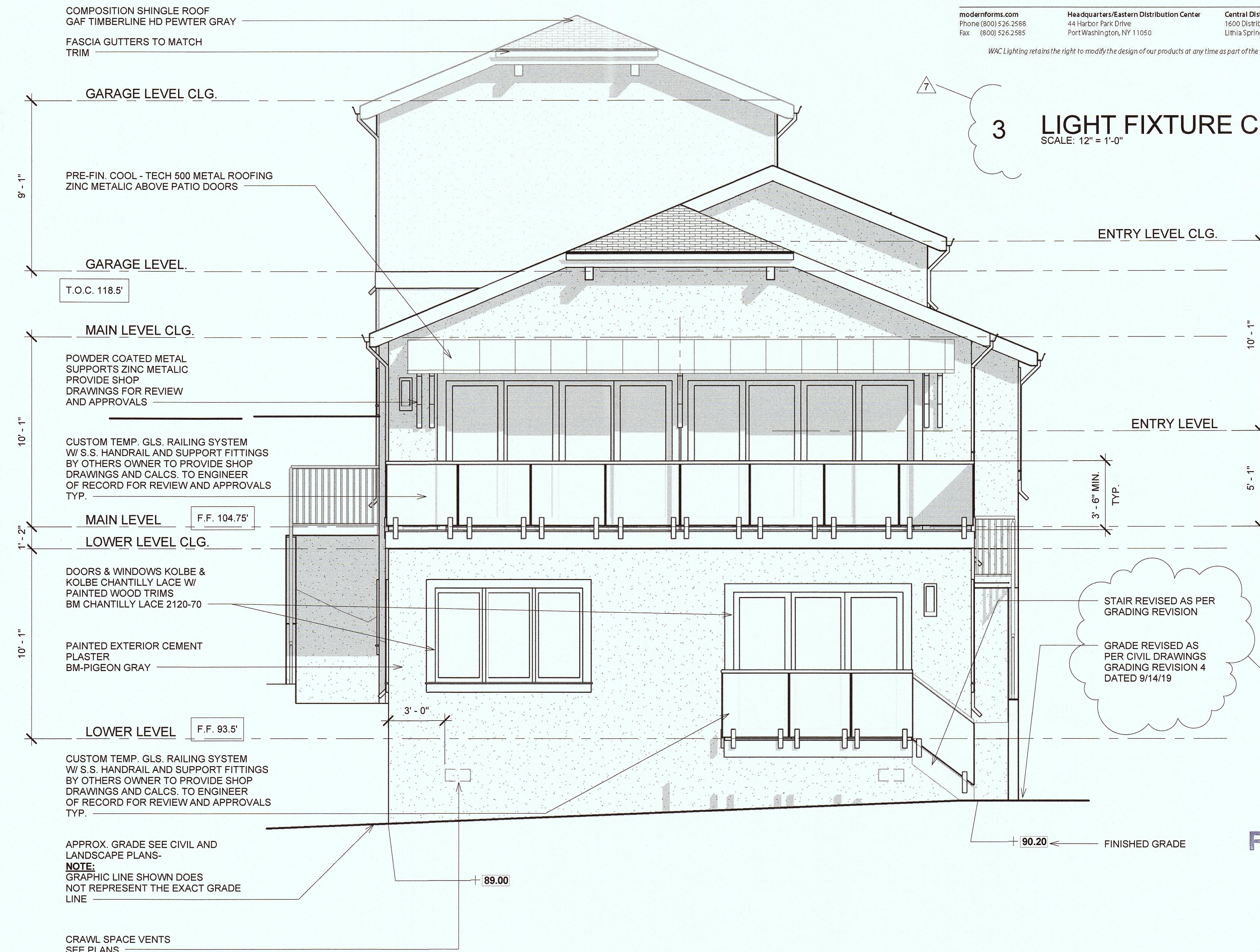
modernforms.com
Phone (800) 526-2588
Fax (800) 526-2585
Headquarters/Eastern Distribution Center
44 Harbor Park Drive
Port Washington, NY 11050
Central Distribution Center
1600 Distribution Ct.
Lithia Springs, GA 30122
Western Distribution Center
1750 Archibald Avenue
Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. AUG 2015



BENCHMARK ELEVATION
GARAGE T.O.C. 118.5'

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



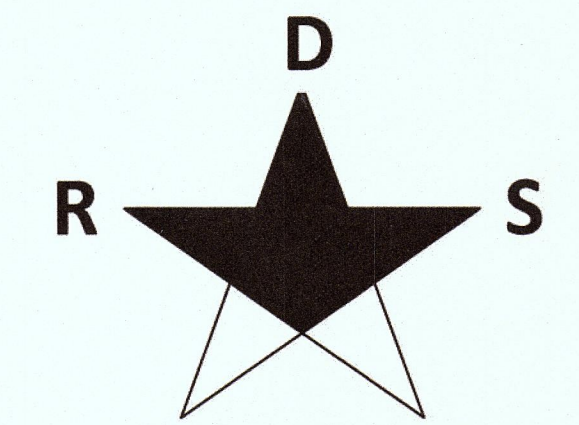
3 LIGHT FIXTURE CUT SHEET
SCALE: 1/2" = 1'-0"

RECEIVED

OCT 2 2 2019

San Mateo County
Planning Division

PLN2017-00296



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DESIGN SOLUTIONS

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SAN MATEO, CA 94403
(650) 218-8161

EMAIL RDS@CHRISTIANRUFFAT.COM

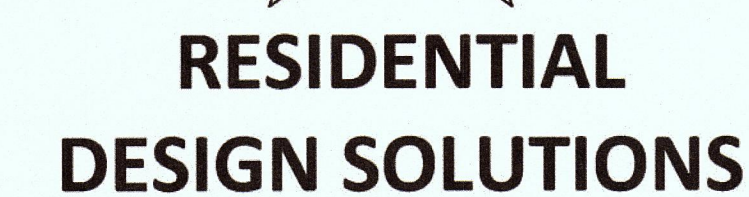
WEB CHRISTIANRUFFAT.COM

LIC. # 48803

ABOLMOLUKI
RESIDENCE
APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

	DESCRIPTION	DATE	BY
1	PLANNING	8-24-17	CR
2	PLANNING 2	9-25-17	CR
3			
4			
5	PLAN CHECK RESPONSES	7-1-18	CR
6	OWNER REVISION	7/31/19	CR
7	OWNER REVISION	10/21/19	CR

DATE 10/8/18 Drawing Number
Scale As indicated A5
Project Number AB03



LIC #48803

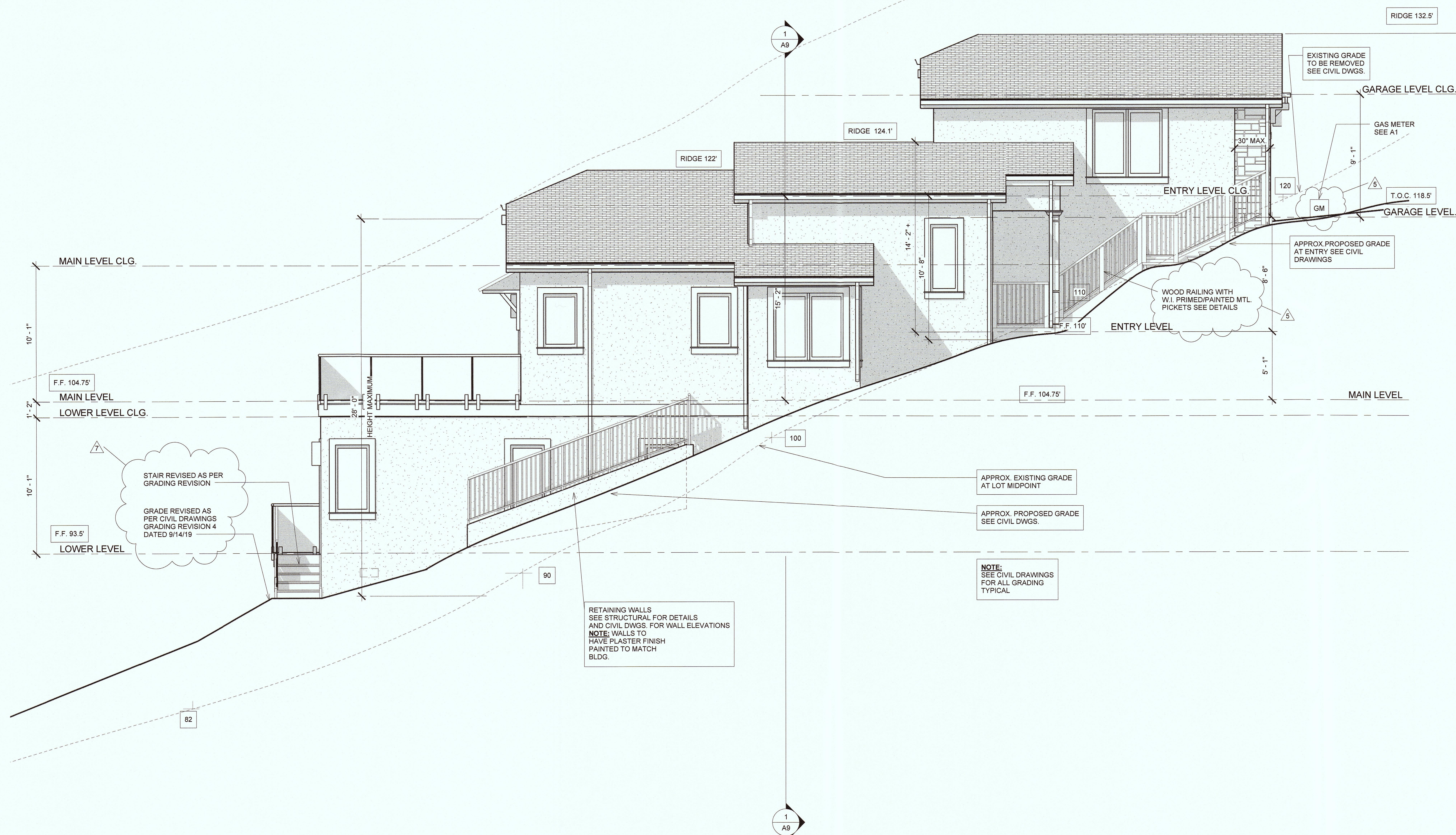
LIC. # 48803

ABOLMOLUKI RESIDENCE

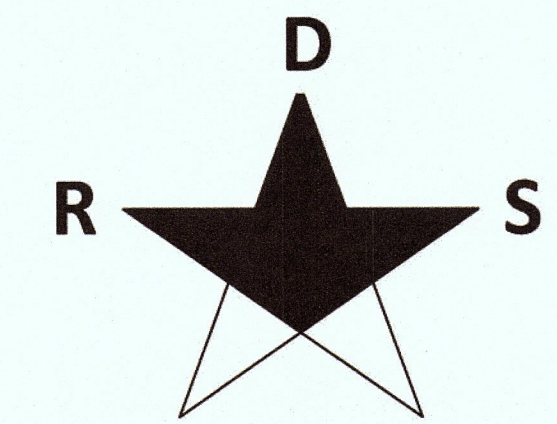
APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

REVISIONS	DESCRIPTION	DATE	BY
	1 PLANNING	8-24-17	C
	2		
	3		
	4		
	5 PLAN CHECK RESPONSES	7-1-18	CR
	6 OWNER REVISION	7/31/19	C
	7 OWNER REVISION	10/21/19	CR

Scale
1/4" = 1'-0"

Project Number
AB03

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



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LIC. # 48803

ABOLMOLUKI RESIDENCE

APN 047-275-050
COLUMBUS ST.
EL GRANADA, CA.

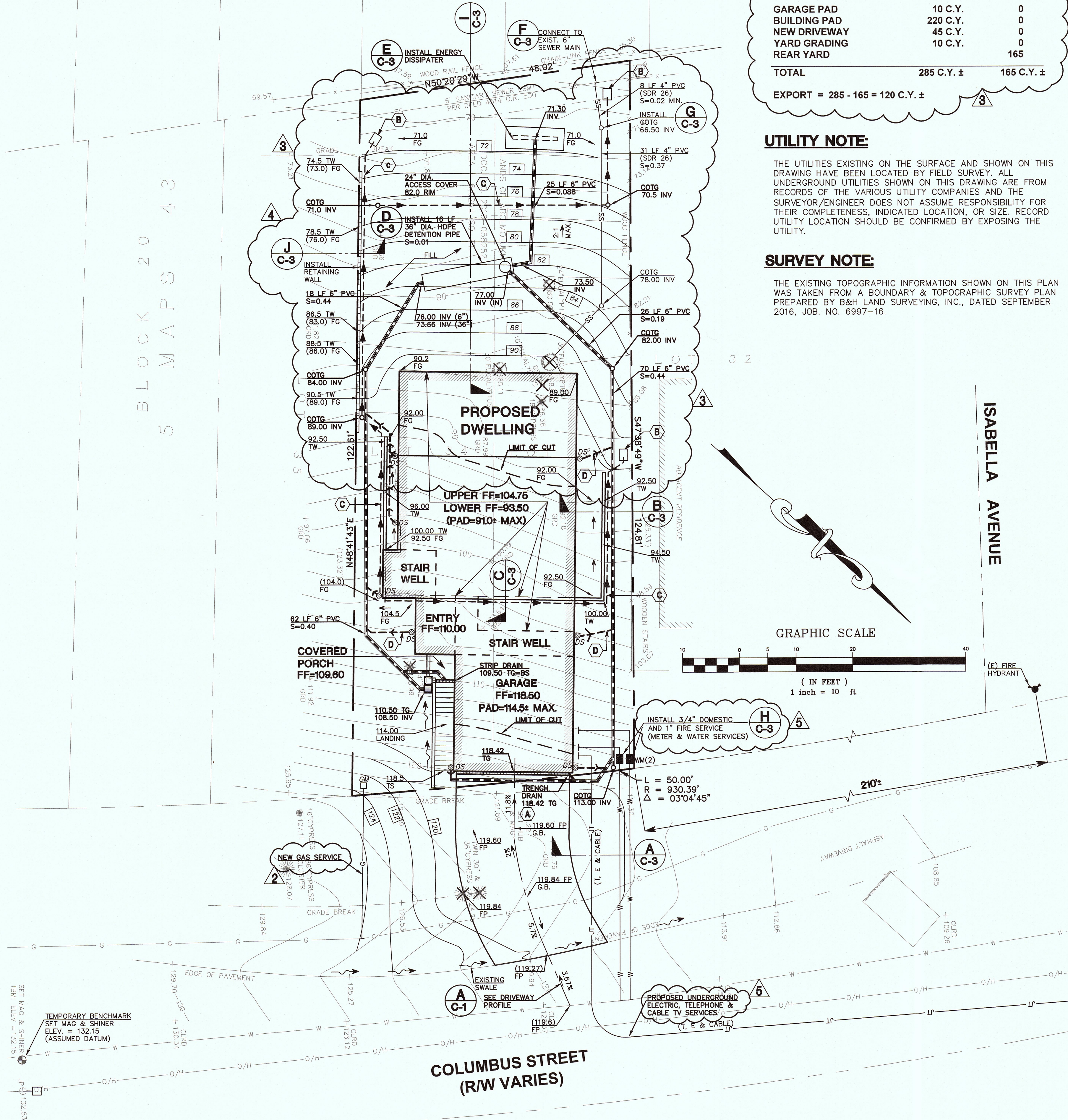
	DESCRIPTION	DATE	BY
REVISIONS	1 PLANNING	8-24-17	CR
	2		
	3		
	4		
	5 PLAN CHECK RESPONSES	7-1-18	CR
	6 OWNER REVISION	7/31/19	CR
	7 OWNER REVISION	10/21/19	CR

1 RIGHT ELEVATION

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

DATE 10/8/18 Drawing Number
Scale 1/4" = 1'-0" **A7**
Project Number AB03

BLOCK 20
5 MAPS 43



GRADING QUANTITIES:

	CUT (C.Y. ±)	FILL (C.Y. ±)
GARAGE PAD	10 C.Y.	0
BUILDING PAD	220 C.Y.	0
NEW DRIVEWAY	45 C.Y.	0
YARD GRADING	10 C.Y.	0
REAR YARD		165
TOTAL	285 C.Y. ±	165 C.Y. ±
EXPORT = 285 - 165 = 120 C.Y. ±		

UTILITY NOTE:

THE UTILITIES EXISTING ON THE SURFACE AND SHOWN ON THIS DRAWING HAVE BEEN LOCATED BY FIELD SURVEY. ALL UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE FROM RECORDS OF THE VARIOUS UTILITY COMPANIES AND THE SURVEYOR/ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR THEIR COMPLETENESS, INDICATED LOCATION, OR SIZE. RECORD UTILITY LOCATION SHOULD BE CONFIRMED BY EXPOSING THE UTILITY.

SURVEY NOTE:

THE EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN WAS TAKEN FROM A BOUNDARY & TOPOGRAPHIC SURVEY PLAN PREPARED BY B&H LAND SURVEYING, INC., DATED SEPTEMBER 2016, JOB. NO. 6997-16.

GENERAL NOTES:

- ALL MATERIALS SHALL BE FURNISHED BY AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
- WHEN APPLICABLE, ALL CONSTRUCTION MATERIALS AND METHODS SHALL COMPLY WITH THE ORDINANCES, SPECIFICATIONS AND STANDARDS OF THE COUNTY OF SAN MATEO, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) PRIOR TO START OF CONSTRUCTION. PHONE (800) 642-2444.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTING ANY EXCESS MATERIAL OR SUPPLYING MATERIAL FOR DEFICIENCIES TO BRING DRIVEWAY AND BUILDING PADS TO REQUIRED GRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, GRADING, ETC., AND TO AVOID ABRUPT OR APPARENT CHANGES OR CROSS SLOPES, LOW SPOTS OR HAZARDOUS CONDITIONS.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL WORK SHOWN ON THIS PLAN.
- ALL STORM DRAIN PIPES SHALL BE PVC SDR 35 WITH BELL AND SPIGOT RUBBER GASKET JOINTS PER ASTM D3034 OR BETTER.

GEOTECHNICAL ENGINEER'S NOTE:

THE GEOTECHNICAL SITE INVESTIGATION REPORT PREPARED BY J. YANG AND ENGINEERS, PROJECT NO. J16-1625, DATED JANUARY 25, 2017, SHALL BE MADE A PART OF THIS PLAN.

CONSTRUCTION NOTES:

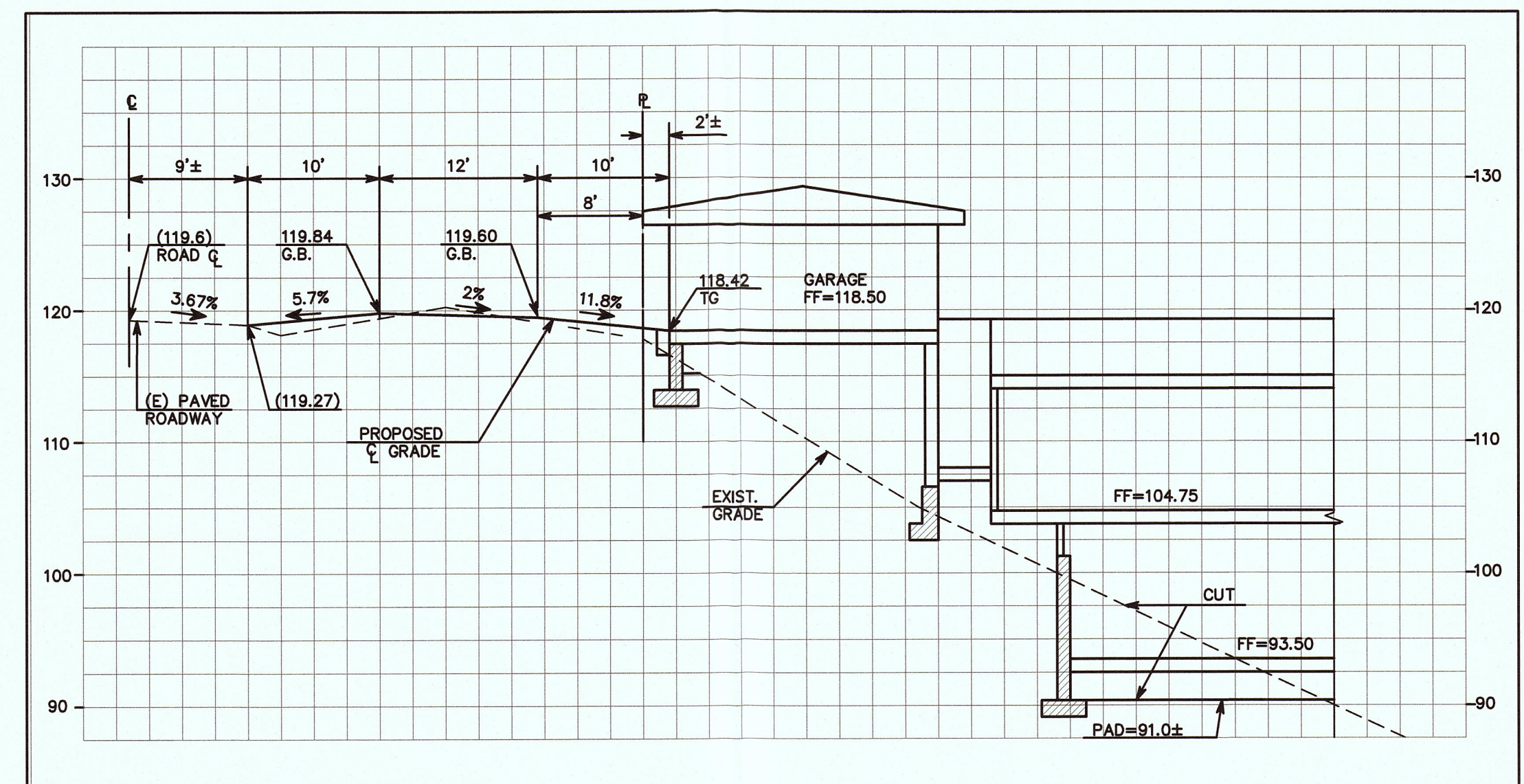
- INSTALL 6" WIDE TRENCH DRAIN WITH TRAFFIC RATED GRATE COVER BY "NDS" OR APPROVED EQUAL.
- DAYLIGHT END OF 4" DIA. PERFORATED PVC PIPE AND INSTALL 2' X 3' ROCK RIPRAP DISSIPATER.
- INSTALL 4" DIA. PERF. PVC SUBDRAIN PIPE AT 1% MIN. SLOPE.
- CONNECT DOWNSPOUT TO NEW STORM DRAIN PIPE WITH 4" PVC AT 1% MIN. SLOPE (TYPICAL).

GRADING PLAN LEGEND:

BS	BOTTOM OF STEP
COTG	CLEANOUT TO GRADE
DS	DOWNSPOUT
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOWLINE
FP	FINISH PAVE
GB	GRADE BREAK
INV	INVERT
TG	TOP OF GRATE
TS	TOP OF STEP
TW	TOP OF WALL
WM	WATER METER
SS	SANITARY SEWER LINE
W	WATER LINE
T20	NEW CONTOUR
JT	JOINT TRENCH
G	GAS LINE
SS	NEW STORM DRAIN LINE
W	NEW DRAIN INLET
JT	SWALE
G	SURFACE RUNOFF FLOW DIRECTION
X	EXIST. TREE TO BE REMOVED
(119.38)	EXIST. GRADE

SURVEY LEGEND:

●	FOUND IRON PIPE OR REBAR, AS NOTED
A/C	FOUND 2" BRASS DISK WITH PUNCH, IN CASING
BW	SET PER 8 U.S. 108 - 111
CB	ASPHALTIC CONCRETE
CIP	BACK OF WALK
CMC	CATCH BASIN
CO	CAST IRON PIPE
DI	CORRUGATED METAL PIPE
EM	CONCRETE
FD	CLEAN-OUT
FF	DROP INLET
FL	ELECTRIC METER
FM	FINISHED FLOOR
GH	FLOW LINE
GM	FIRE HYDRANT
GRD	GUY ANCHOR
HCR	GAS METER
INV	GROUND
IP	HANDICAP RAMP
JP	INVERT
LAT.	IRON PIPE
LG	JOINT POLE
O/H	LATERAL
P.U.E.	LIP OF GUTTER
RCP	OVERHEAD
RET. WALL	PUBLIC UTILITIES EASEMENT
R/W	REINFORCED CONCRETE PIPE
SSCO	RETAINING WALL
SSMH	RIGHT OF WAY
SDMH	SANITARY SEWER CLEAN-OUT
TBC	SANITARY SEWER MANHOLE
T/W	STORM DRAIN MANHOLE
U/G	TOP BACK OF CURB
VOP	TOP OF WALL
WV	UNDERGROUND
WM	VITRIFIED CLAY PIPE
-CTV-	WATER VALVE
-E-	WATER METER BOX
-G-	CABLE TELEVISION LINE
-SD-	ELECTRICAL LINE
-T-	GAS LINE
-W-	SANITARY SEWER LINE
	STORM DRAIN LINE
	TELEPHONE LINE
	WATER LINE



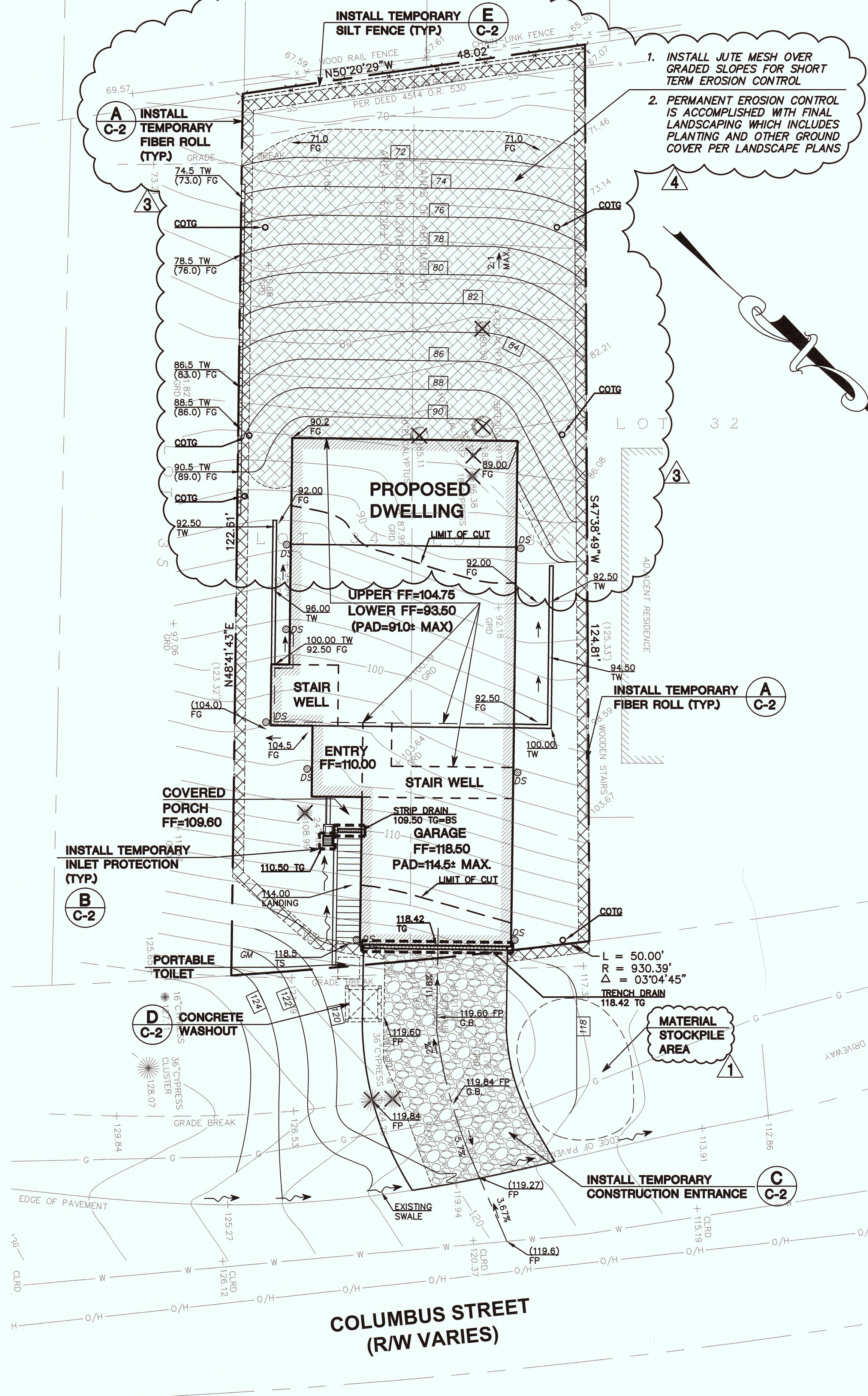
A DRIVEWAY PROFILE
SCALE (VERTICAL & HORIZONTAL): 1"=10'

NEW WATER & ELECTRICAL SERVICES	10/22/19	DATE:
PER COUNTY COMMENTS	09/4/19	BY:
GRADING REVISION	07/25/19	DESCRIPTION
NEW GAS & JOINT TRENCH LOCATIONS	10/09/18	REV.

MACLEOD AND ASSOCIATES
CIVIL ENGINEERING • LAND SURVEYING
965 CENTER STREET • SAN CARLOS, CA 94070 • (650) 593-8580

PREPARED FOR:	BAHRAM ABOLMOLUKI
GRADING, DRAINAGE AND UTILITY PLAN	COLUMBUS STREET A.P.N. 047-275-050 UNINCORPORATED SAN MATEO COUNTY CALIFORNIA
DRAWN BY:	DJK/AAP
DESIGNED BY:	VPG
CHECKED BY:	DGM
SCALE:	1"=10'
DATE:	08/24/18
DRAWING NO.	4452-GRAD
SHEET	1 OF 4

C-1



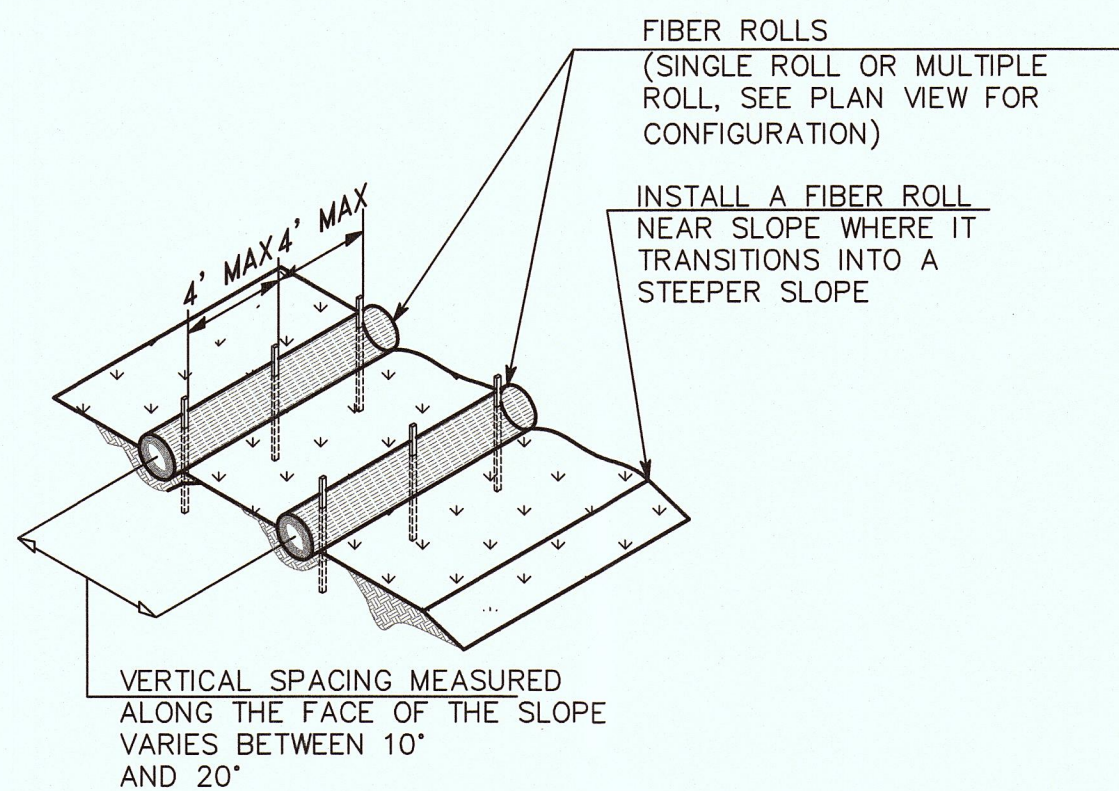
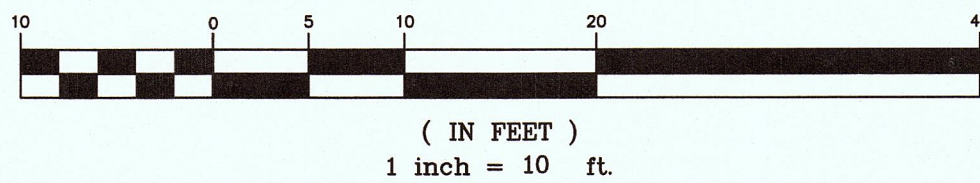
LEGEND:

EXISTING TREES TO BE REMOVED

DUST CONTROL NOTES:

1. WATER ALL CONSTRUCTION AND GRADING AREAS AT LEAST TWICE DAILY.
2. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIAL, OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST 2 FEET OF FREEBOARD.
3. ENCLOSE, COVER, WATER TWICE DAILY, OR APPLY (NON-TOXIC) BINDERS TO EXPOSED STOCKPILE (DIRT, SAND, ETC.).

GRAPHIC SCALE

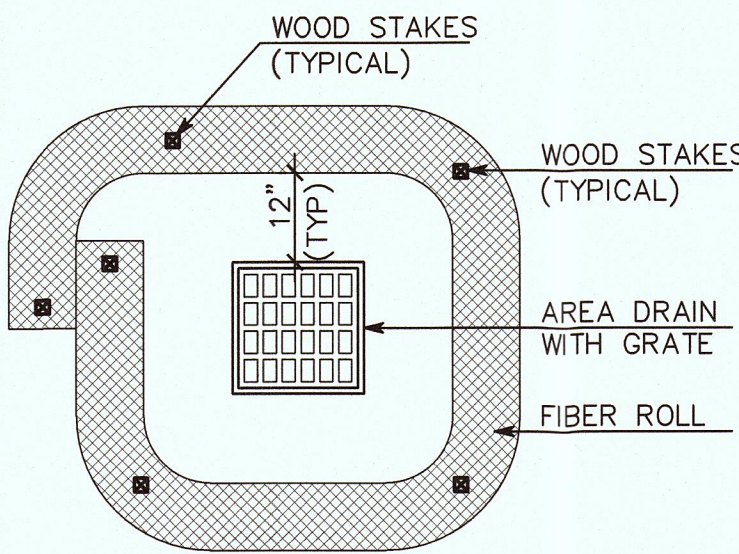


TYPICAL FIBER ROLL INSTALLATION

N.T.S.

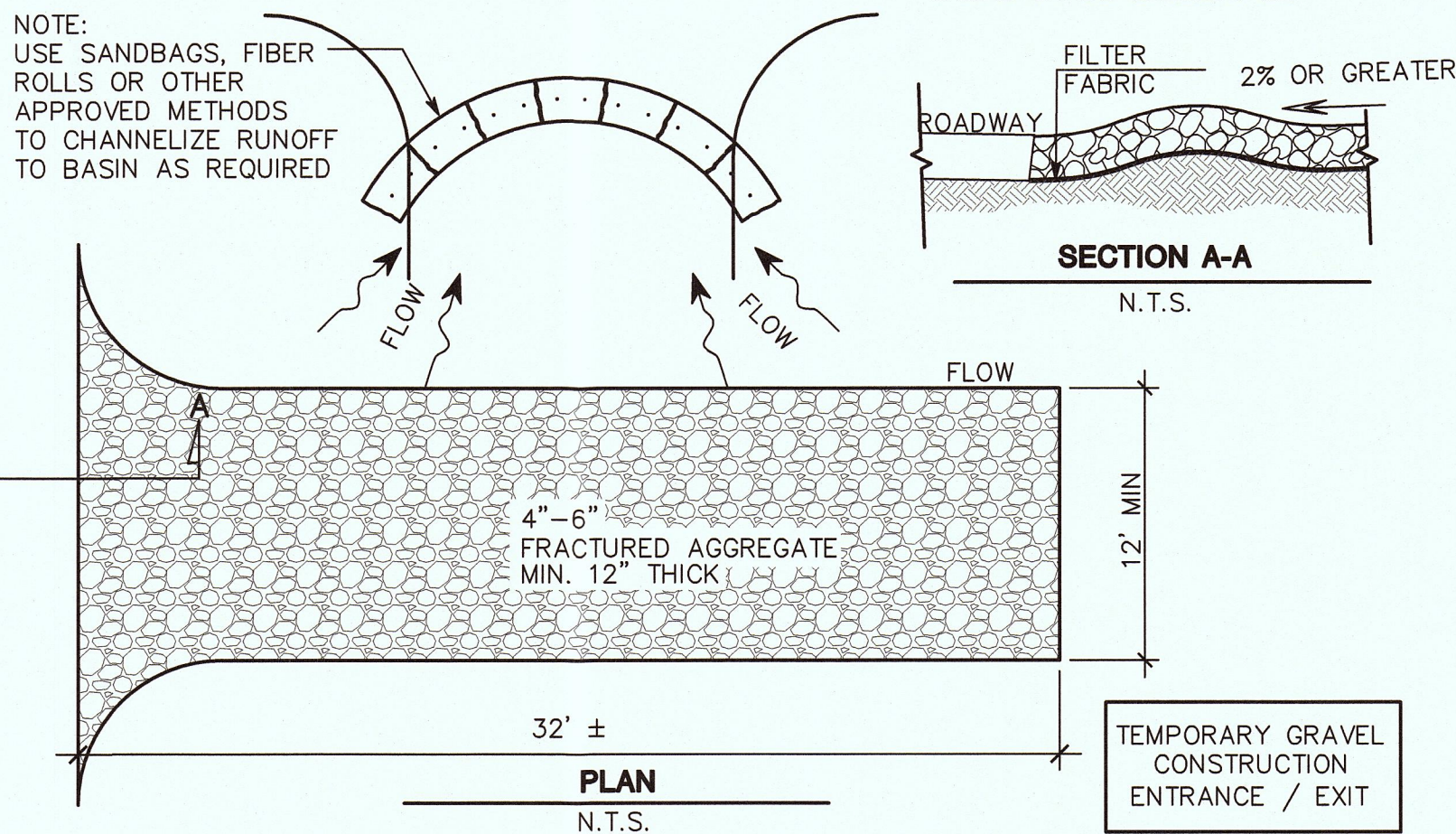
FIBER ROLL DETAIL

SCALE: NOT TO SCALE



DRAIN INLET PROTECTION DETAIL

SCALE: NOT TO SCALE



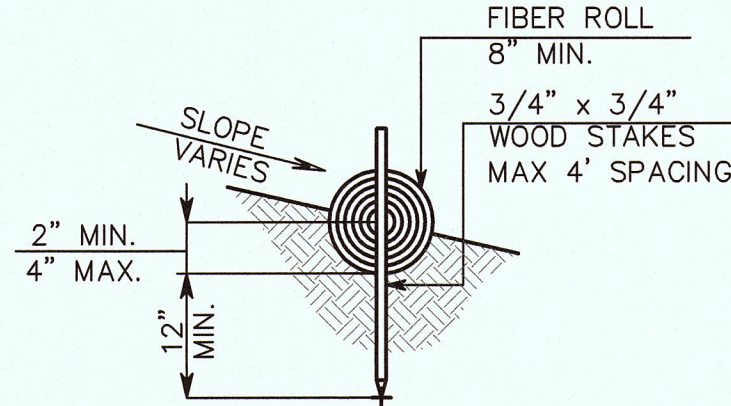
CONSTRUCTION ENTRANCE DETAIL

SCALE: NOT TO SCALE

EROSION CONTROL NOTES:

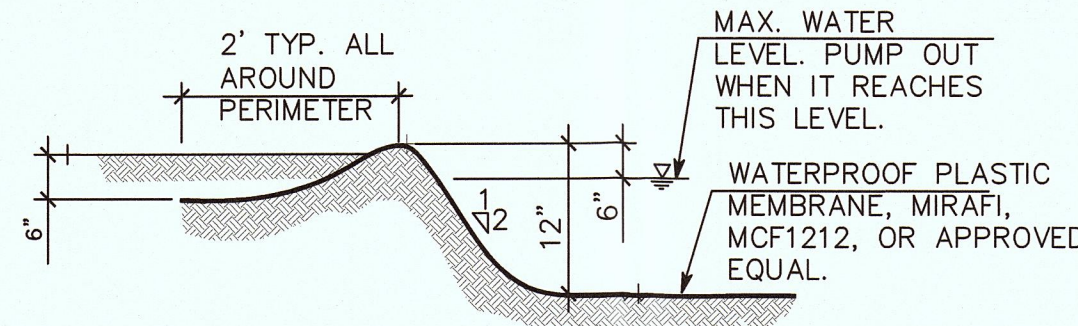
1. THE INTENT OF THE EROSION CONTROL PLAN IS TO MINIMIZE ANY WATER QUALITY IMPACTS IN THE FORM OF SEDIMENT POLLUTION TO MAIN CREEK & TRIBUTARIES.
2. A CONSTRUCTION ENTRANCE WILL BE INSTALLED PRIOR TO OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE CONSTRUCTION ENTRANCE. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS- OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITION DEMAND, AND REPAIR OF ANY MEASURES USED TO TRAP SEDIMENTS.
3. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH THE USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
4. THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE OPERABLE DURING THE RAINY SEASON, OCTOBER 1 TO APRIL 15. BY OCTOBER 1, GRADING AND INSTALLATION OF STORM DRAINAGE AND EROSION AND SEDIMENT CONTROL FACILITIES WILL BE COMPLETED. NO GRADING WILL OCCUR BETWEEN OCTOBER 1 AND APRIL 15 UNLESS AUTHORIZED BY THE CITY REPRESENTATIVE.
5. DURING THE RAINY SEASON, ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT-LADEN RUNOFF ENTERS THE STORM DRAINAGE SYSTEM.
6. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL FIELD MANUAL OF THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, 4TH EDITION, DATED AUGUST 2002 OR LATER EDITION.

NOTE: INSTALL FIBER ROLL ALONG A LEVEL CONTOUR



ENTRENCHMENT DETAIL

N.T.S.

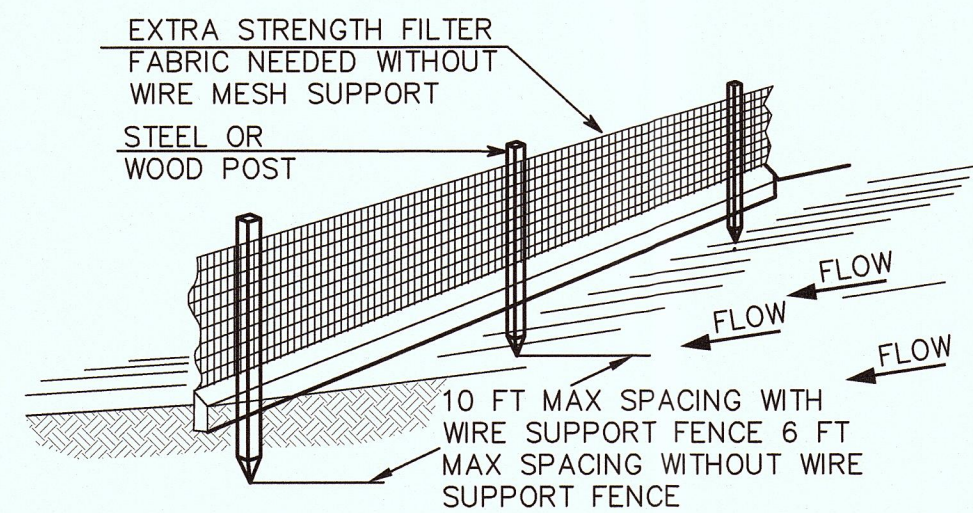


SECTION A-A

N.T.S.

TEMPORARY CONCRETE WASHOUT DETAIL

SCALE: (NOT TO SCALE)



SILT FENCE DETAIL

SCALE: (NOT TO SCALE)

SAN MATEO COUNTY STANDARD NOTES:

1. EROSION CONTROL POINT OF CONTACT: PROJECT MANAGER: JEN JACINTO EMAIL: jen.bobuilders@gmail.com OFFICE: (650) 804-8850
2. PERFORM CLEARING AND EARTH-MOVING ACTIVITIES ONLY DURING DRY WEATHER. MEASURES TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO EARTH-MOVING ACTIVITIES AND CONSTRUCTION
3. STABILIZE ALL DENUDED AREAS AND MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY BETWEEN OCTOBER 1 AND APRIL 30.
4. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.
5. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICAL, WASH WATER OR SEDIMENTS AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
6. AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED AND TREATED.
7. LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.
8. LIMIT CONSTRUCTION ACCESS ROUTES TO STABILIZED, DESIGNATED ACCESS POINTS.
8. LIMIT CONSTRUCTION ACCESS ROUTES TO STABILIZED, DESIGNATED ACCESS POINTS.
9. AVOID TRACKING DIRT OR OTHER MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS.
10. TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEES AND SUBCONTRACTORS REGARDING THE WATERSHED PROTECTION MAINTENANCE STANDARDS AND CONSTRUCTION BEST MANAGEMENT PRACTICES.
11. THE AREAS DELINEATED ON THE PLANS FOR PARKING, GRUBBING, STORAGE ETC., SHALL NOT BE ENLARGED OR "RUN OVER".
12. CONSTRUCTION SITES ARE REQUIRED TO HAVE EROSION CONTROL MATERIALS ON-SITE DURING THE "OFF-SEASON".
13. DUST CONTROL IS REQUIRED YEAR-ROUND.
14. EROSION CONTROL MATERIALS SHALL BE STORED ON-SITE.
15. USE OF PLASTIC SHEETING BETWEEN OCTOBER 1st. AND APRIL 30th IS NOT ACCEPTABLE, UNLESS FOR USE ON STOCKPILES WHERE THE STOCKPILE IS ALSO PROTECTED WITH FIBER ROLLS CONTAINING THE BASE OF THE STOCKPILE.
16. THE TREE PROTECTION SHALL BE IN PLACE BEFORE ANY GRADING, EXCAVATING OR GRUBBING IS STARTED.

REV.	DESCRIPTION	BY:	DATE:
1	PER COUNTY COMMENTS	VPG	08/24/18
2	GRADING REVISION	VPG	07/25/18
3	PER PLANNING COMMENTS	VPG	09/27/18



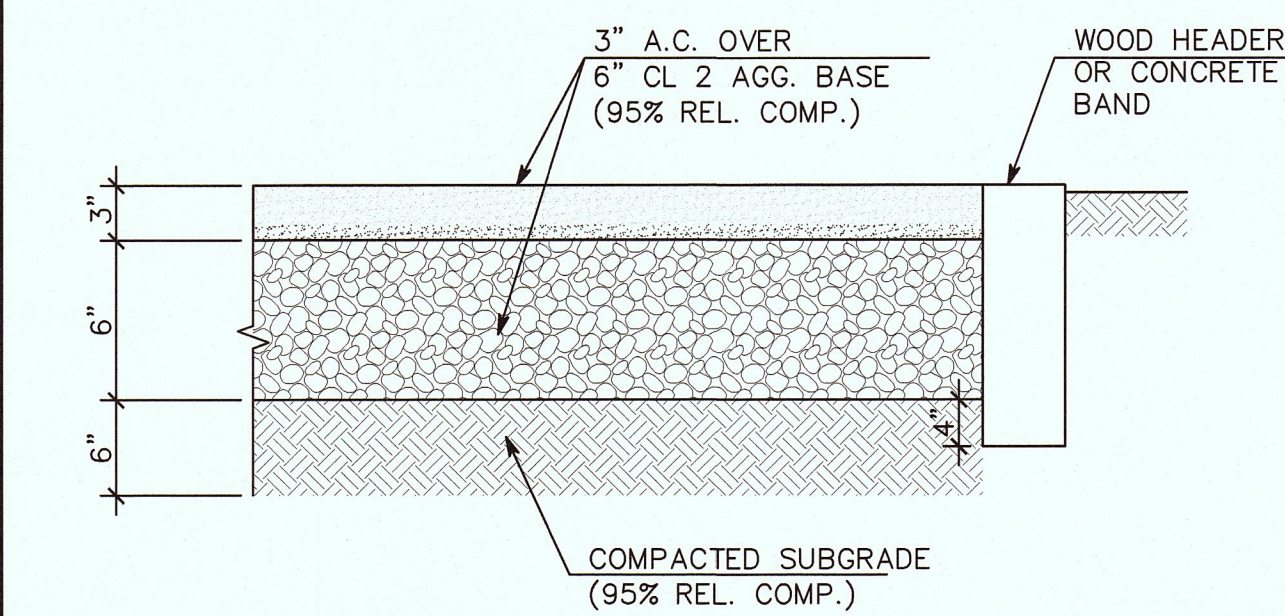
MACLEOD AND ASSOCIATES
CIVIL ENGINEERING • LAND SURVEYING
965 CENTER STREET • SAN CARLOS, CA 94070 • (650) 593-8580

PREPARED FOR:
BAHRAM ABOLMOLUKI

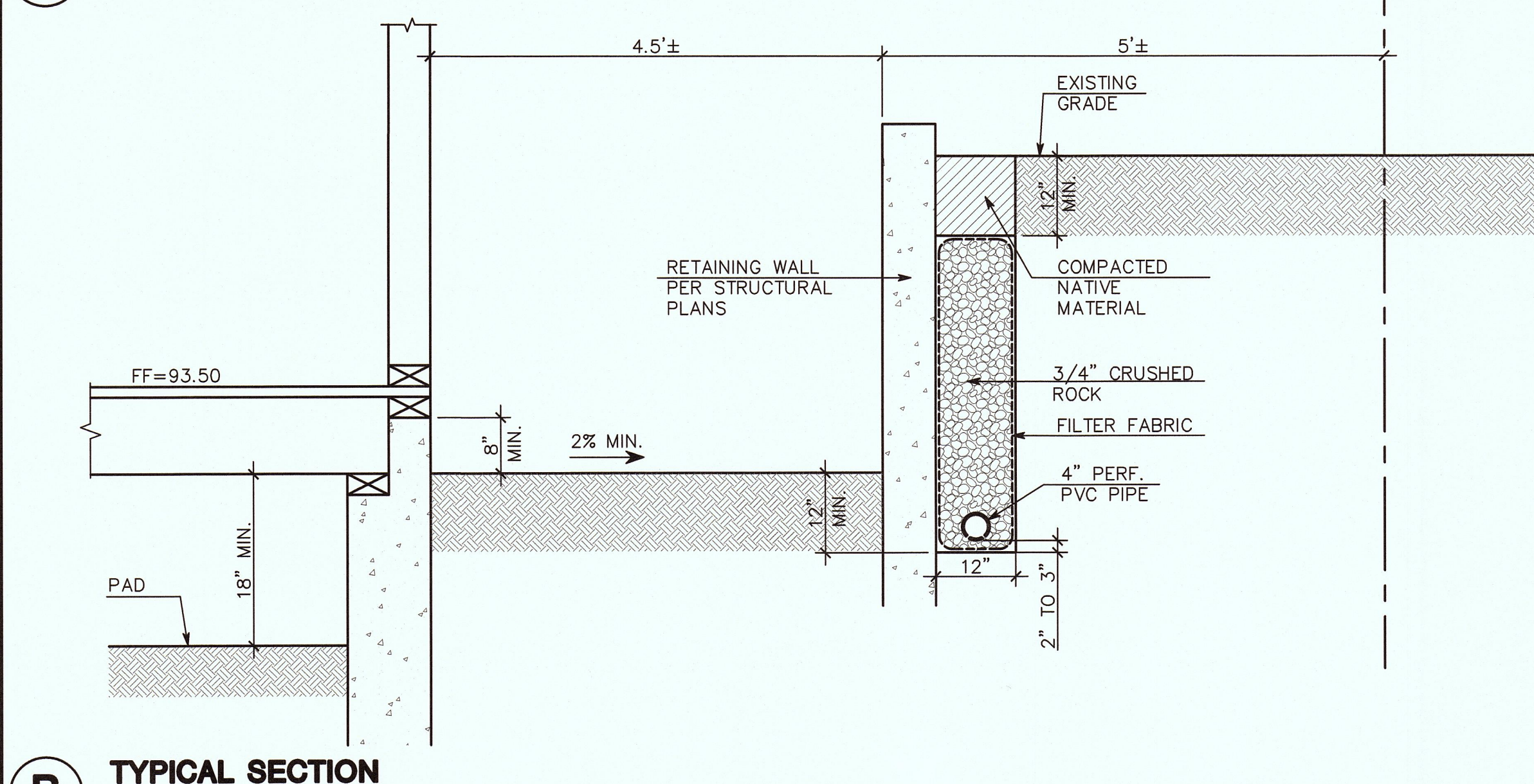
EROSION AND SEDIMENTATION CONTROL PLAN
WITH DUST CONTROL NOTES
COLUMBUS STREET
A.P.N. 047-275-050
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA

DRAWN BY:	DJK/AAP
DESIGNED BY:	VPG
CHECKED BY:	OGM
SCALE:	1"=10'
DATE:	08/24/18
DRAWING NO.	4452-GRAD
SHEET	2 OF 4

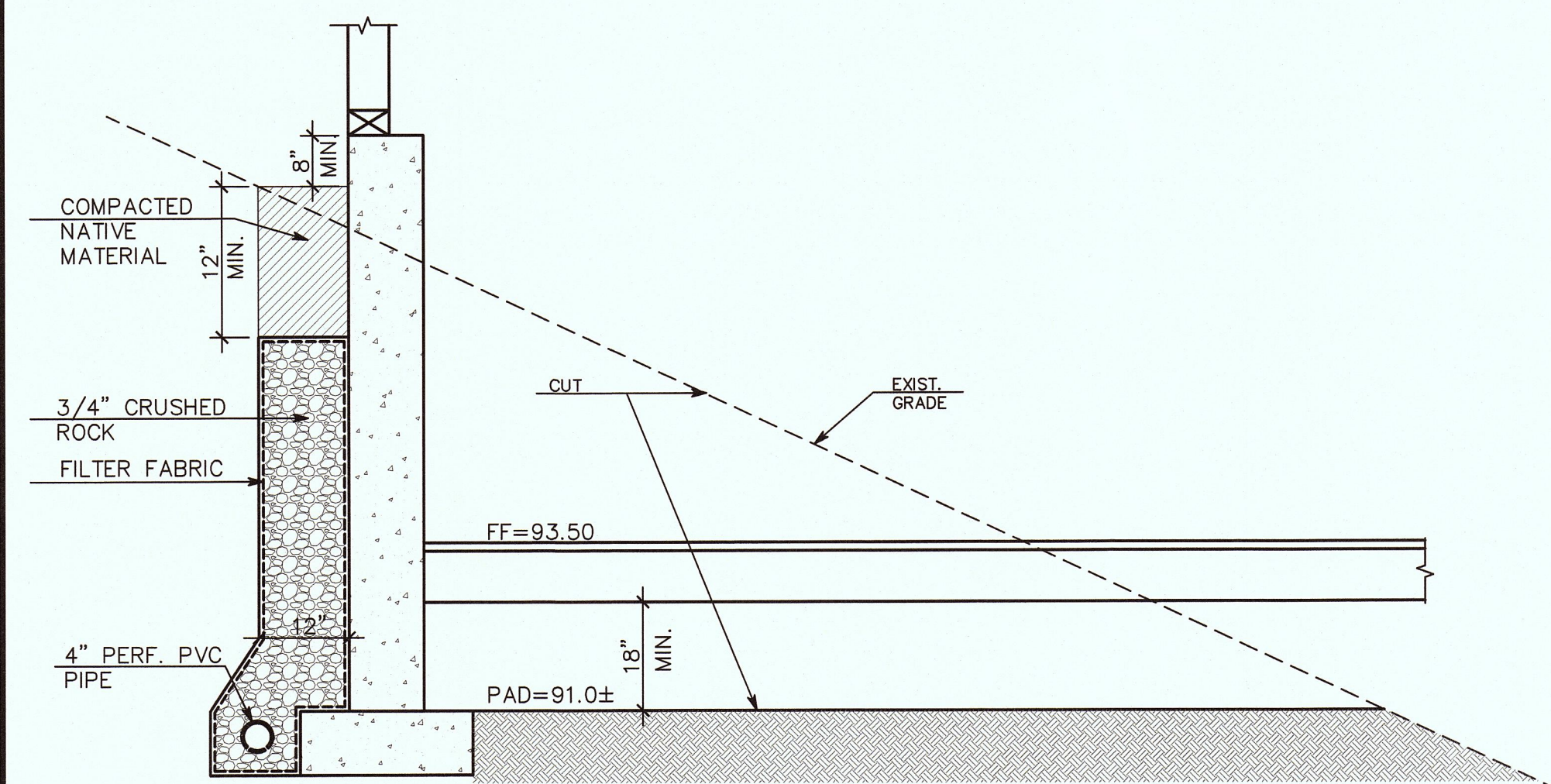
C-2



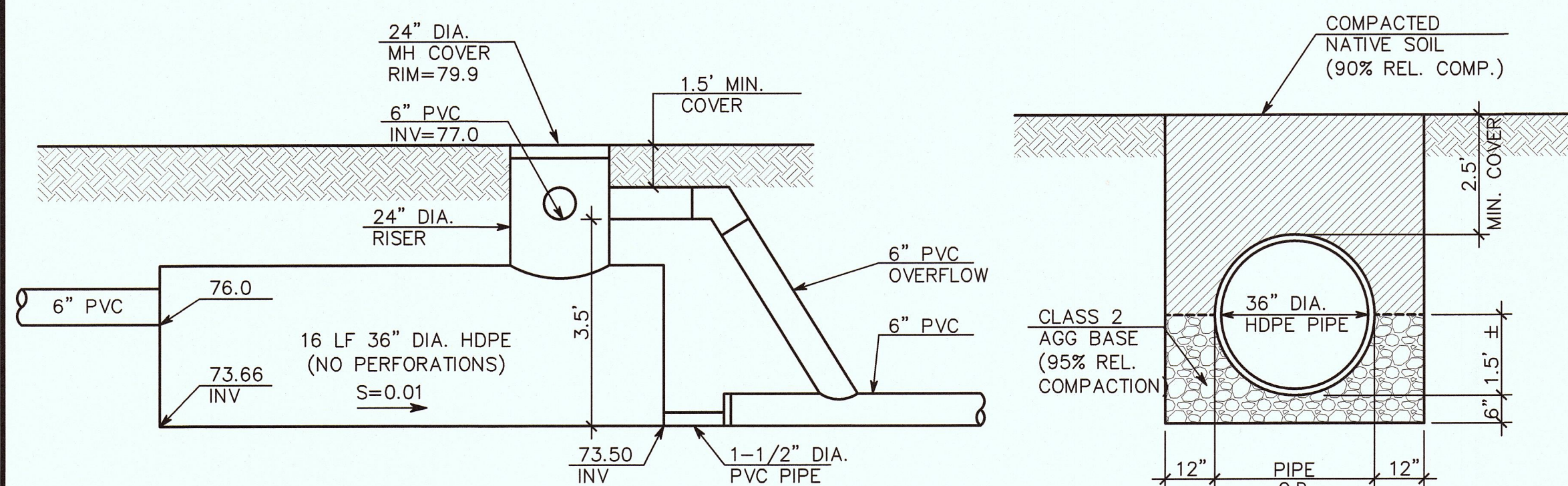
A DRIVEWAY PAVEMENT SECTION
SCALE: (NOT TO SCALE)



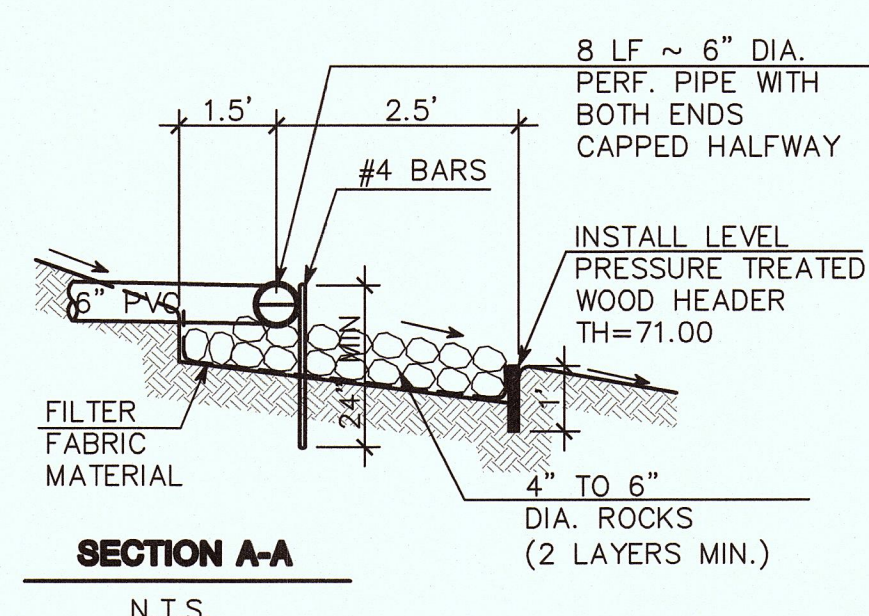
B TYPICAL SECTION
SCALE: (NOT TO SCALE)



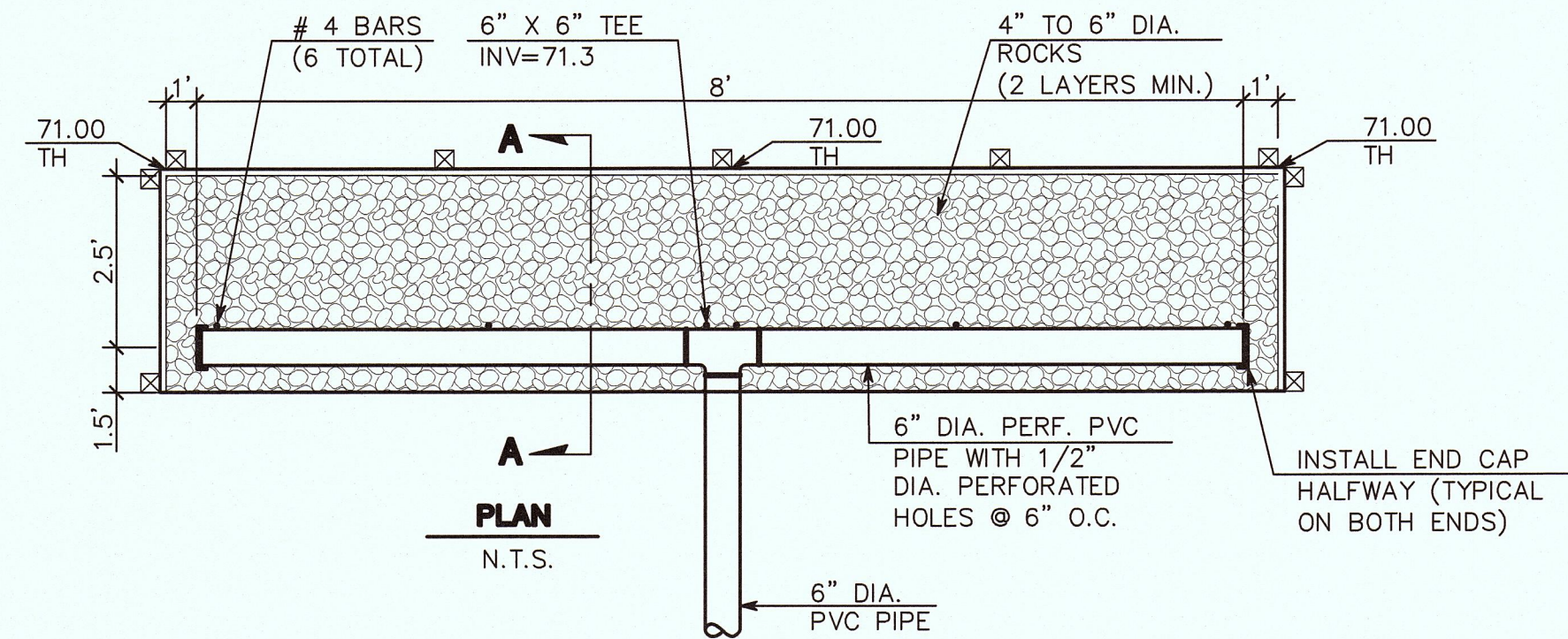
C TYPICAL SECTION
SCALE: (NOT TO SCALE)



D DETENTION PIPE DETAIL
SCALE: NOT TO SCALE

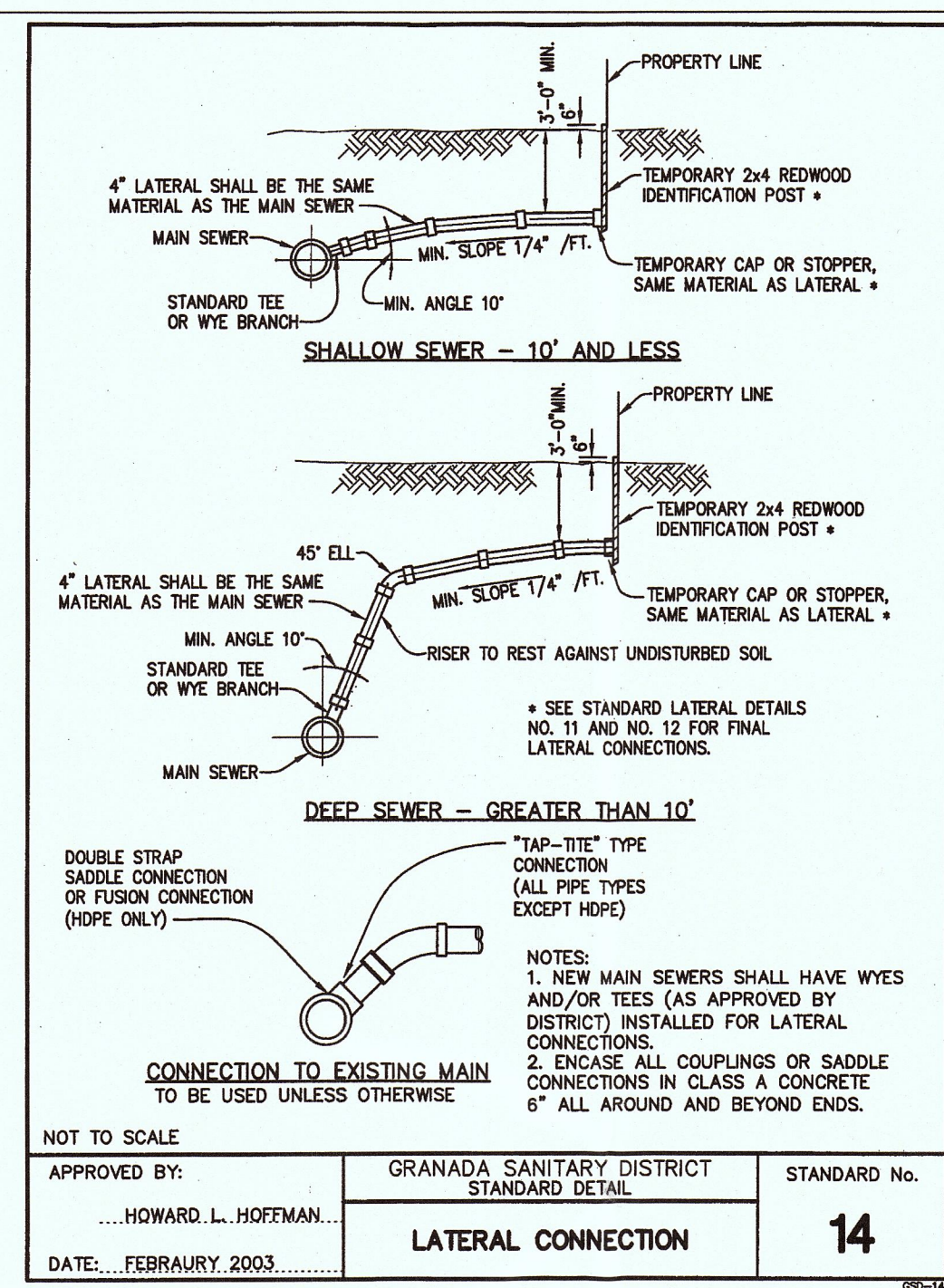


SECTION A-A
N.T.S.

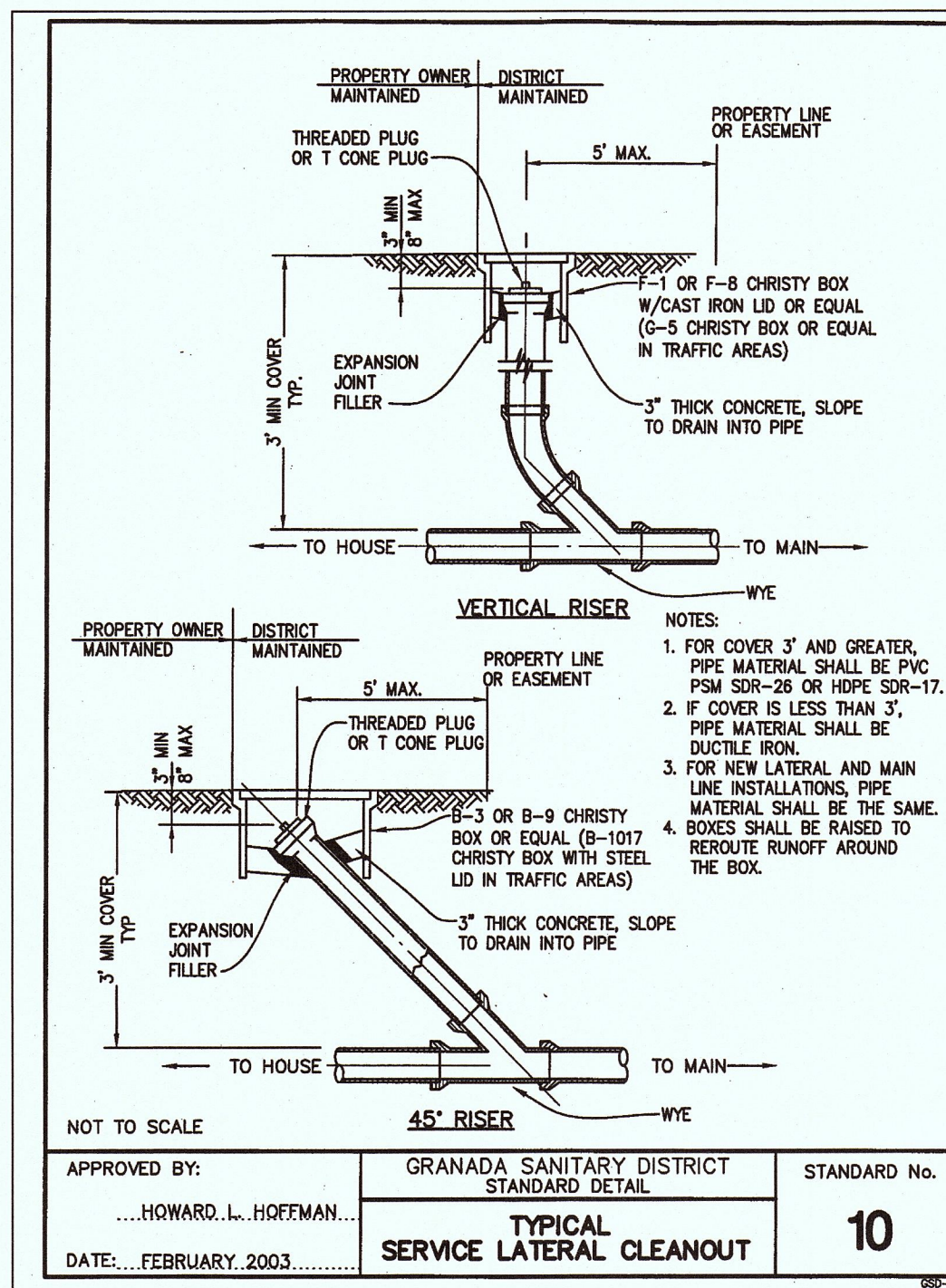


PLAN
N.T.S.

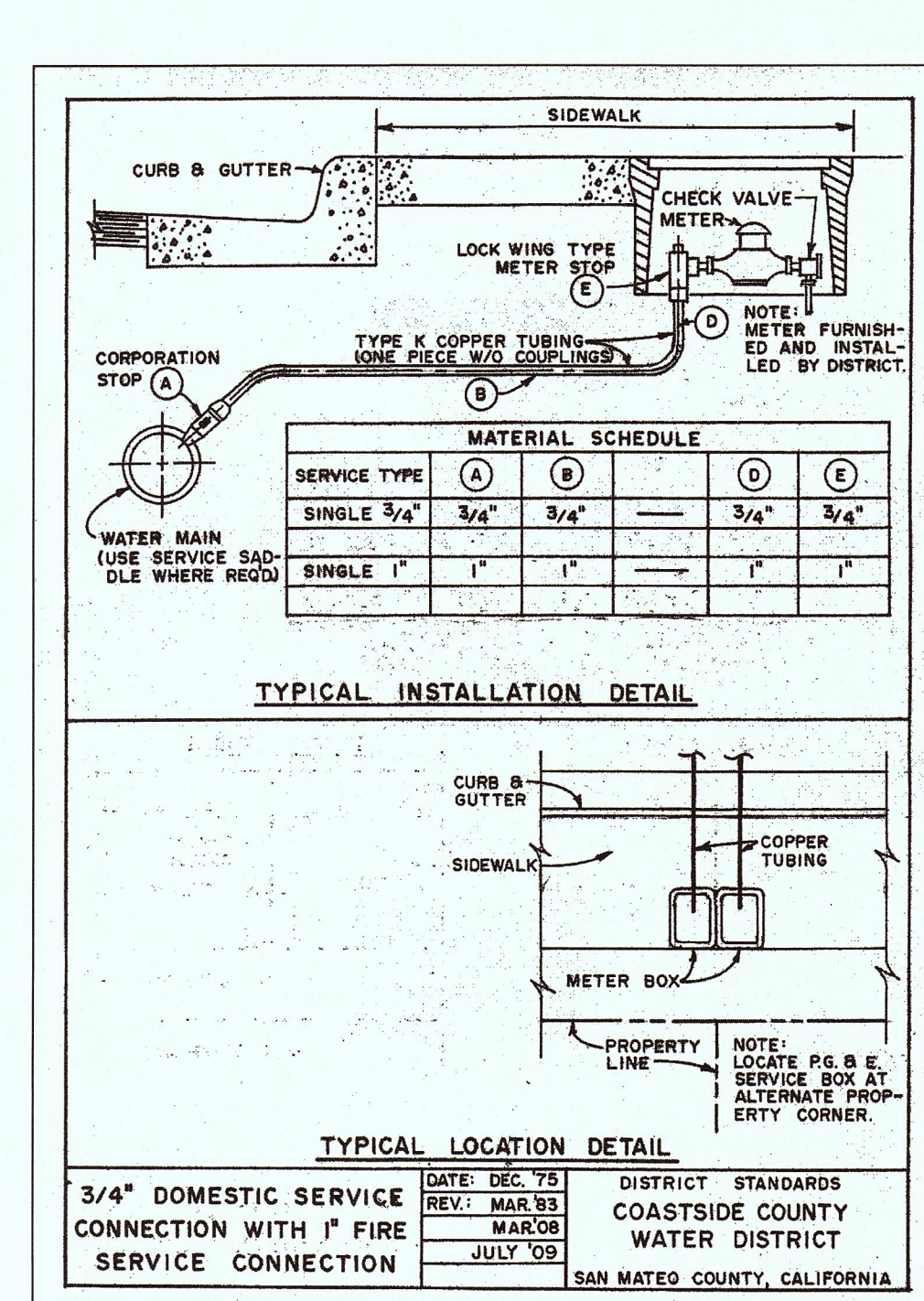
E ENERGY DISSIPATER
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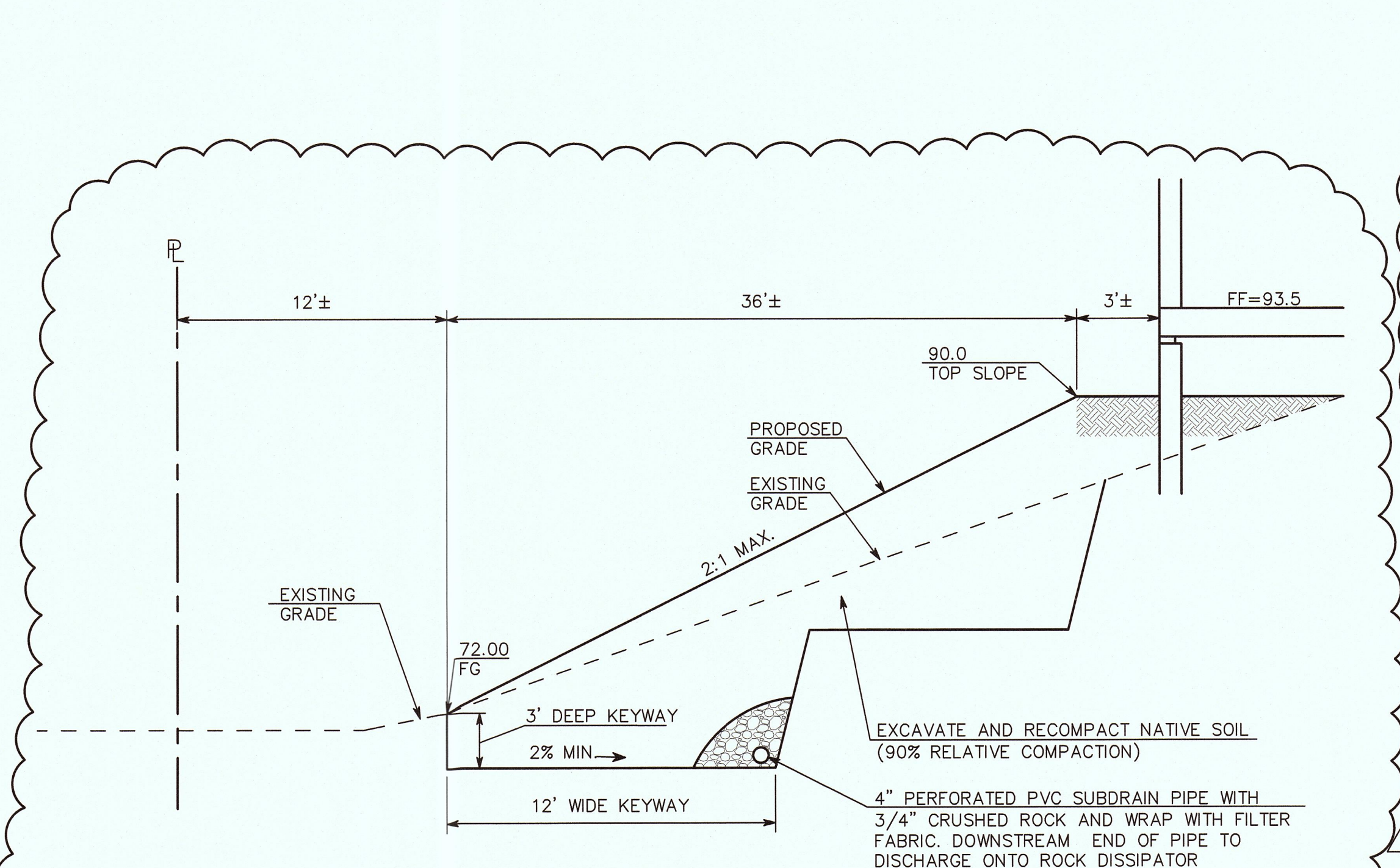
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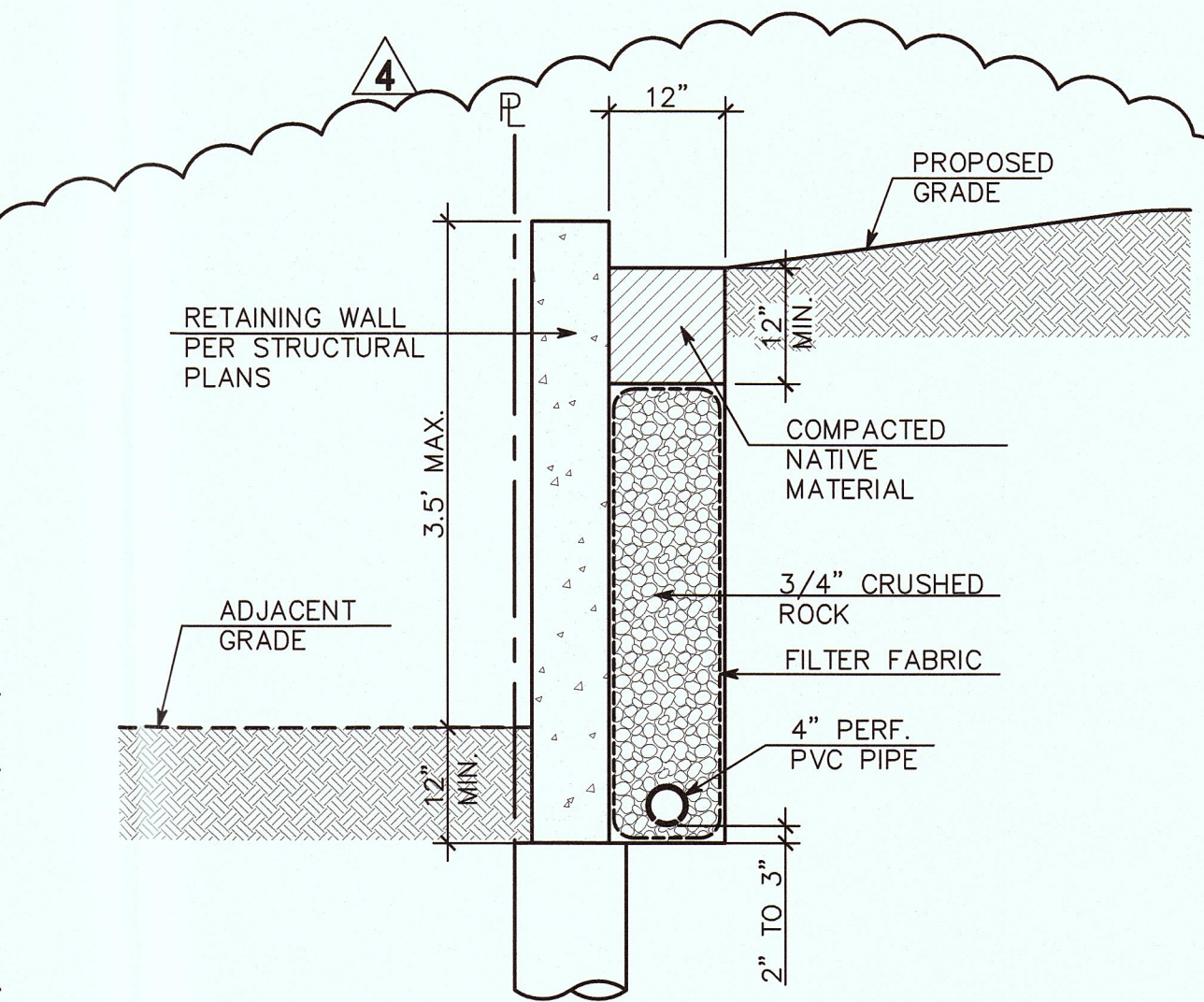
G STANDARD DETAIL
SCALE: (NOT TO SCALE)



H STANDARD DETAIL
SCALE: (NOT TO SCALE)



I CROSS SECTION (PROPOSED FILL ON EXISTING SLOPE)
SCALE: (NOT TO SCALE)



J WALL SECTION
SCALE: (NOT TO SCALE)

REGISTERED PROFESSIONAL ENGINEER
No. 35048
CIVIL
STATE OF CALIFORNIA

MACLEOD AND ASSOCIATES
CIVIL ENGINEERING • LAND SURVEYING
965 CENTER STREET • SAN CARLOS • CA 94070 • (650) 593-8580

PER COUNTY COMMENTS: VPG 08/4/19

GRADING REVISION: VPG 07/25/19

DESCRIPTION: REV. 4

DATE: BY:

PREPARED FOR:
BAHRAM ABOLMOLUKI

CIVIL DETAILS
COLUMBUS STREET
A.P.N. 047-275-050
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA

DRAWN BY: DJK/AAP

DESIGNED BY: VPG

CHECKED BY: DGM

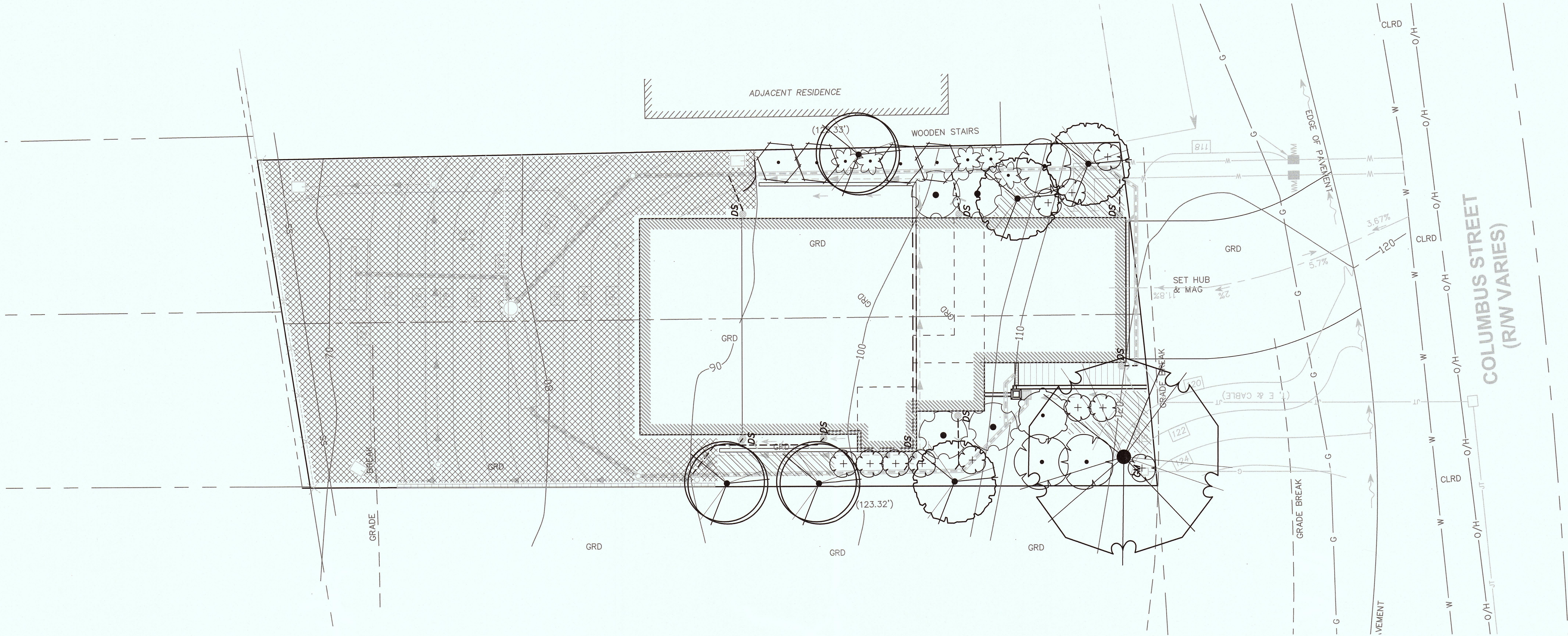
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DATE: 08/24/18

DRAWING NO. 4452-DETAIL

SHEET 3 OF 4

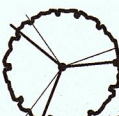
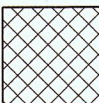
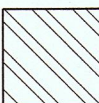
C-3



- MAINTENANCE DURING THE WARRANTY PERIOD by the plant installer
During the warranty period, provide all maintenance for all plantings to keep the plants in a healthy state and the planting areas clean and neat.
- General requirements:
- All work shall be undertaken by trained planting crews under the supervision of a foreman with a minimum of 5 years experience supervising commercial plant maintenance crews.
 - All chemical and fertilizer applications shall be made by licensed applicators for the type of chemicals to be used. All work and chemical use shall comply with all applicable local, provincial and federal requirements.
 - Assure that hoses and watering equipment and other maintenance equipment does not block paths or be placed in a manner that may create tripping hazards. Use standard safety warning barriers and other procedures to maintain the site in a safe manner for visitors at all times.
 - All workers shall wear required safety equipment and apparel appropriate for the tasks being undertaken.
 - The Contractor shall not store maintenance equipment at the site at times when they are not in use unless authorized in writing by the Owner's Representative.
 - Maintenance vehicles shall not park on the site including walks and lawn areas at any time without the Owner's Representative's written permission.
 - Maintain a detailed log of all maintenance activities including types of tasks, date of task, types and quantities of materials and products used, watering times and amounts, and number of each crew. Periodically review the logs with the Owner's Representative, and submit a copy of the logs at the end of each year of the maintenance agreement.
 - Meet with the Owner's Representative a minimum of three times a year to review the progress and discuss any changes that are needed in the maintenance program. At the end of the warranty period attend a hand over meeting to formally transfer the responsibilities of maintenance to the Owner's Representative. Provide all information on past maintenance activities and provide a list of critical tasks that will be needed over the next 12 months. Provide all maintenance logs and soil test data. Make the Contractor's supervisor available for a minimum of one year after the end of the warranty period to answer questions about past maintenance.
 - Provide the following maintenance tasks:
 - Watering: Provide all water required to keep soil within and around the root balls at optimum moisture content for plant growth.
 - Maintain all watering systems and equipment and keep them operational.
 - Monitor soil moisture to provide sufficient water. Check soil moisture and root ball moisture with a soil moisture meter on a regular basis and record moisture readings. Do not over water.
 - Soil nutrient levels: Take a minimum of 4 soil samples from around the site in the spring and fall and have them tested by an accredited agricultural soil testing lab for chemical composition of plant required nutrients, pH, salt and % organic matter. Test results shall include laboratory recommendations for nutrient applications. Apply fertilizers at rates recommended by the soil test.
 - Make any other soil test and/or plant tissue test that may be indicated by plant conditions that may not be related to soil nutrient levels such as soil contaminated by other chemicals or lack of chemical uptake by the plant.
 -

- Plant pruning: Remove cross over branching, shorten or remove developing co dominant leaders, dead wood and winter-damaged branches. Unless directed by the Owner's Representative, do not shear plants or make heading cuts.
- Restore plants: Reset any plants that have settled or are leaning as soon as the condition is noticed.
- Guying and staking: Maintain plant guys in a taught position. Remove tree guys and staking after the first full growing season unless directed by Owner's Representative.
- Weed control: Keep all beds free of weeds. Hand-remove all weeds and any plants that do not appear on the planting plan. Chemical weed control is permitted only with the approval of the Owner's Representative. Schedule weeding as needed but not less 12 times per year.
- Trash removal: Remove all trash and debris from all planting beds and maintain the beds in a neat and tidy appearance. The number of trash and debris removal visits shall be no less than 12 times per year and may coincide with other maintenance visits.
- Plant pest control: Maintain disease, insects and other pests at manageable levels. Manageable levels shall be defined as damage to plants that may be noticeable to a professional but not to the average person. Use least invasive methods to control plant disease and insect outbreaks.
- The Owner's Representative must approve in advance the use of all chemical pesticide applications.
- Plant replacement: Replace all plants that are defective as defined in the warranty provisions, as soon as the plant decline is obvious and in suitable weather and season for planting as outlined in above sections. Plants that become defective during the maintenance period shall be covered and replaced under the warranty provisions.
- Mulch: Refresh mulch once a year to maintain complete coverage but do not over mulch. At no time shall the overall mulch thickness be greater than 3 inches. Do not apply mulch within 6 inches of the trunks or stems of any plants. Replacement mulch shall meet the requirements of the original approved material. Mulch shall be no more than one inch on top of the root ball surface.
- Bed edging: Check and maintain edges between mulch and lawn areas in smooth neat lines as originally shown on the drawings.
- Leaf, fruit and other plant debris removal: Remove fall leaf, spent flowers, fruit and plant part accumulations from beds and paved surfaces. Maintain all surface water drains free of debris. Debris removal shall be undertaken at each visit to weed or pick up trash in beds.
- Damage from site use: Repair of damage by site visitors and events, beyond normal wear, are not part of this maintenance. The Owner's Representative may request that the Contractor repair damage beds or plantings for an additional cost. All additional work shall be approved in advance by the Owner's Representative.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	REMARKS	
	ARB COM	3	ARBUTUS UNEDO 'COMPACTA' / DWARF STRAWBERRY TREE	15 GAL.	WATER USE LOW	
	ARC HUR	3	ARCTOSTAPHYLOS MANZANITA 'DR. HURD' / DR. HURD MANZANITA	15 GAL.	LOW	
	EUC SIL	1	EUCALYPTUS CINEREA / SILVER DOLLAR TREE	15 GAL.	LOW	
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	REMARKS	
	BAC TWI	4	BACCHARIS PILULARIS 'TWIN PEAKS II' / TWIN PEAKS COYOTE BRUSH	1 GAL	WATER USE LOW	
	CEA VAL	11	CEANOTHUS MARITIMUS 'VALLEY VIOLET' / MARITIME CEANOTHUS	5 GAL	LOW	
	CEA JUL	1	CEANOTHUS X 'JULIA PHELPS' / CALIFORNIA LILAC	5 GAL	LOW	
	HET ARB	3	HETEROMELES ARBUTIFOLIA / TOYON	5 GAL	LOW	
	MYR CAL	4	MYRICA CALIFORNICA / PACIFIC WAX MYRTLE	5 GAL	MEDIUM	
	WOO FIM	5	WOODWARDIA FIMBRIATA / GIANT CHAIN FERN	1 GAL	MEDIUM	
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	REMARKS
	MYO PAR	294	MYOPORUM PARVIFOLIUM / TRAILING MYOPORUM	1 GAL	36" o.c.	WATER USE LOW
	SAL BEE	14	SALVIA X 'BEE'S BLISS' / SAGE	1 GAL	48" o.c.	LOW

"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."

DATED: 10/18/19
BY: Andrew Bolt



General Notes

PLANTING LAYOUT

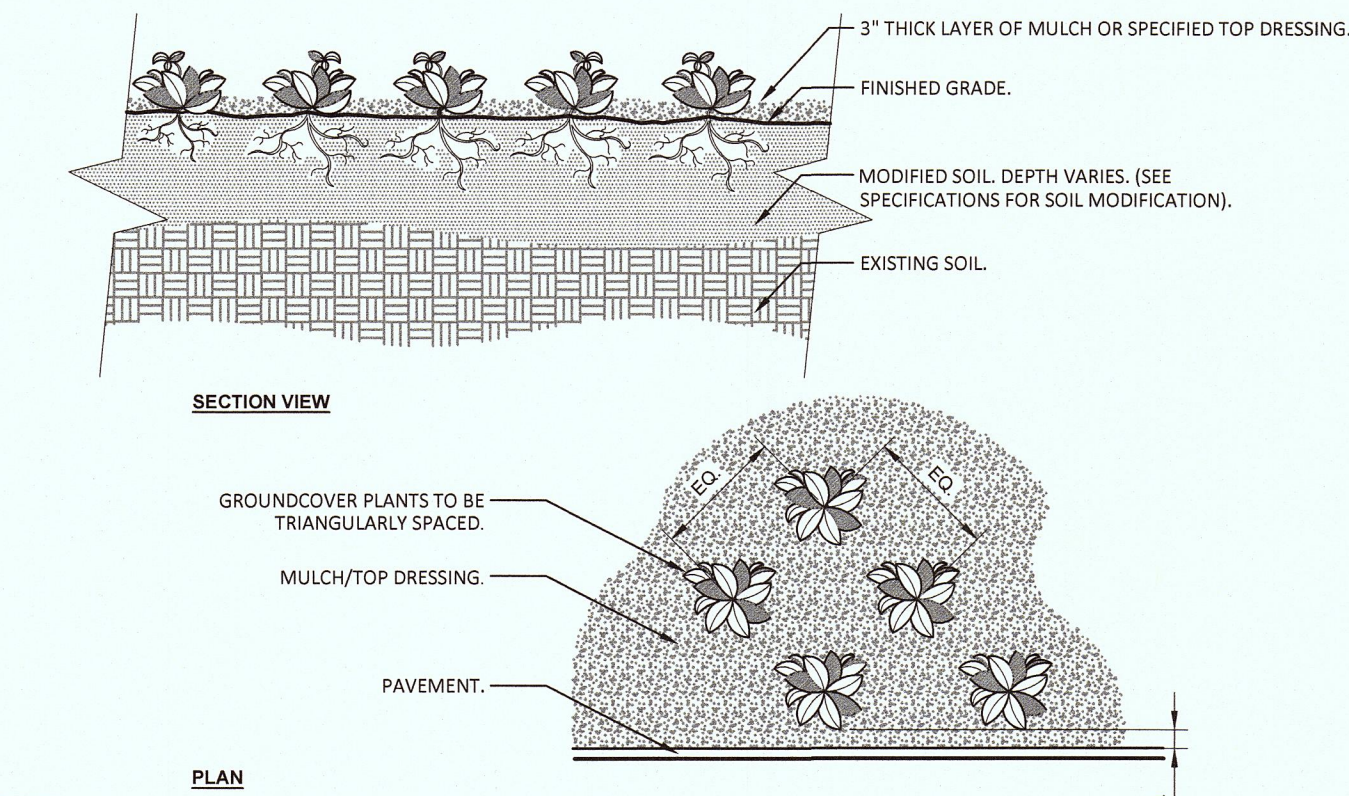
No. Revision/Issue Date

Firm Name and Address
4Binc
Select Certified
IRRIGATION ASSOCIATION
Experienced professionals. Efficient solutions.
LIC # 1012790 IA CERT # 57436
ASIC
COMMERCIAL MEMBER

Project Name and Address
**COLUMBUS ST.
EL GRANADA, CA**

Project 236-2019	Drawn By 4BInc.
Date 10/18/19	Checked By 4BInc.
Scale 1/8"=1'-0"	Approved By
	Sheet L-1.0

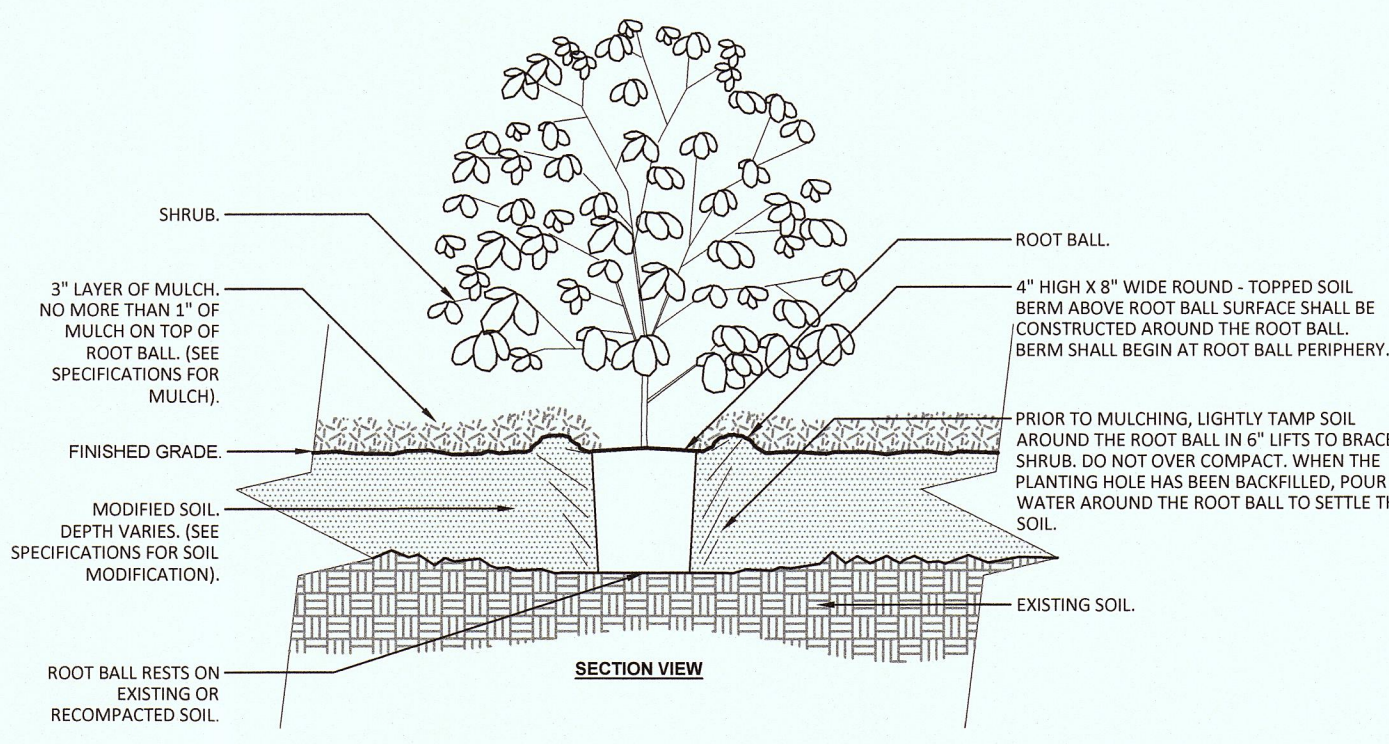
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NOTES:
1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION.
2- SMALL ROOTS (1/2\"/>

3 GROUNDCOVER

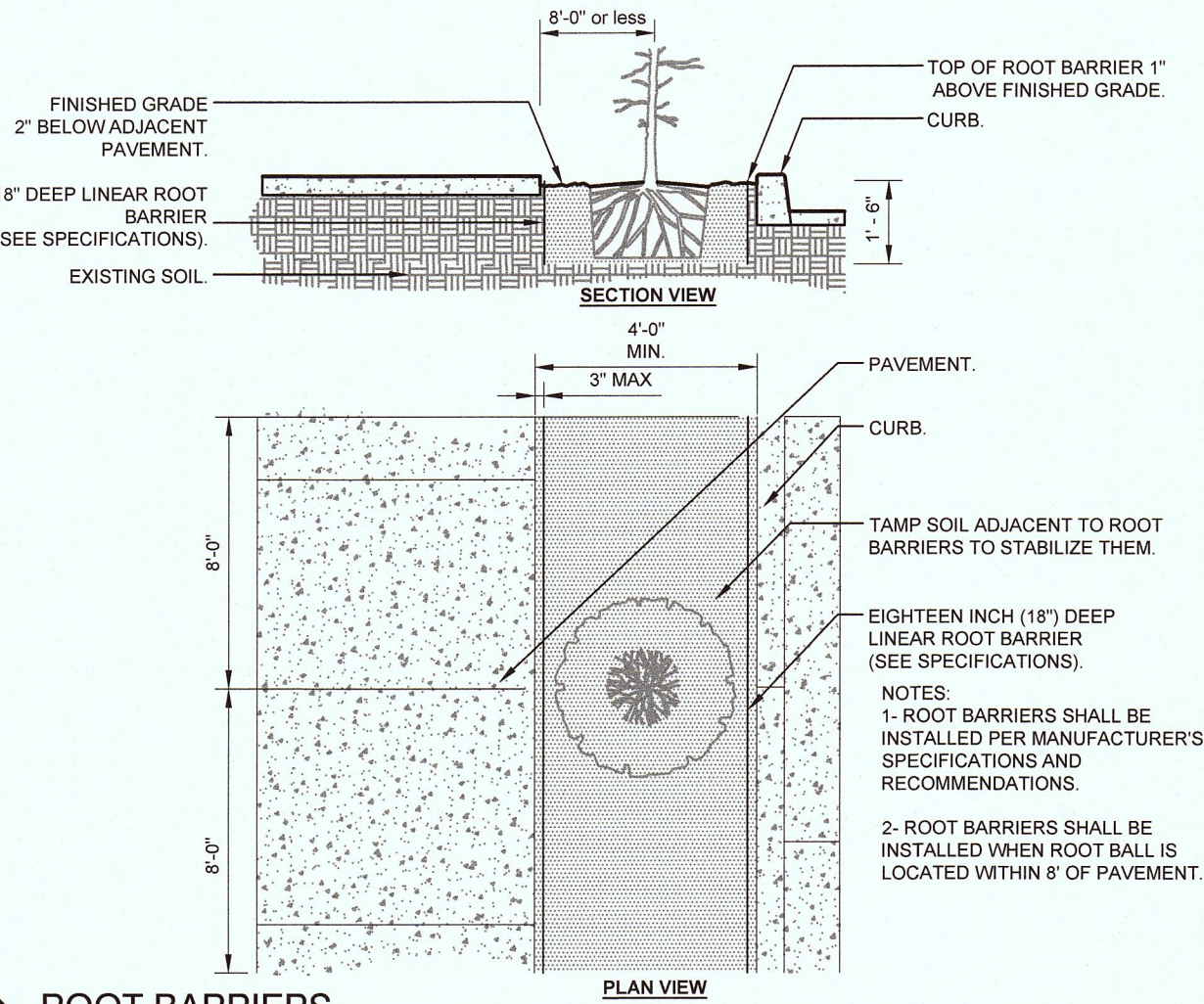
NTS



NOTES:
1- SHRUBS SHALL BE OF QUALITY PRESCRIBED IN THE ROOT OBSERVATIONS DETAIL AND SPECIFICATIONS.
2- SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

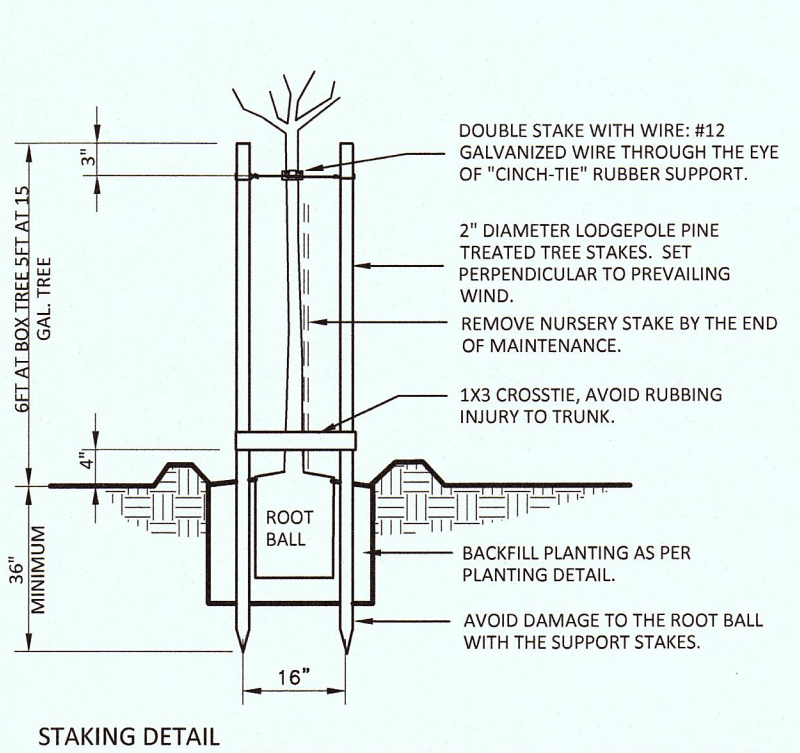
4 SHRUB PLANTING

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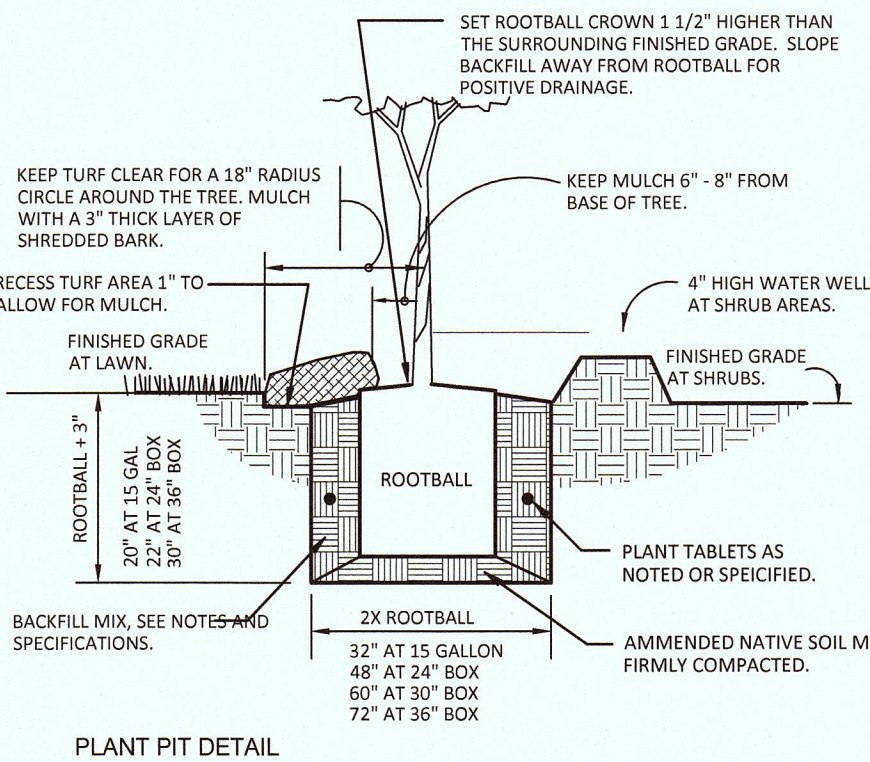


1 ROOT BARRIERS

NTS



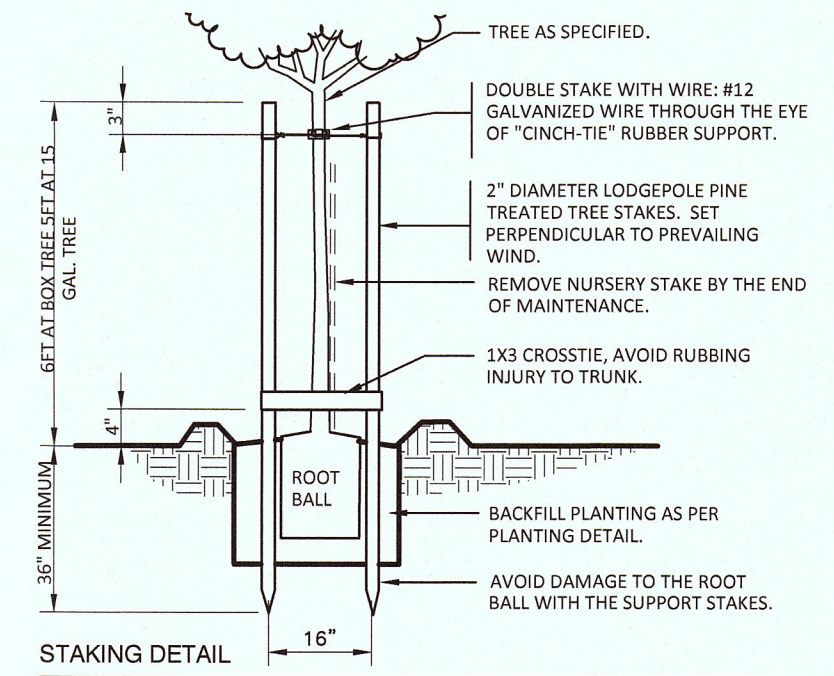
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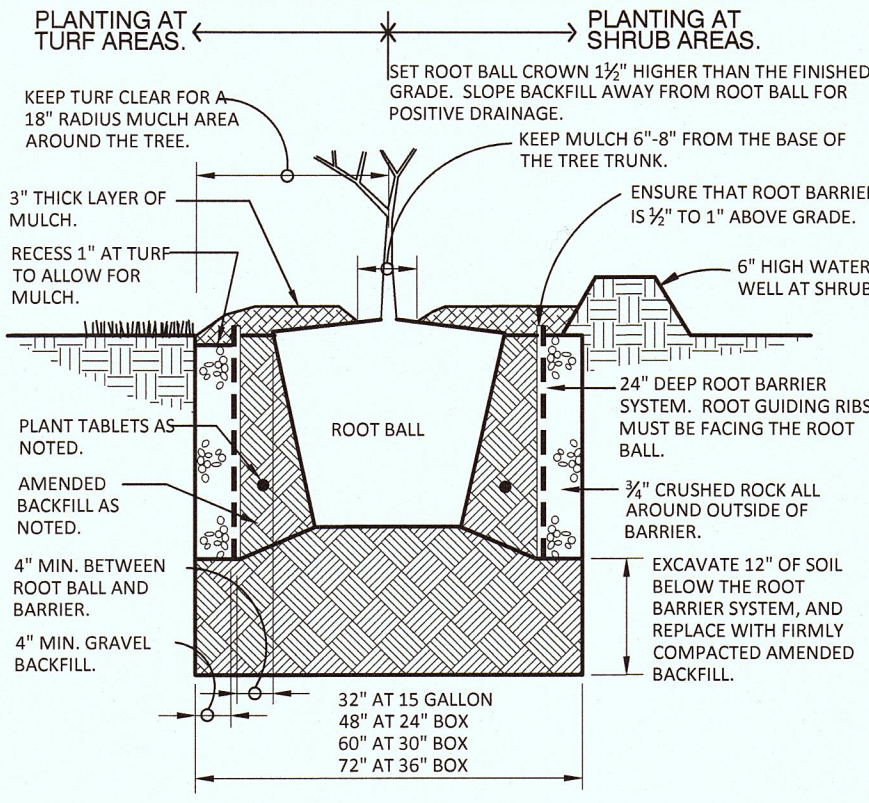
PLANT PIT DETAIL

5 TREE PLANTING DOUBLE STAKE

NTS



STAKING DETAIL

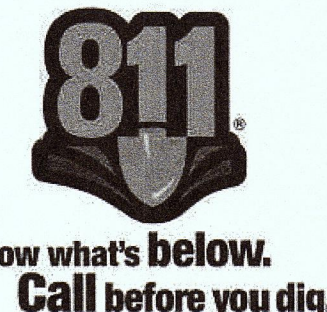


PLANT PIT DETAIL

4 ROOT BARRIER TREE PLANTING

1\"/>

"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."
DATED: 10/18/19
BY: Andrew Bolt



PLANTING DETAILS

No.	Revision/Issue	Date
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Firm Name and Address

4Binc
Select Certified
IRRIGATION ASSOCIATION
Experienced professionals. Efficient solutions.
LIC # 1012730 IA CERT # 57436

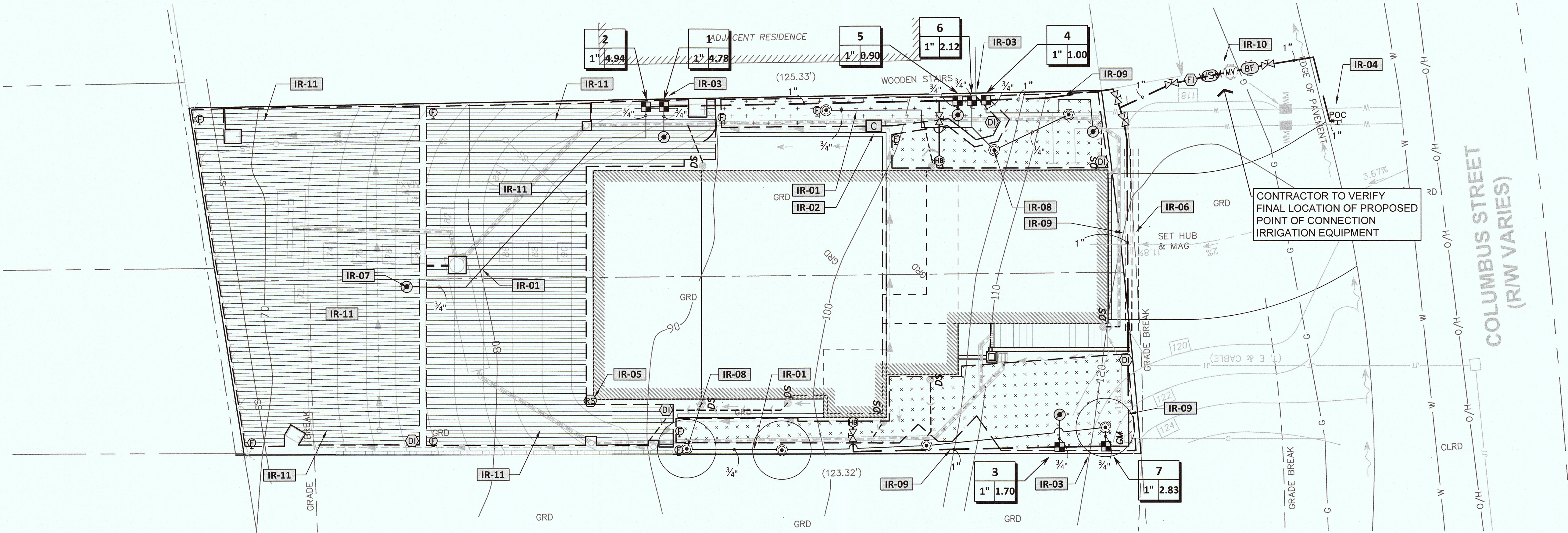
ASIC
COMMERCIAL MEMBER

Project Name and Address

**COLUMBUS ST.
EL GRANADA, CA**

Project 236-2019	Drawn By 4BInc.
Date 10/18/19	Checked By 4BInc.
Scale	Approved By
	Sheet
	L-2.0

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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	TORO DZK-700-1-MF MEDIUM-FLOW DRIP CONTROL VALVE KIT. WITH 1" IRRITROL 700 ULTRAFLOW INLINE VALVE, TORO Y-FILTER, AND MEDIUM-FLOW PRESSURE REGULATOR AND FITTINGS. 5GPM-20GPM.
	PIPE TRANSITION POINT PVC-PLY PIPE TRANSITION POINT.
	NETAFIM TISOV NETAFIM TISOV- 1/2" MANUAL FLUSH VALVE, BARBED INSERT. INSTALL IN 10" BOX, WITH ADEQUATE BLANK OR "COBRA" TUBING TO EXTEND VALVE OUT OF VALVE BOX. 17MM FITS TECHLINE HCVXR, HCVXR-RW/RWP, CV, DL, RW AND RWP DRIPLINES, AND PE IRRIGATION HOSE
	RAIN BIRD OPERIND DRIP SYSTEM OPERATION INDICATOR, STEM RISES 6" FOR CLEAR VISIBILITY WHEN DRIP SYSTEM IS CHARGED TO A MINIMUM OF 20PSI. INCLUDES 16" OF 1/4" DISTRIBUTION TUBING WITH CONNECTION FITTING PRE-INSTALLED. INSTALL MINIMUM TWO PER DRIP ZONE, PLACE NEXT TO FLUSH VALVE.
	TREE DRIP RING 1.0 GPH TREE DRIP RING TORO RGP-212 / 1.0 GPH. INSTALL PER DETAIL. 3 RINGS = 42.5 GPH 4 RINGS = 69.5 GPH. INSTALL (2) ROOTWELL 318-C EVENLY AROUND THE ROOT BALL OF EVERY PROPOSED TREE
	AREA TO RECEIVE DRIP EMITTERS NETAFIM WPC WITH BUG CAP SINGLE OUTLET PRESSURE COMPENSATING DRIP EMITTER, 5PSI INTERNAL CHECK VALVE, WITH A BARB INLET X NIPPLE OUTLET. BUG CAP INCLUDED. RED= 0.5GPH, BLACK= 1.0GPH, GREEN= 2.0GPH. Emitter Notes: 2.0 GPH emitters (3 assigned to each 1 Gal plant) 2.0 GPH emitters (3 assigned to each 5 Gal plant)
	AREA TO RECEIVE DRIPLINE NETAFIM TLHCVR-053-18 TECHLINE HCVXR PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE AND ANTI-SIPHON FEATURE. 0.53 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	BUCKNER-SUPERIOR HB1F 3/4" X 1/2" FEMALE NPT RED BRASS HOSE BIBB. INSTALL BELOW GRADE WITHIN A 1416 VALVE BOX, TYPICAL
	NIBCO T-113 CLASS 125 BRONZE GATE SHUT OFF VALVE WITH WHEEL HANDLE, SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION. SIZE RANGE - 1/4" - 3"

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	BUCKNER-SUPERIOR 3300 1-1/2" NORMALLY OPEN BRASS MASTER VALVE THAT PROVIDES DIRTY WATER PROTECTION AND NO MINIMUM FLOW FEATURE, WHICH ENSURES RELIABLE OPENING AND CLOSING OF THE VALVE IN EXTREME HIGH OR LOW FLOW SCENARIOS. AVAILABLE IN 1-1/2", 2", 2-1/2" AND 3".
	FEBCO 825Y 3/4" REDUCED PRESSURE BACKFLOW PREVENTER WITH FREEZE BLANKET PER CITY STANDARDS
	HUNTER HC-12 12 STATION CONTROLLER WITH WI-FI CONNECTION
	HUNTER RFC-NO-SGM RAIN AND FREEZE SENSOR, WITH CONDUIT INSTALLATION, MOUNT AS NOTED. NORMALLY OPEN SWITCH. WITH OPTIONAL GUTTER MOUNT.
	HUNTER HC-075-FLOW 3/4" FLOW METER FOR USE WITH HYDRAWISE ENABLED CONTROLLER TO MONITOR FLOW AND PROVIDE SYSTEM ALERTS. ALSO FUNCTIONS AS STAND ALONE FLOW TOTALIZER/SUB METER ON ANY RESIDENTIAL OR COMMERCIAL IRRIGATION SYSTEM.
	EZ-FLO FERTILIZING SYSTEMS EZ001-CX ONE SYSTEM FEEDS ALL ZONES, DRIP OR SPRINKLER. INSTALL DIRECTLY IN THE IRRIGATION SYSTEM MAIN LINE AFTER THE BACK FLOW PREVENTER. TANK CAPACITY: 1.5 G. USE LIQUID ORGANIC FERTILIZER OR CONTACT EZ FLOW FOR RECOMMENDED FERTILIZERS.
	POINT OF CONNECTION 1"
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 INSTALL ALL LATERAL LINES TO A DEPTH OF 12" BELOW FINISH GRADE. PIPE TO SHRUB IRRIGATION ONLY. BACKFILL WITH CLEAN FILL NO ROCKS OVER 1/2" IN SIZE.
	IRRIGATION MAINLINE: PVC SCHEDULE 40 INSTALL ALL MAINLINE TO A DEPTH OF 18" UNLESS OTHERWISE NOTED. BACKFILL WITH CLEAN FILL NO ROCKS OVER 1/2" IN SIZE. NOTE ALL MAINLINE LOCATION ON ASBUILT PLANS.
	PIPE SLEEVE: PVC SCHEDULE 40 INSTALL SLEEVE 12" PAST EDGE OF HARDSCAPE TO A DEPTH OF 24" FOR MAINLINE AND 18" FOR LATERAL LINES. ALL OTHER SLEEVING INSTALL TO A DEPTH OF 12".
	Valve Callout # Valve Number # Valve Flow # Valve Size

CRITICAL ANALYSIS

Generated:	2019-10-18 14:42
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Point of Connection Size:	1"
Flow Available:	20.24 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	50.00 psi
Pressure Available:	50.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	4.94 gpm
Flow Available at POC:	20.24 gpm
Residual Flow Available:	15.30 gpm
Critical Station:	2
Design Pressure:	30.00 psi
Friction Loss:	0.54 psi
Fittings Loss:	0.05 psi
Elevation Loss:	0.00 psi
Loss through Valve:	3.00 psi
Pressure Req. at Critical Station:	33.59 psi
Loss for Fittings:	0.07 psi
Loss for Main Line:	0.73 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	11.68 psi
Loss for Master Valve:	0.45 psi
Critical Station Pressure at POC:	46.52 psi
Pressure Available:	50.00 psi
Residual Pressure Available:	3.48 psi

REFERENCE NOTES SCHEDULE

SYMBOL	IRRIGATION DESCRIPTION
	LATERAL LINES- ALL LATERALS ARE SIZED 3/4" UNLESS OTHERWISE NOTED.
	CONTROLLER LOCATION- CONTRACTOR TO CONFIRM LOCATION WITH OWNER OR GENERAL CONTRACTOR.
	SCHEMATIC VALVE BOX LOCATION- INSTALL ALL VALVE BOXES IN PLANTER AREAS AND SET BACK 2 FEET FROM ANY PATHS, ROADS OR OTHER HARDSCAPE AREAS.
	POINT OF CONNECTION- CONTRACTOR TO CONFIRM POC LOCATION, WELL STATIC PRESSURE AND FLOWS AVAILABLE. IF LOCATION IS DIFFERENT INDICATE ON AS BUILT PLANS. IF STATIC PRESSURE AVAILABLE IS UNDER 45 PSI NOTIFY LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH IRRIGATION INSTALLATION.
	WEATHER BASED SENSOR LOCATION- INSTALL WEATHER SENSOR ON SW SIDE OF BUILDING WITH NO OVERHANG OBSTRUCTIONS.
	CONDUIT- FOR CONTROL VALVE WIRE RUN(S) TO CONTROLLER, SIZE PER PLAN
	INLINE DRIP SUPPLY AND EXHAUST HEADERS- CONTRACTOR MUST INSTALL PVC SUPPLY AND EXHAUST HEADERS ON ALL DRIP SYSTEMS PER DETAILS ON THE IRRIGATION DETAIL SHEET(S). ALL SUBSURFACE DRIP MUST TERMINATE IN A PVC EXHAUST HEADER. PLANS ONLY SHOW SUPPLY TAP-IN LOCATIONS.
	TREE DRIP RING- FOR PROPOSED TREES
	MAIN LINE- INSTALL MAIN LINE IN PLANTER AREAS WITHIN THE SITES PROPERTY BOUNDARIES AND SET BACK 2 FEET FROM ANY PATHS, ROADS OR OTHER HARDSCAPE AREAS. THE PROPOSED MAIN LINE LOCATION(S) IS DIAGRAMMATIC.
	MASTER CONTROL VALVE & HUNTER HC FLOW METER- INSTALLING CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND PROGRAMMING MASTER VALVE AND FLOW METER AT THE IRRIGATION CONTROLLER. CONTACT MANUFACTURER FOR ASSISTANCE WITH SET UP.
	EROSION CONTROL- REFER TO CIVIL ENGINEER PLANS, SHEET C-2 FOR JUTE MESH (OVER GRADED SLOPES) SPECIFICATION AND DETAILS

IRRIGATION NOTES:

POINT OF CONNECTION (P.O.C.)

1. CONNECT IRRIGATION MAINLINE TO MAIN WATER SUPPLY (SEE CIVIL OR ARCHITECTURAL DRAWINGS FOR LOCATION). LANDSCAPE CONTRACTOR TO VERIFY LOCATION, SIZE, FLOW AND PRESSURES AVAILABLE AND TO NOTIFY LANDSCAPE ARCHITECT OF ANY NECESSARY CHANGES NEEDED TO BE MADE SO THAT THE IRRIGATION SYSTEM PERFORMS TO AN IRRIGATION EFFICIENCY OF A MINIMUM OF 81 PERCENT.
2. SYSTEM MAXIMUM OPERATING PRESSURES: 80 PSI (AT P.O.C.) INSTALL PRESSURE REDUCER IF PRESSURES EXCEED EQUIPMENT MANUFACTURERS SUGGESTED MAXIMUM OPERATING PRESSURES.
3. SYSTEM MINIMUM OPERATING PRESSURES: 47 PSI (AT P.O.C.)

MWEO NOTES

CERTIFICATION OF COMPLETION REQUIREMENTS

UPON COMPLETION OF LANDSCAPE AND IRRIGATION INSTALLATION THE LANDSCAPE CONTRACTOR SHALL SUBMIT THE FOLLOWING AS REQUIRED BY CALIFORNIA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. (MWEO)

1. PROJECT INFORMATION SHEET.
2. CERTIFICATION FROM LANDSCAPE ARCHITECT FOR INSTALLATION ACCORDING TO THE APPROVED LANDSCAPE DOCUMENTATION PACKAGE.
3. SOIL MANAGEMENT REPORT AND RECEIPTS FOR SOIL IMPROVEMENT PRODUCTS.
4. LANDSCAPE MAINTENANCE MANAGEMENT REPORT.
5. IRRIGATION MAINTENANCE MANAGEMENT REPORT.
6. IRRIGATION SCHEDULE FOR NEW AND ESTABLISHED PLANT MATERIALS
7. IRRIGATION AUDIT REPORT INDICATING SITE IRRIGATION EFFICIENCY,
8. IRRIGATION DISTRIBUTION UNIFORMITY, ALL INSTALLED EQUIPMENT COMPLIES WITH APPROVED MWEO GUIDELINES.
9. CERTIFICATE OF COMPLETION (COC) FORM.

CONTACT LOCAL ENFORCING AGENCY FOR APPROVED SUBMITTAL FORMS AND PROCEDURES.

"I HAVE FOLLOWED THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM TO THIS DESIGN."
ANDREW BOLT 10/18/19

LANDSCAPE MWEO GENERAL NOTES:

- A CERTIFICATE OF COMPLETION SHALL BE COMPLETED BY EITHER THE OWNER, THE DESIGNER OF THE LANDSCAPE PLANS OR BY THE LICENSED INSTALLING CONTRACTOR.
- AN AS BUILT DIAGRAM OF THE INSTALLED IRRIGATION SHOWING NUMBERED ZONES, VALVE LOCATION, MAINLINE LOCATION, IRRIGATION CONTROLLER AND P.O.C. LOCATION SHALL BE KEPT WITH THE CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
- CHECK VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW HEAD DRAINAGE COULD OCCUR.
- PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER OPTIMUM PRESSURE OF THE SPECIFIED IRRIGATION DEVICE PRESSURE EXCEEDS THE OPERATING RECOMMENDATIONS.
- NO OVERHEAD IRRIGATION IS PERMITTED IN LANDSCAPE AREAS THAT ARE LESS THAN 10' WIDE. DRIP OR LOW FLOW BUBBLER IRRIGATION MUST BE USED AS AN ALTERNATIVE.
- INSTALLING CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND PROGRAMMING ALL SELF-ADJUSTING WEATHER/SOIL MOISTURE SENSING BASED CONTROLLERS. RAIN SENSORS ARE TO BE INSTALLED WITH ANY CONTROLLER WHERE AN OFFSITE WEATHER STATION IS USED.
- ALL SPECIFIED FLOW SENSORS AND MASTER VALVES MUST BE INSTALLED AND PROGRAMMED AS PER MANUFACTURERS REQUIREMENTS.
- AN IRRIGATION AUDIT AND COMMISSIONING IS REQUIRED ON ALL PROJECTS. CONTACT ANDREW BOLT 209-404-1746 TO SET UP.
- THESE PLANS HAVE BEEN PREPARED BY A CERTIFIED PROFESSIONAL AND ARE MEANT AS A GUIDE ONLY. PIPING AND VALVE PLACEMENT ARE DIAGRAMATIC ONLY. ALL PIPING UNDER HARDSCAPES MUST BE SLEEVED WITH SPECIFIED SLEEVING MATERIALS.
- PROTECT ALL EXISTING TREES DURING IRRIGATION TRENCHING AND PIPE INSTALLATION. CONSULT WITH LANDSCAPE ARCHITECT BEFORE CUTTING ANY ROOTS.
- NOTE TO CONTRACTOR: ALL IRRIGATION ZONES HAVE BEEN LAYED OUT AND APPROVED BY THE CITY OR COUNTY BASED ON PLANT WATER USE. SHOULD THE INSTALLING CONTRACTOR CHANGE OR MODIFY THE APPROVED IRRIGATION LAYOUT IN ANYWAY WITHOUT PRIOR AUTHORIZATION THE CONTRACTOR WILL ASSUME ALL LIABILITY AND COST OF ALL CHANGES TO THE IRRIGATION LAYOUT AND ALL ADDITIONAL WATER USAGE OVER AND ABOVE FOR THE LIFE OF THE IRRIGATION SYSTEM(S) AND ALL COSTS THAT ARE ASSOCIATED WITH OVER WATER USAGE.

"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."
DATED: 10/18/19
BY: Andrew Bolt



General Notes

IRRIGATION LAYOUT

No.	Revision/Issue	Date
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Firm Name and Address



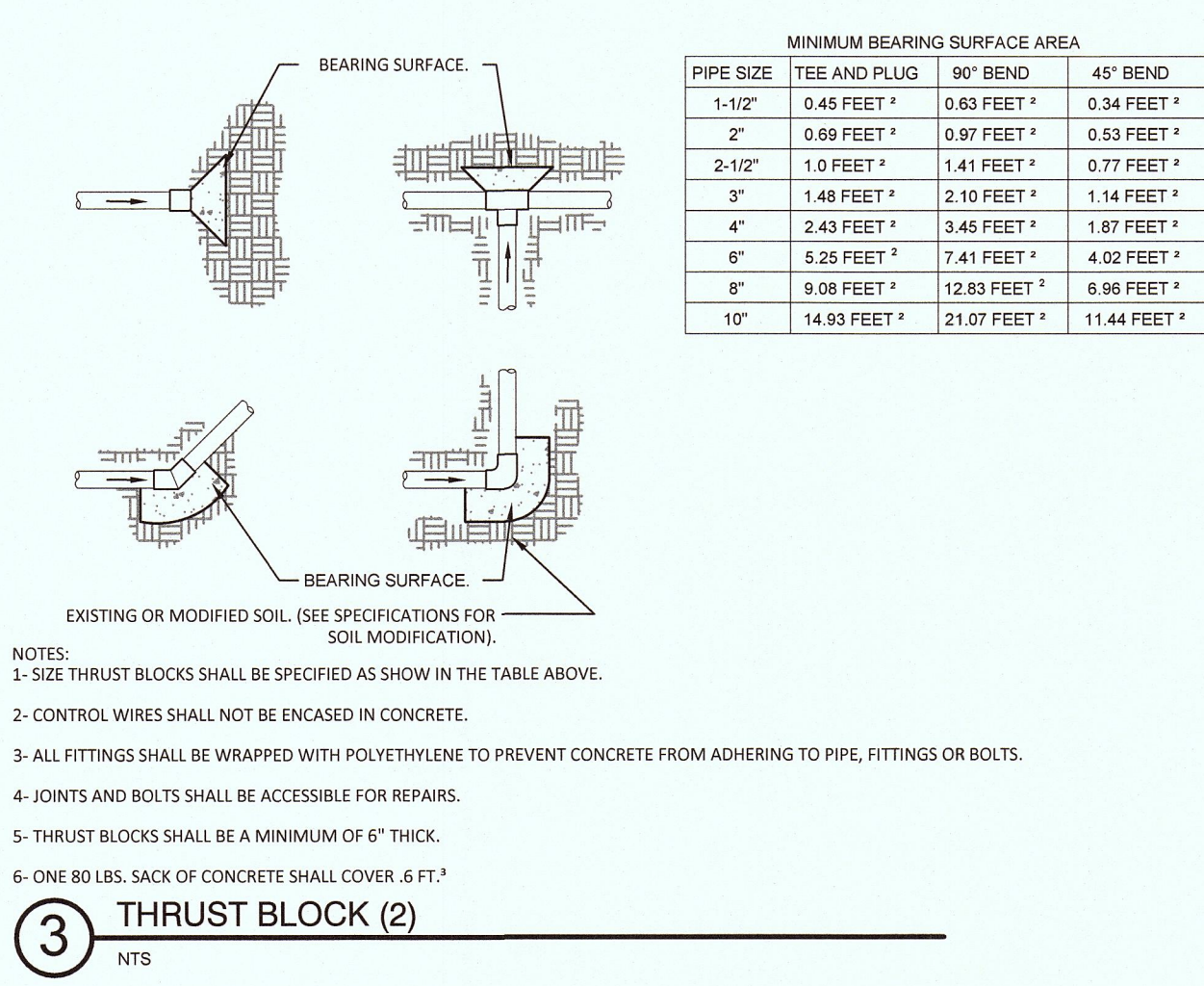
Project Name and Address

COLUMBUS ST.
EL GRANADA, CA

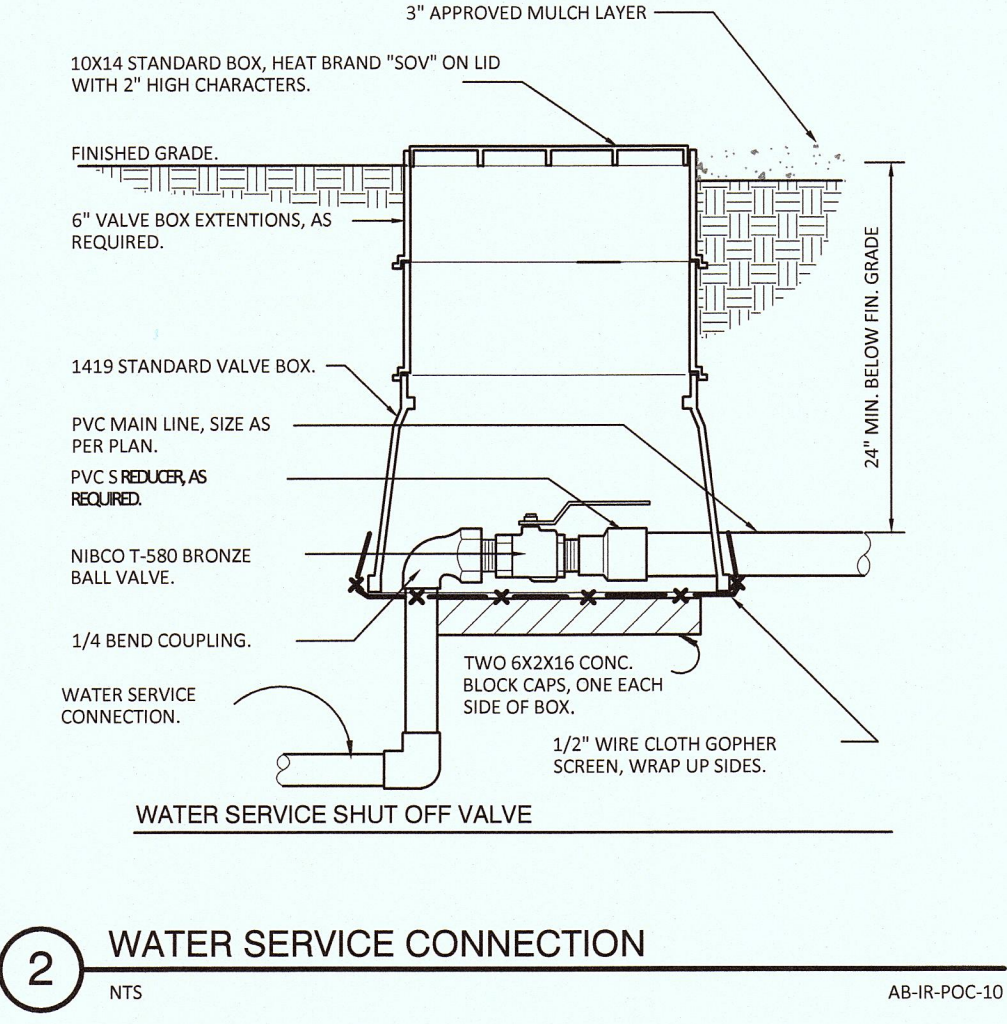
Project 236-2019	Drawn By 4Binc.
Date 10/18/19	Checked By 4Binc.
Scale 1/8"=1'-0"	Approved By
	Sheet



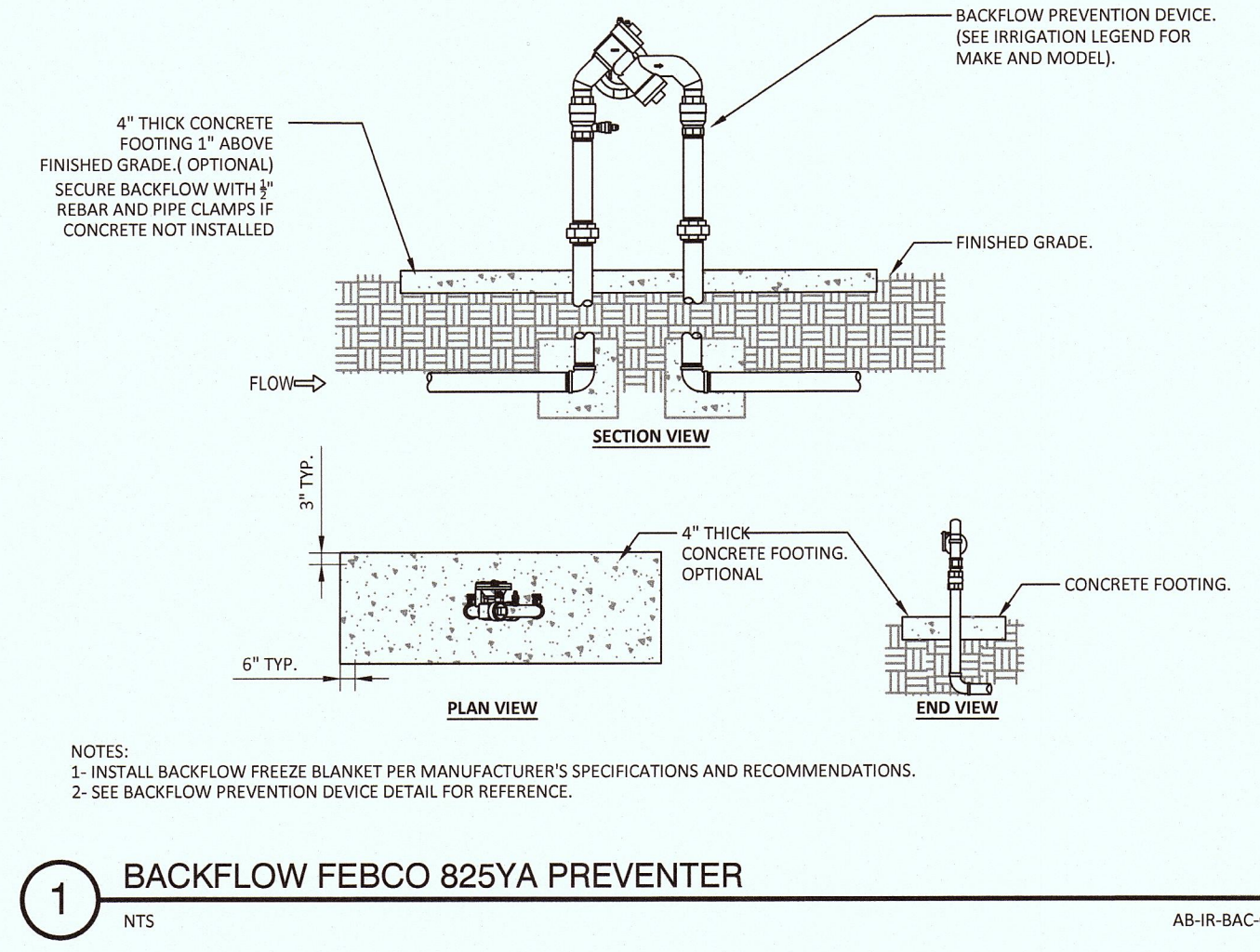
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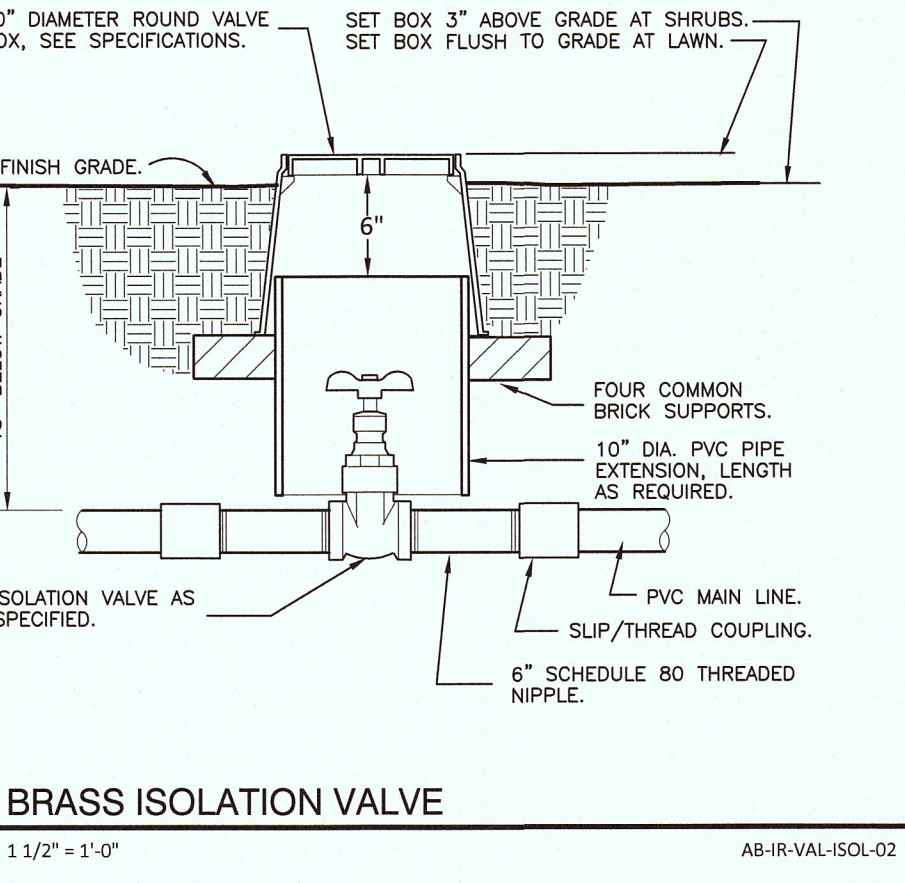
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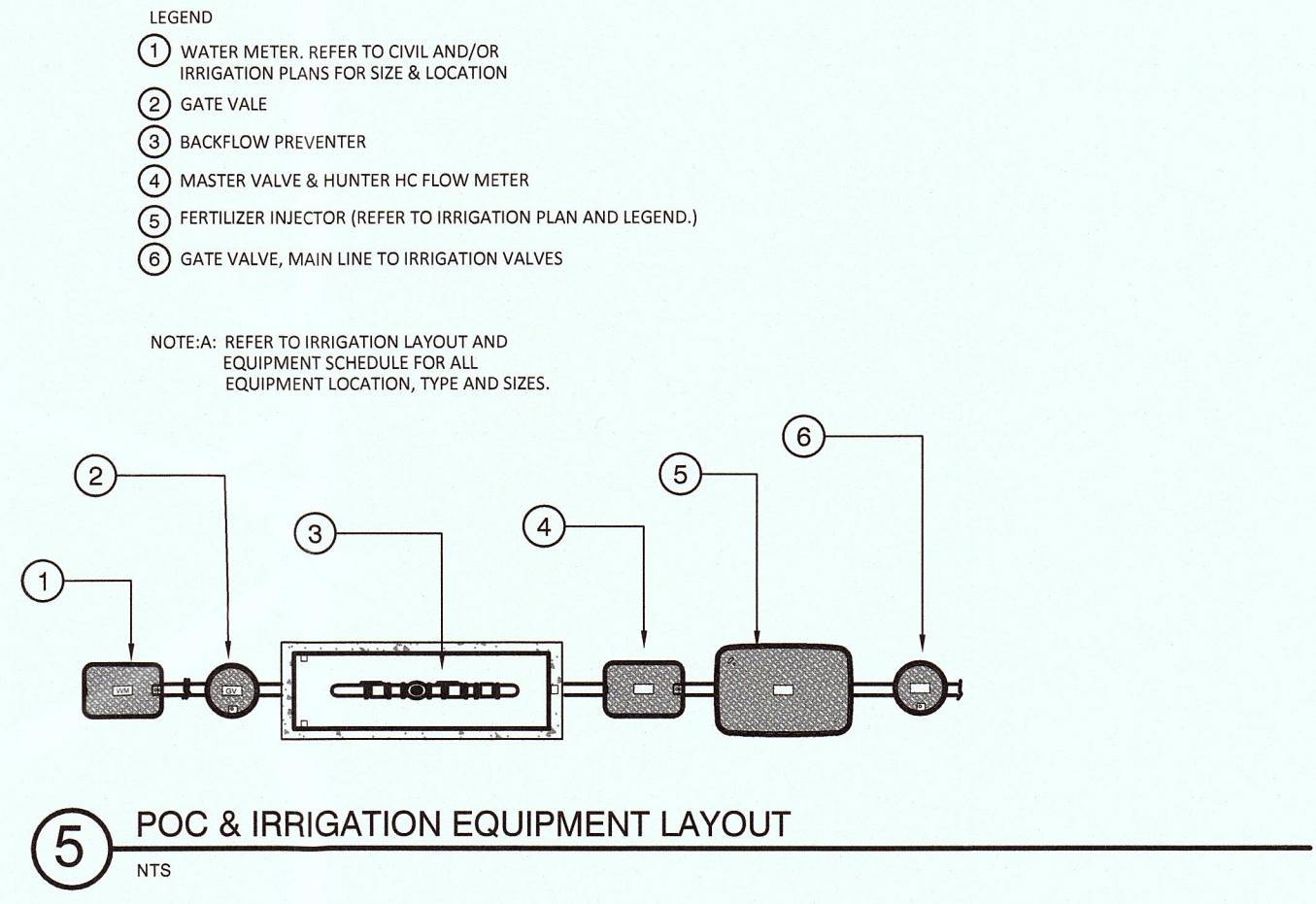
2 WATER SERVICE CONNECTION
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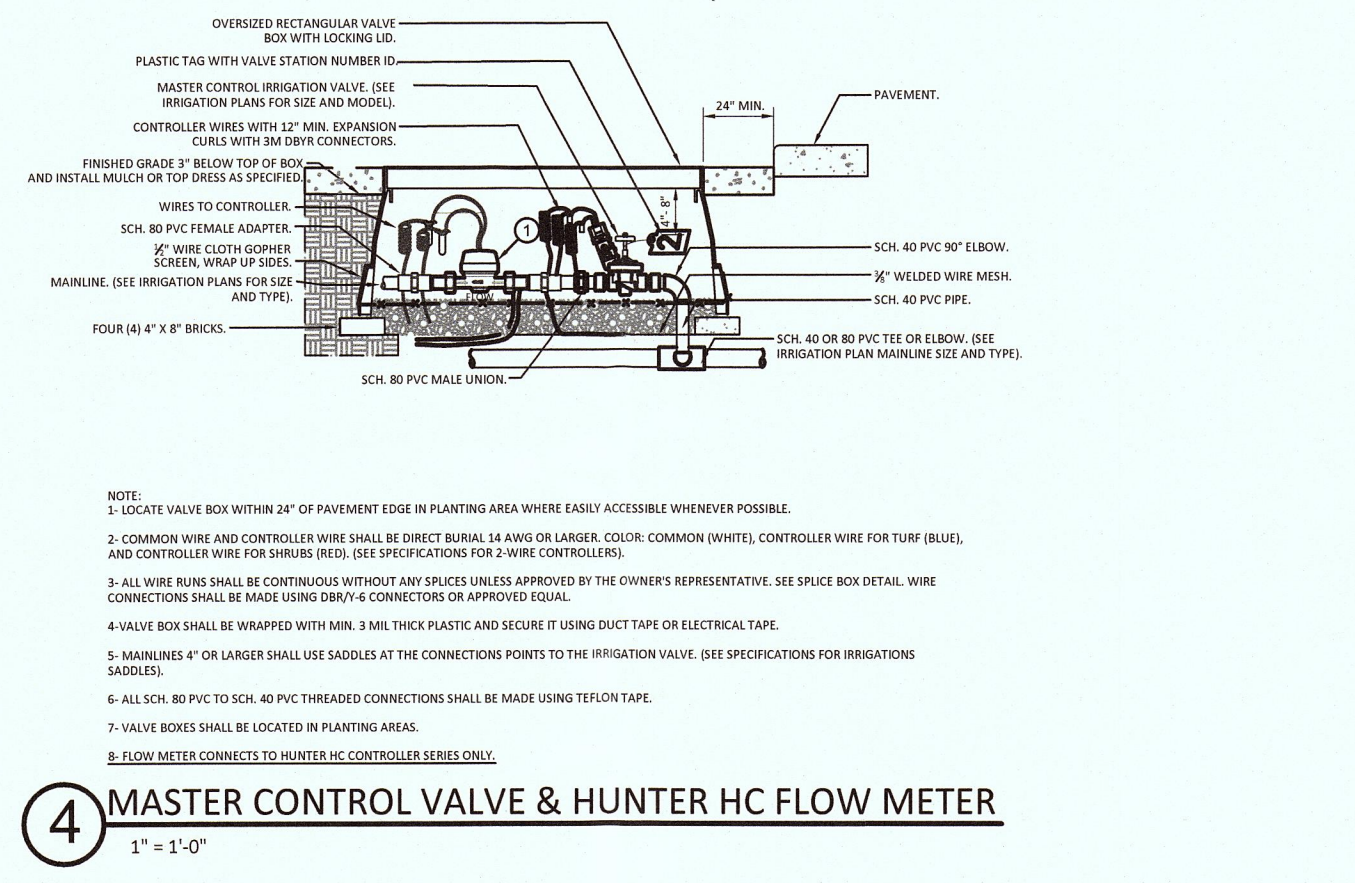
1 BACKFLOW FEBCO 825YA PREVENTER
NTS



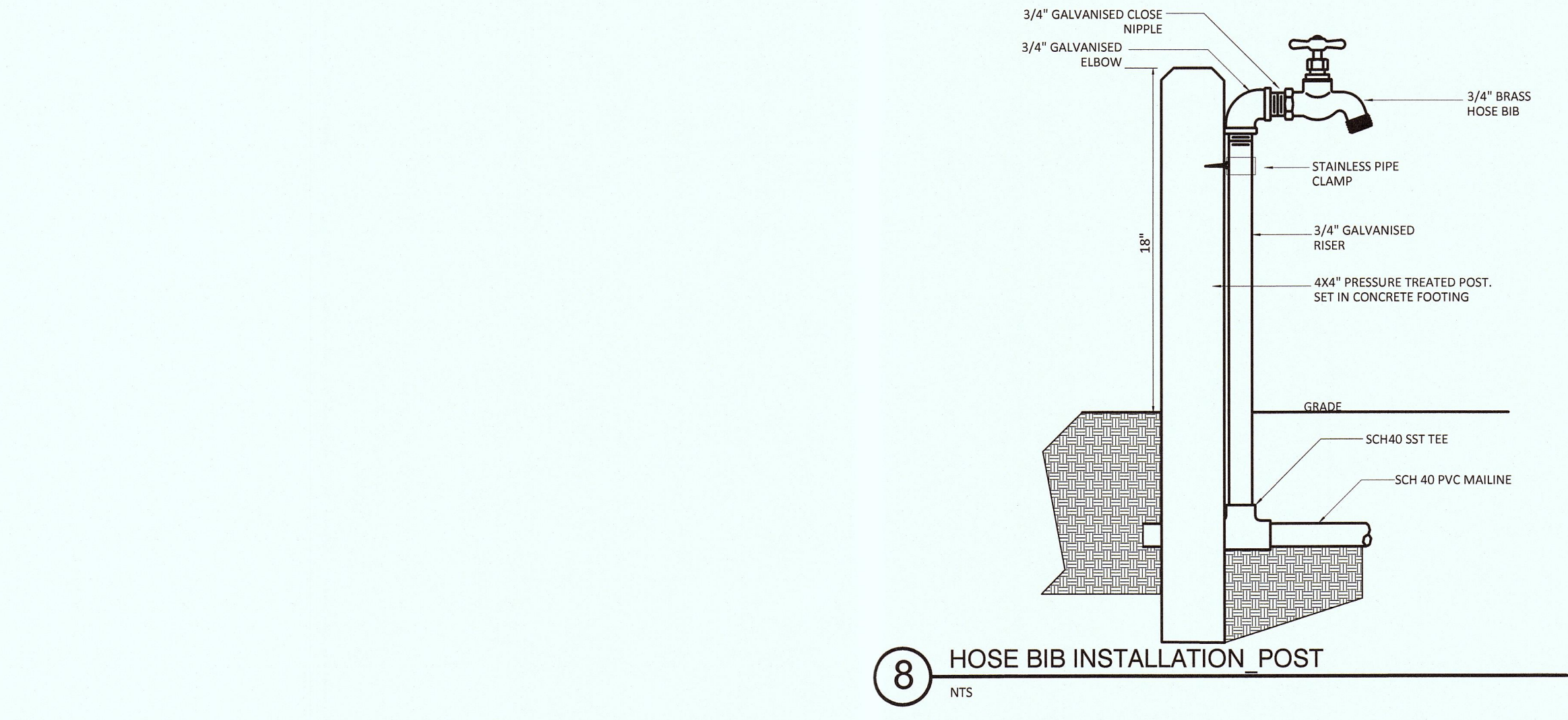
6 BRASS ISOLATION VALVE
1 1/2" = 1'-0"



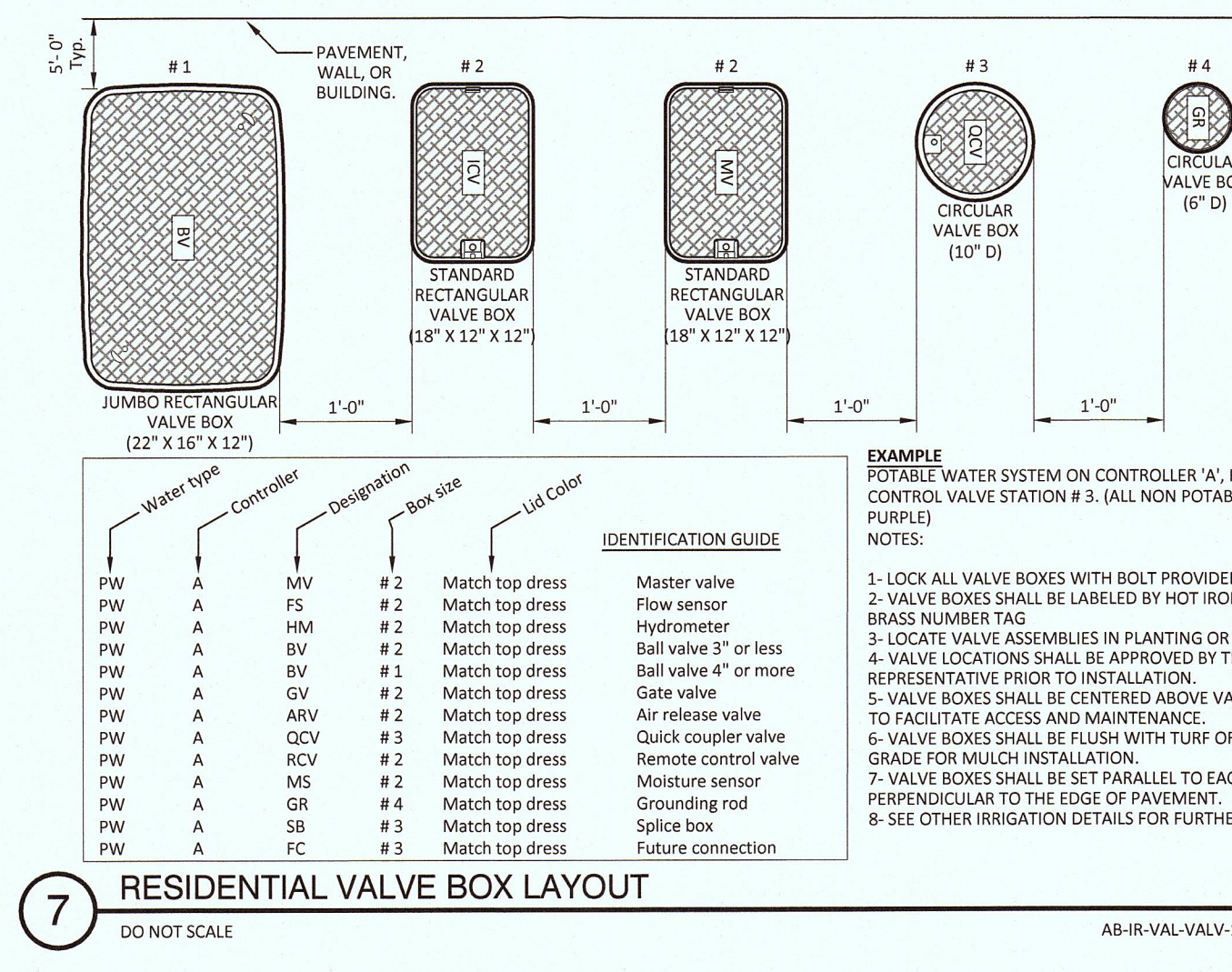
5 POC & IRRIGATION EQUIPMENT LAYOUT
NTS



4 MASTER CONTROL VALVE & HUNTER HC FLOW METER
1" = 1'-0"



8 HOSE BIB INSTALLATION POST
NTS



7 RESIDENTIAL VALVE BOX LAYOUT
DO NOT SCALE

"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."
DATED: 10/18/19
BY: Andrew Bolt



General Notes

IRRIGATION DETAILS

No.	Revision/Issue	Date

Firm Name and Address

4Binc Select Certified ASIC
LIC # 1012730 IA CERT # 57436

Project Name and Address

COLUMBUS ST.
EL GRANADA, CA

Project	Drawn By
236-2019	4Binc.

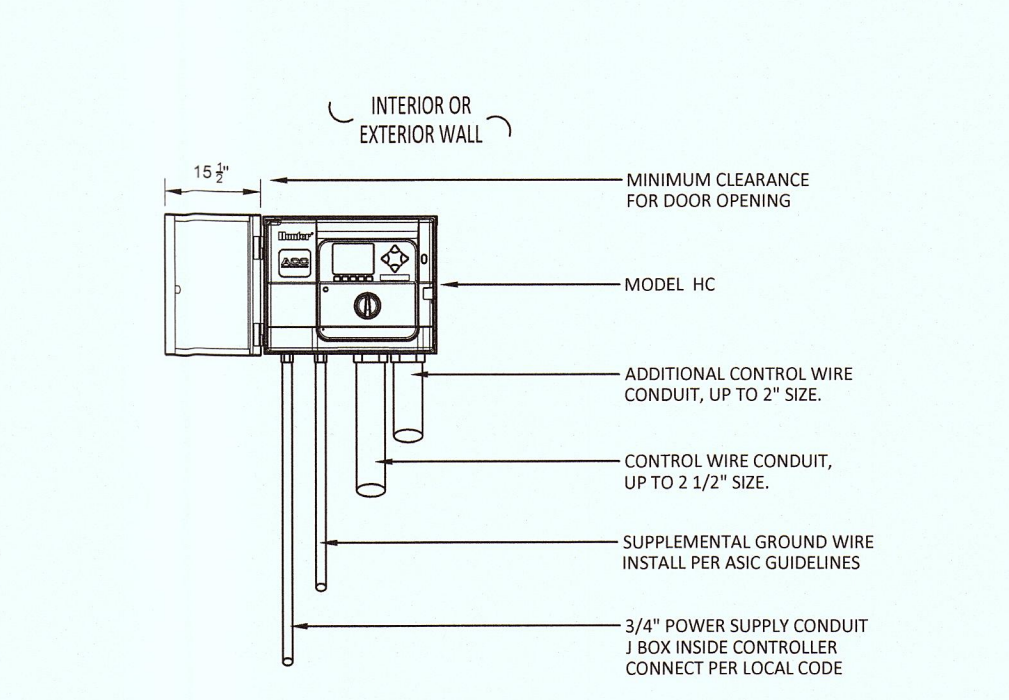
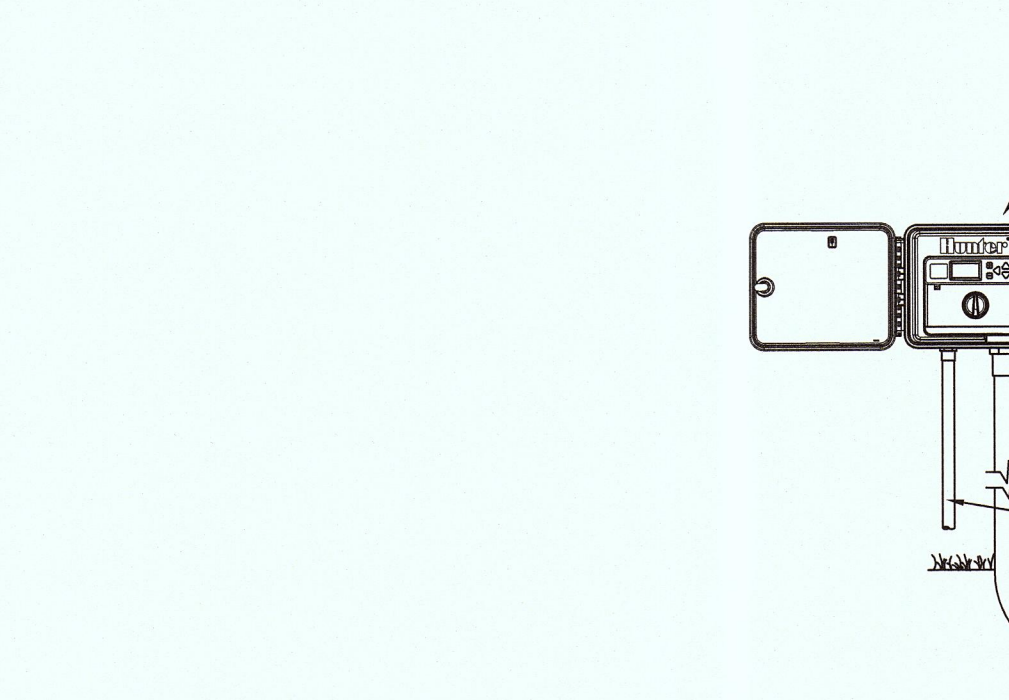
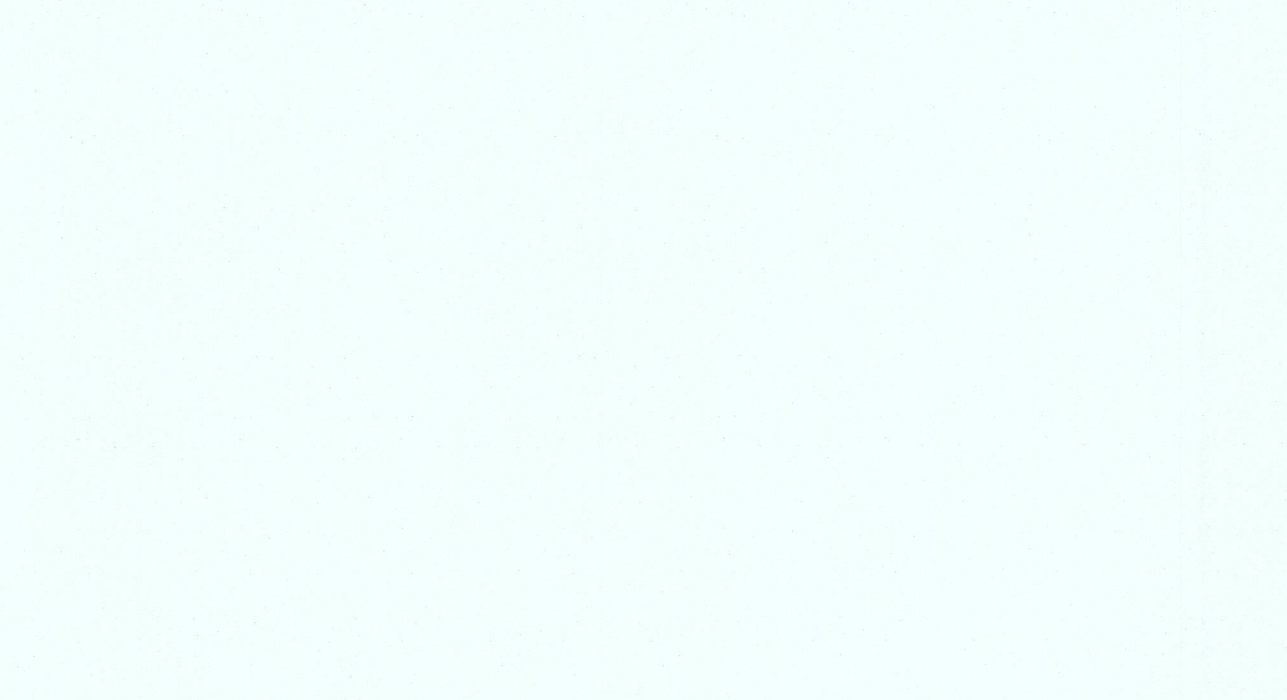
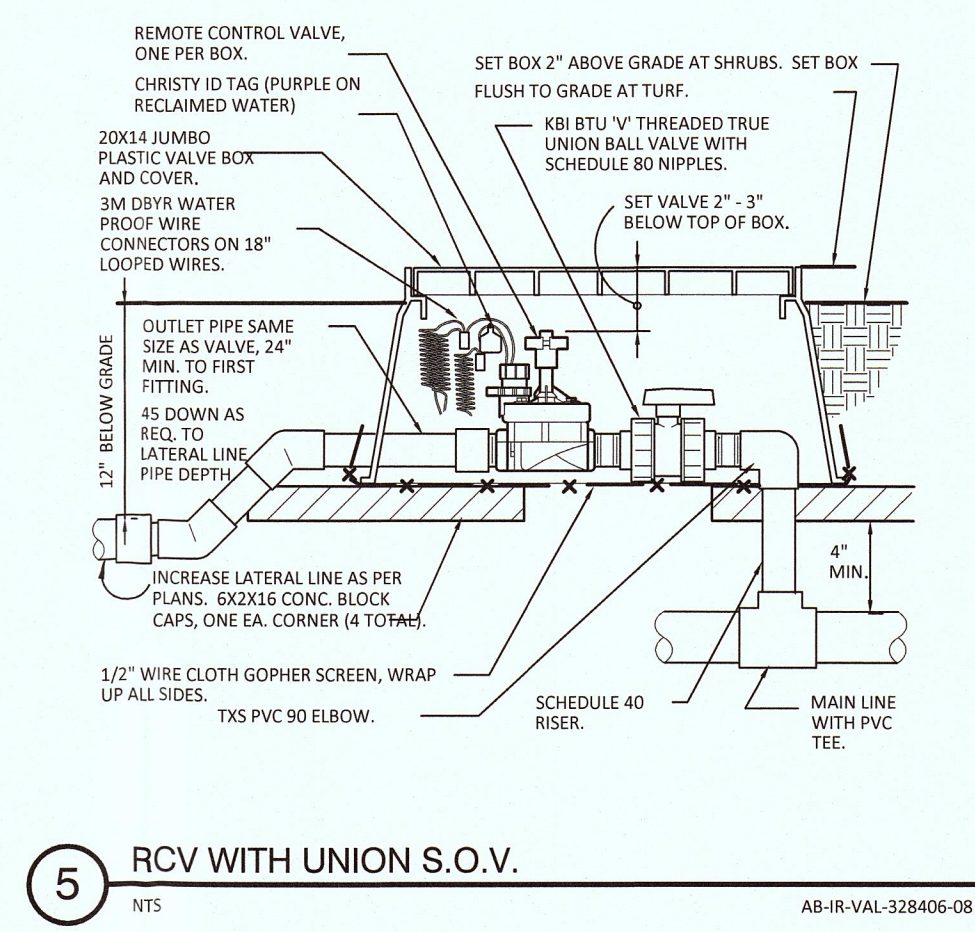
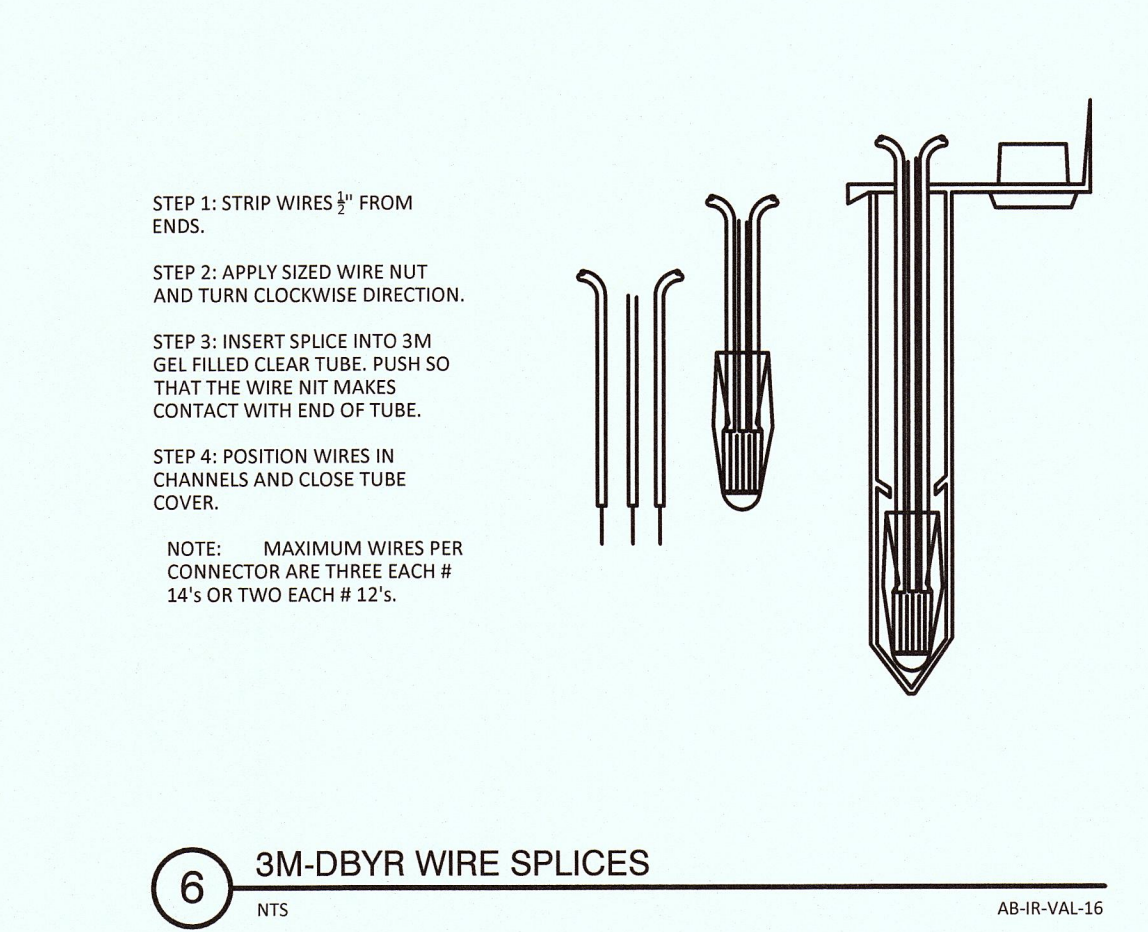
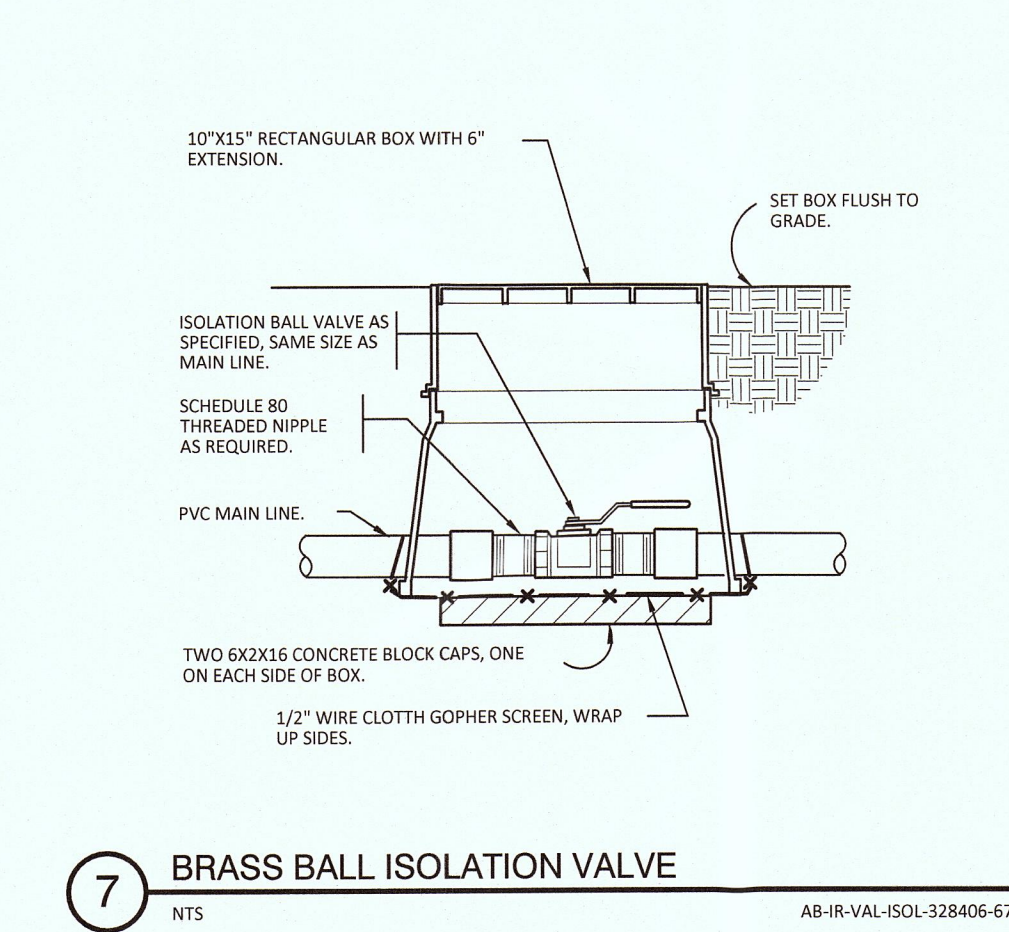
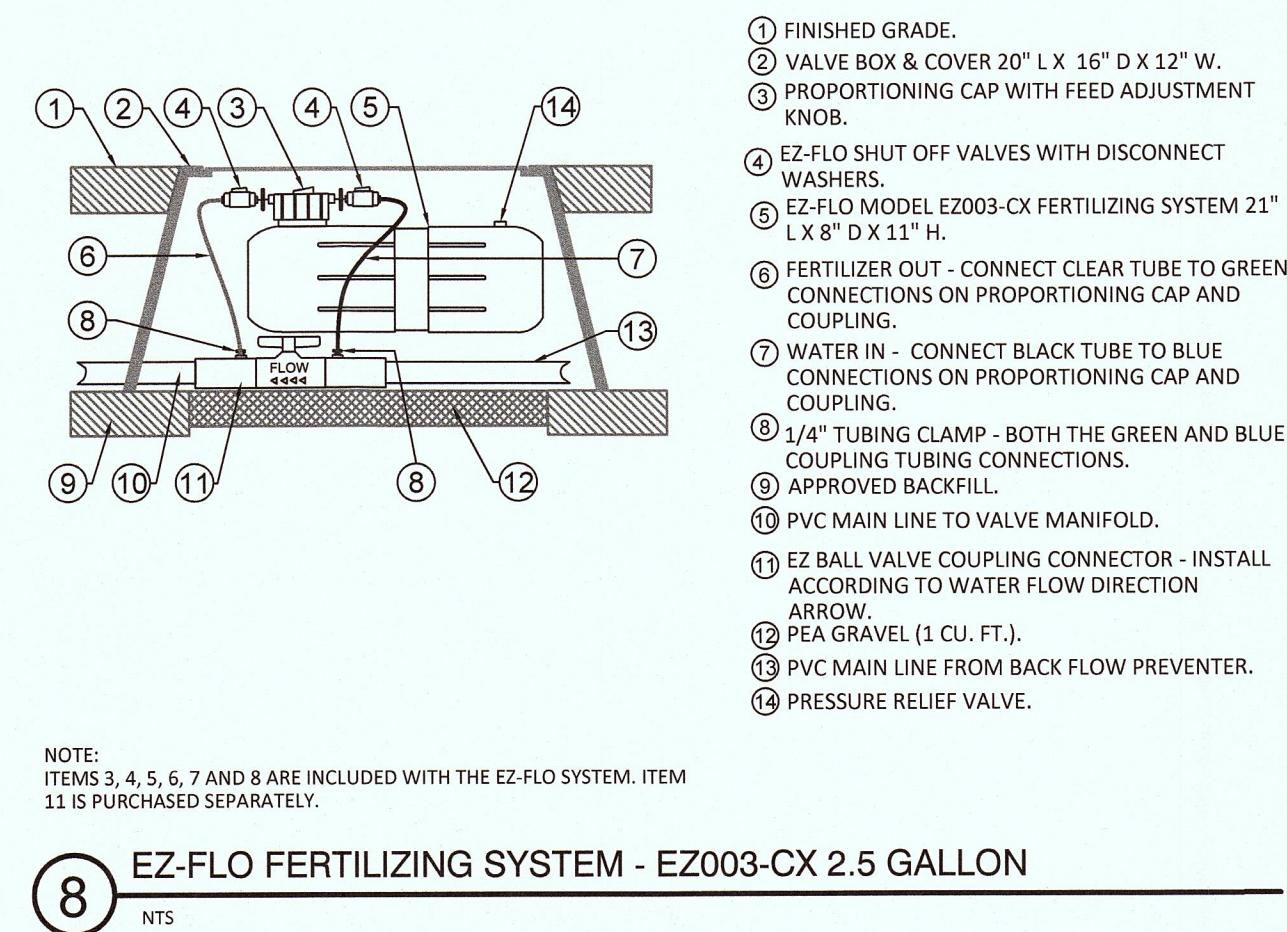
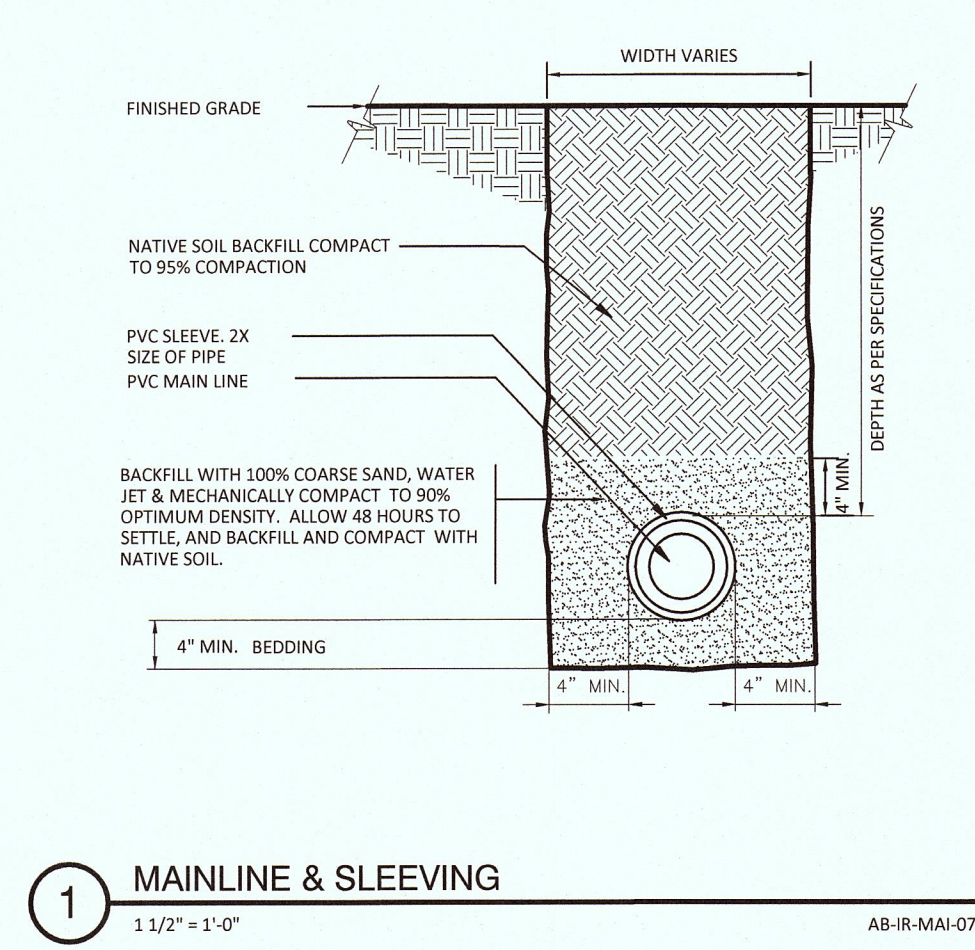
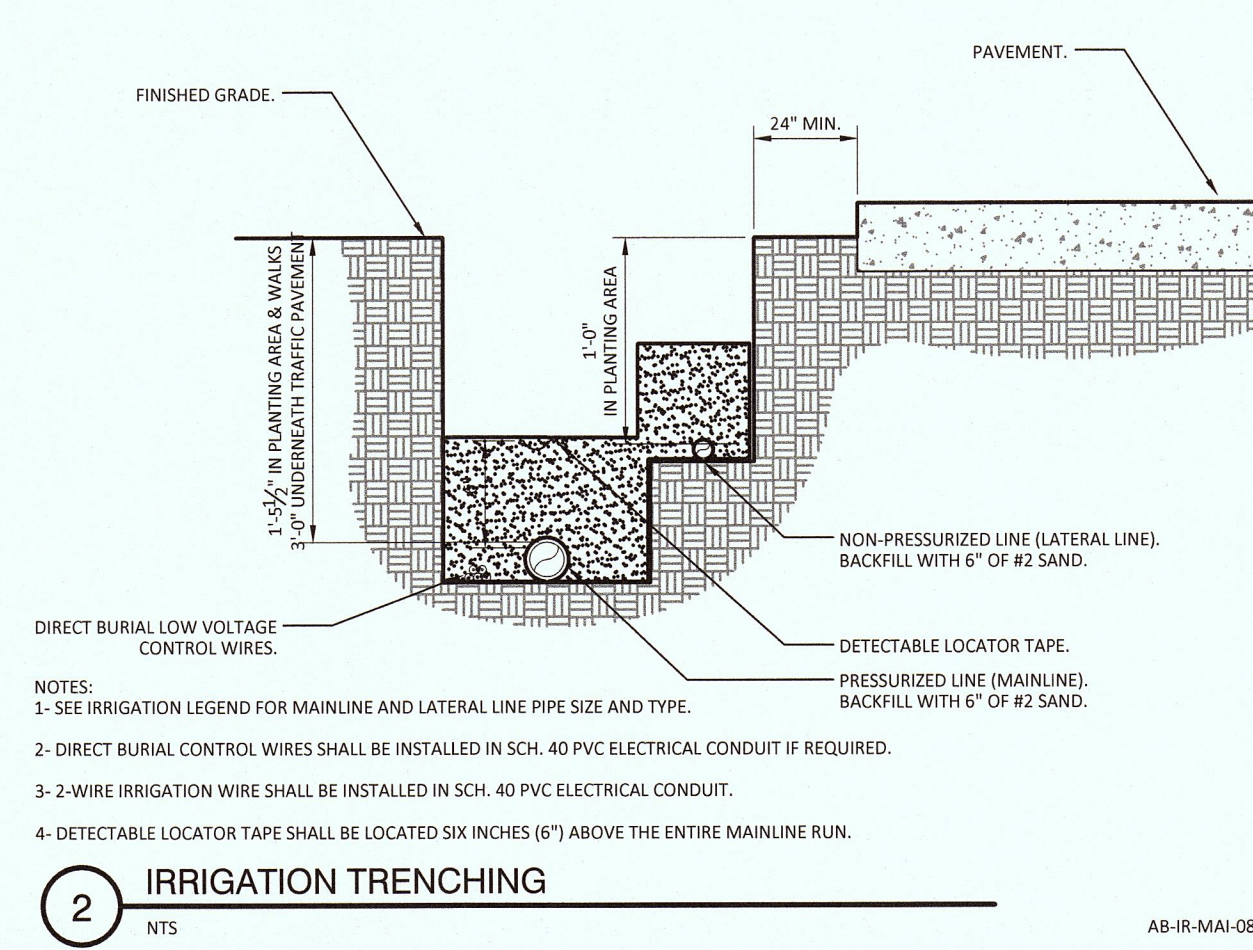
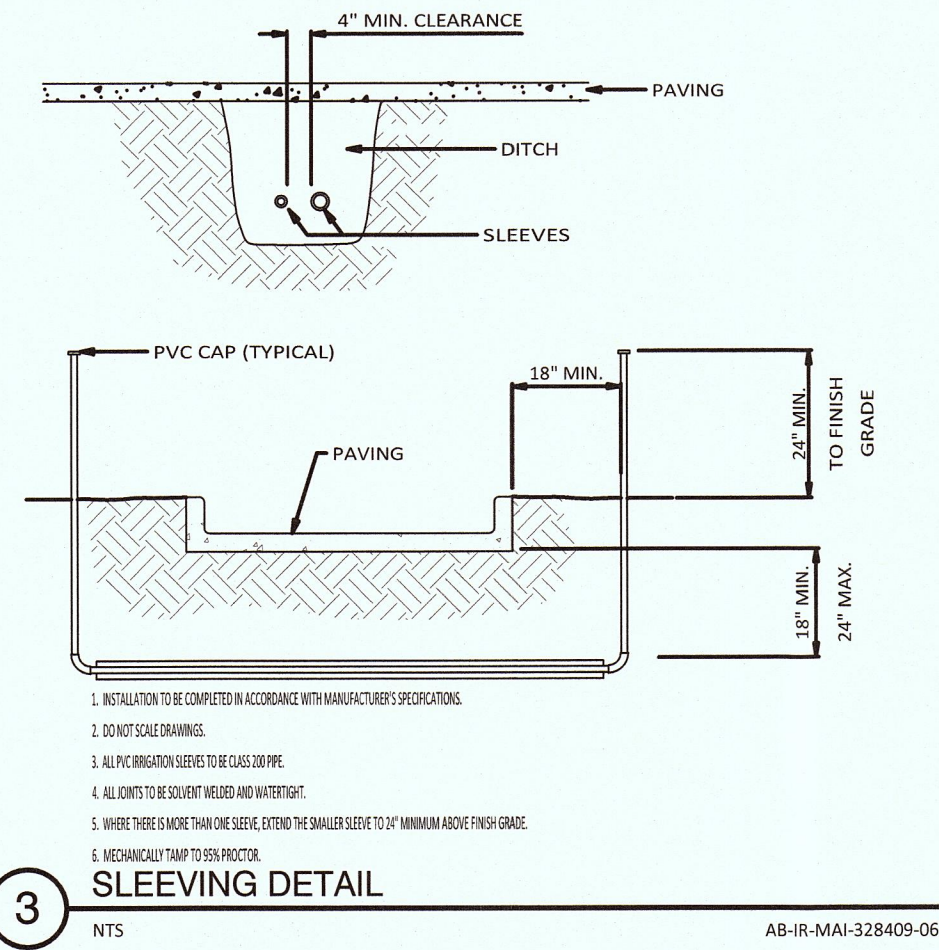
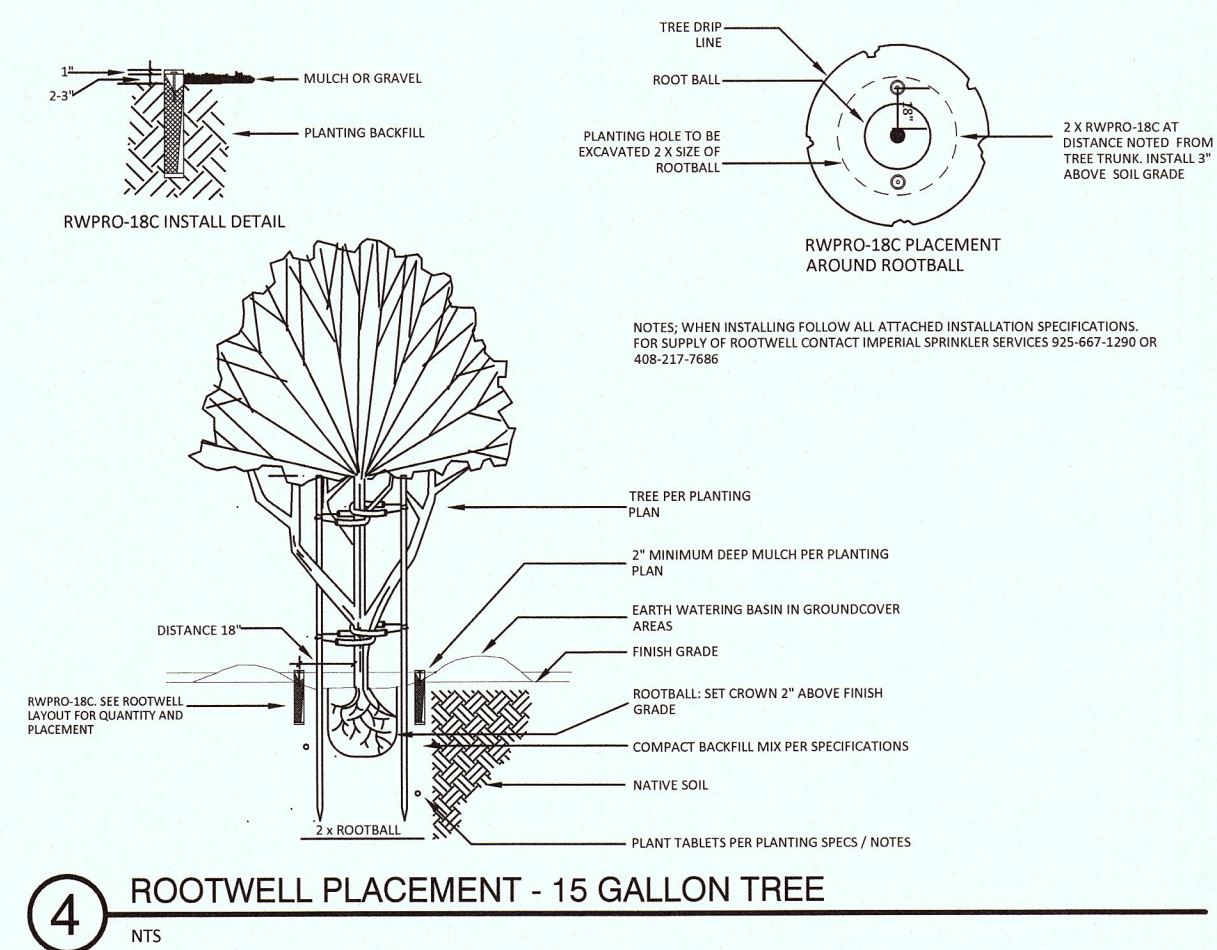
Date	Checked By
10/18/19	4Binc.

Scale	Approved By

Sheet
IR-2.0

General Notes

IRRIGATION DETAILS



"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."

DATED: 10/18/19
BY: Andrew Bolt

811
Know what's below.
Call before you dig.

No.	Revision/Issue	Date
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Firm Name and Address

4Binc
Select Certified
IRRIGATION ASSOCIATION
Equipment Installation, 25 Years of Service
LIC # 1012730 IACERT # 57436

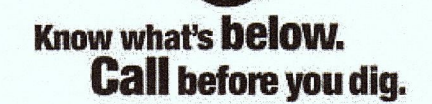
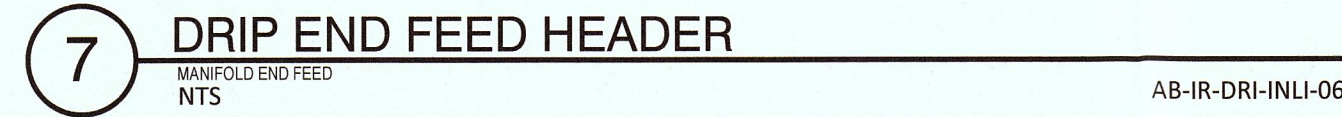
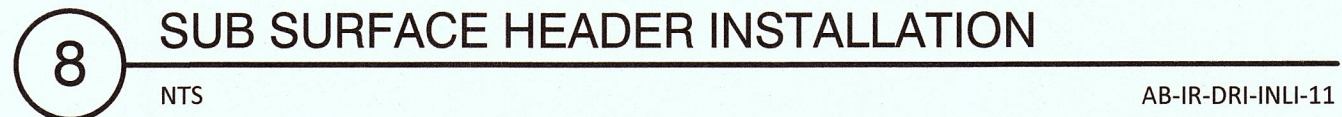
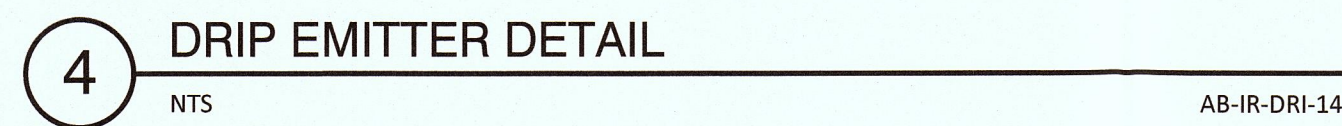
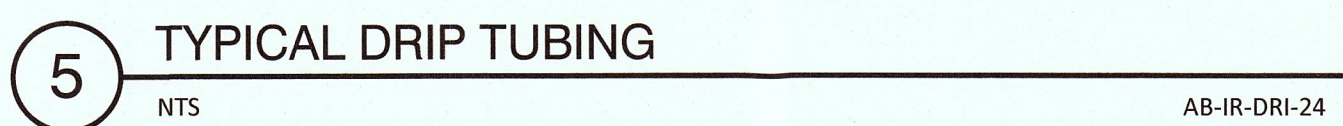
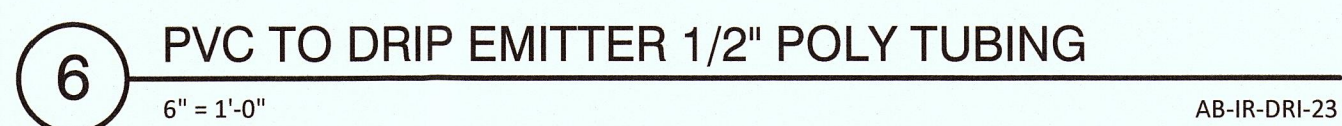
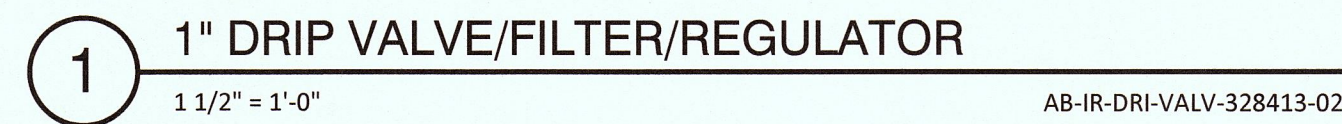
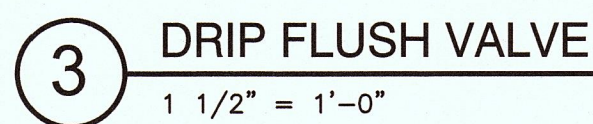
ASIC
COMMERCIAL MEMBER

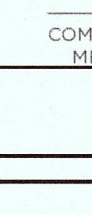
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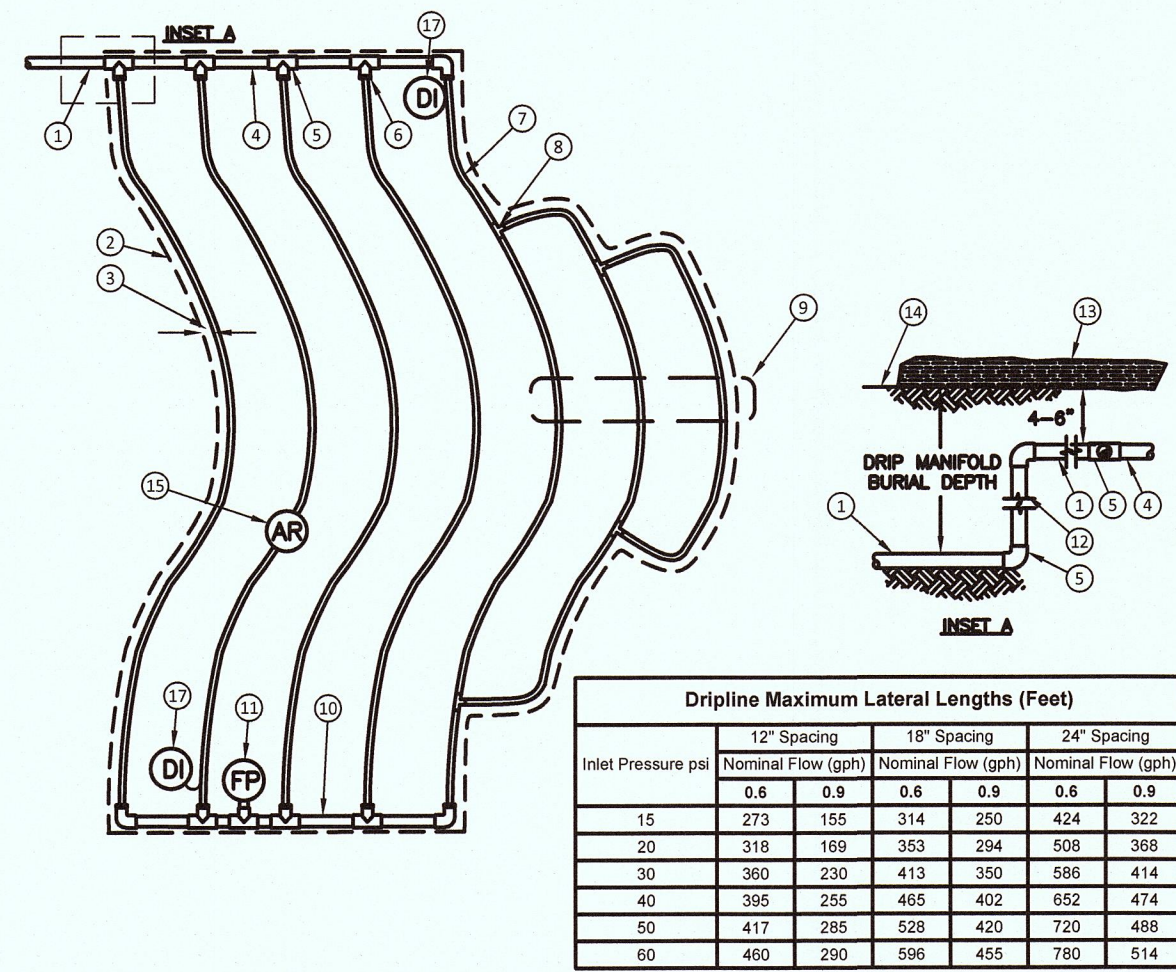
**COLUMBUS ST.
EL GRANADA, CA**

Project 236-2019	Drawn By 4Binc.
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	Sheet
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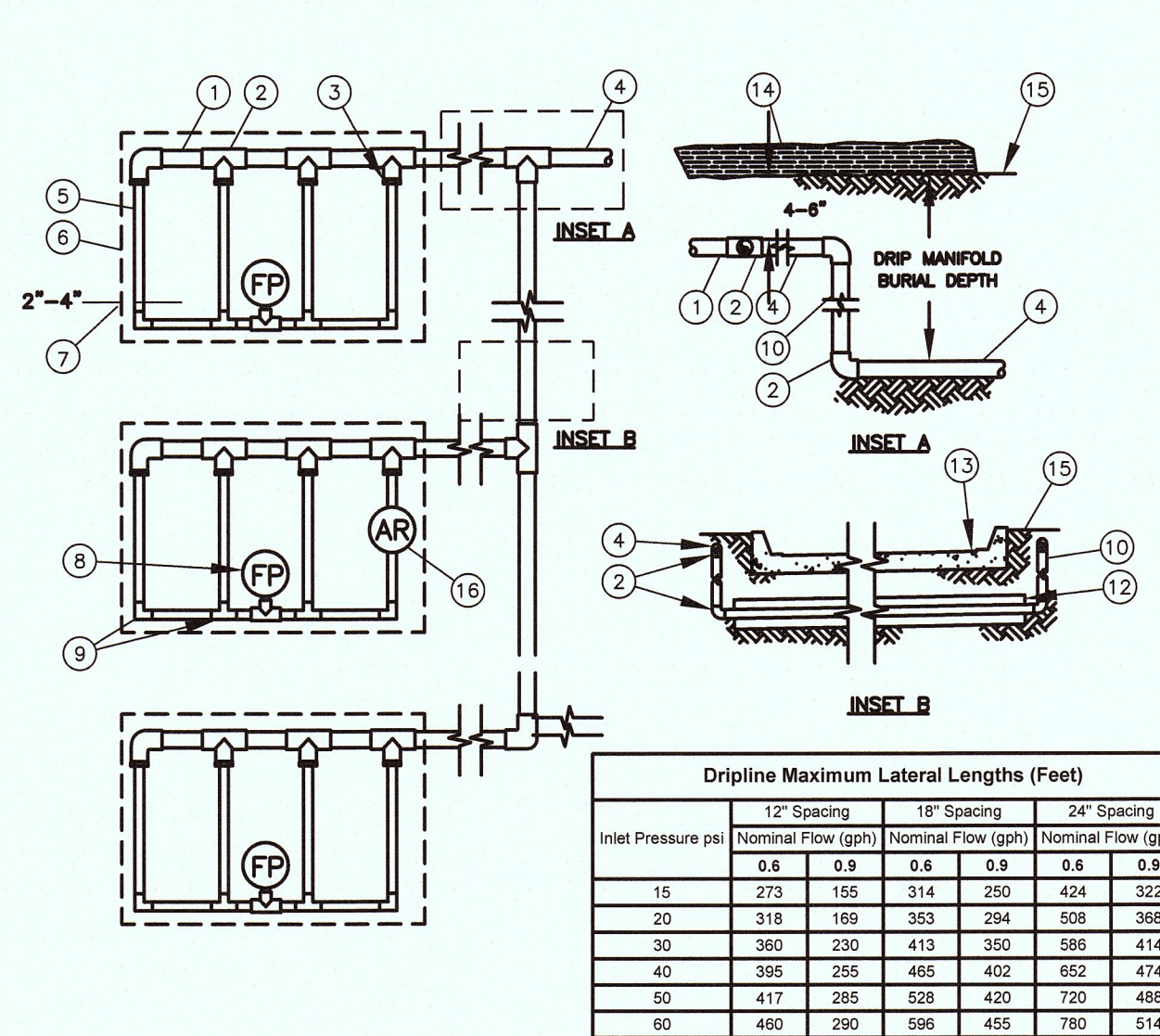
General Notes		
DRIP DETAILS		
No.	Revision/Issue	Date
Firm Name and Address		
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Project Name and Address		
COLUMBUS ST. EL GRANADA, CA		
Project	Drawn By	
236-2019	4Blnc.	
Date	Checked By	
10/18/19	4Blnc.	
Scale	Approved By	
		IR-3.0



NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
4. WHEN USING BARBED INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

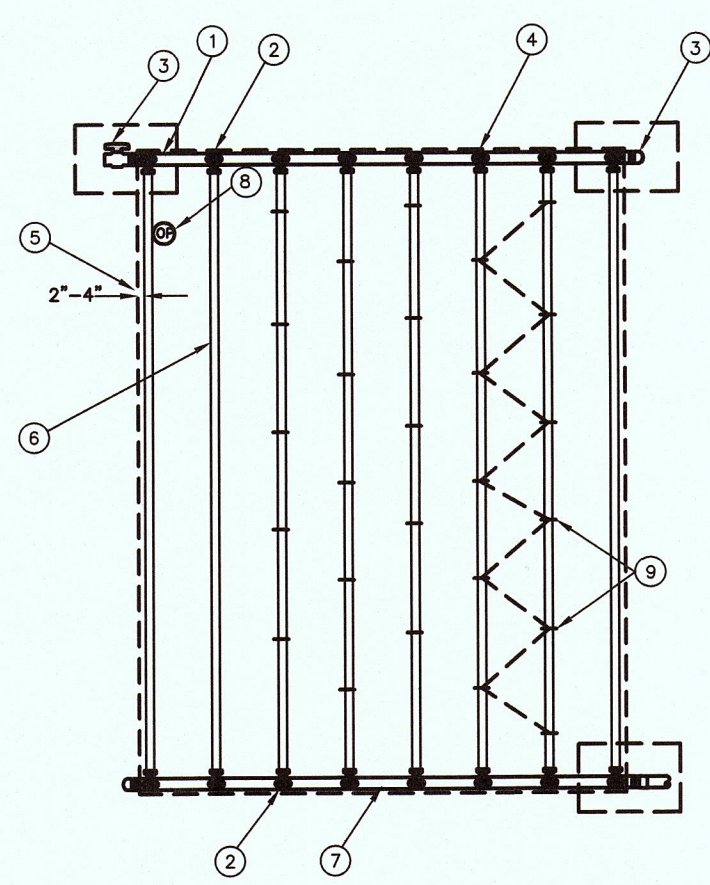
2 DRIP LAYOUT IN ODD SHAPED PLANTER
NTS AB-IR-DRI-DRIP-09

- ① PVC SUPPLY PIPE FROM CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- ② PERIMETER OF AREA
- ③ PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- ④ PVC SUPPLY MANIFOLD
- ⑤ PVC SCH 40 TEE OR EL (TYPICAL)
- ⑥ BARB X MALE FITTING
- ⑦ SUB-SURFACE DRIPLINE: SEE IRRIGATION LEGEND FOR SPECIFICATION
- ⑧ BARB X BARB INSERT TEE
- ⑨ TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- ⑩ PVC FLUSH HEADER
- ⑪ FLUSH POINT: SEE DETAILS FOR FLUSH POINT INSTALLATION
- ⑫ PVC RISER PIPE
- ⑬ TURF OR MULCH
- ⑭ FINISH GRADE
- ⑮ ½" AIR RELIEF VALVE: RAIN BIRD MODEL: SEE DETAILS FOR AIR RELIEF INSTALLATION
- ⑯ DRIP INDICATOR



- ① PVC SUPPLY HEADER
- ② PVC SCH 40 TEE OR EL (TYPICAL)
- ③ BARB X MALE FITTING
- ④ PVC DRIP MANIFOLD FROM CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- ⑤ SUB-SURFACE DRIPLINE: SEE IRRIGATION LEGEND FOR SPECIFICATIONS
- ⑥ PERIMETER OF AREA
- ⑦ PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- ⑧ FLUSH POINT (TYPICAL) - SEE DETAILS FOR FLUSH POINT INSTALLATION
- ⑨ BARB X BARB INSERT TEE OR ELBOW
- ⑩ PVC RISER PIPE
- ⑪ PVC SUPPLY MANIFOLD
- ⑫ PVC SCH 40 SLEEVE PIPE SIZED TWICE THE SIZE OF MANIFOLD PIPE SIZE
- ⑬ PAVEMENT AND CURB
- ⑭ TURF OR MULCH
- ⑮ FINISH GRADE
- ⑯ ½" AIR RELIEF VALVE:

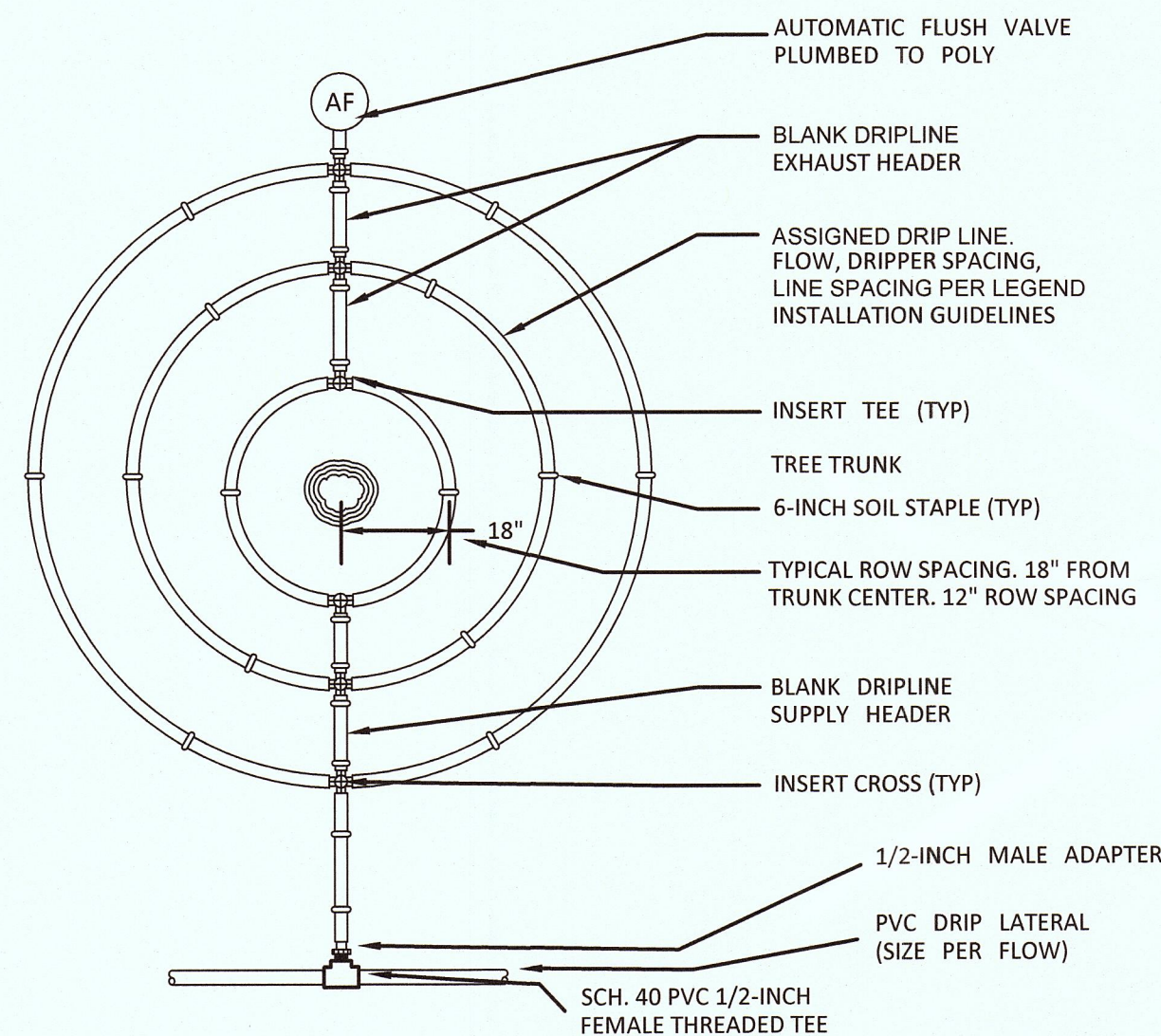
1 DRIP IRRIGATION IN PLANTER LAYOUT
NTS AB-IR-DRI-DRIP-08



NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION.

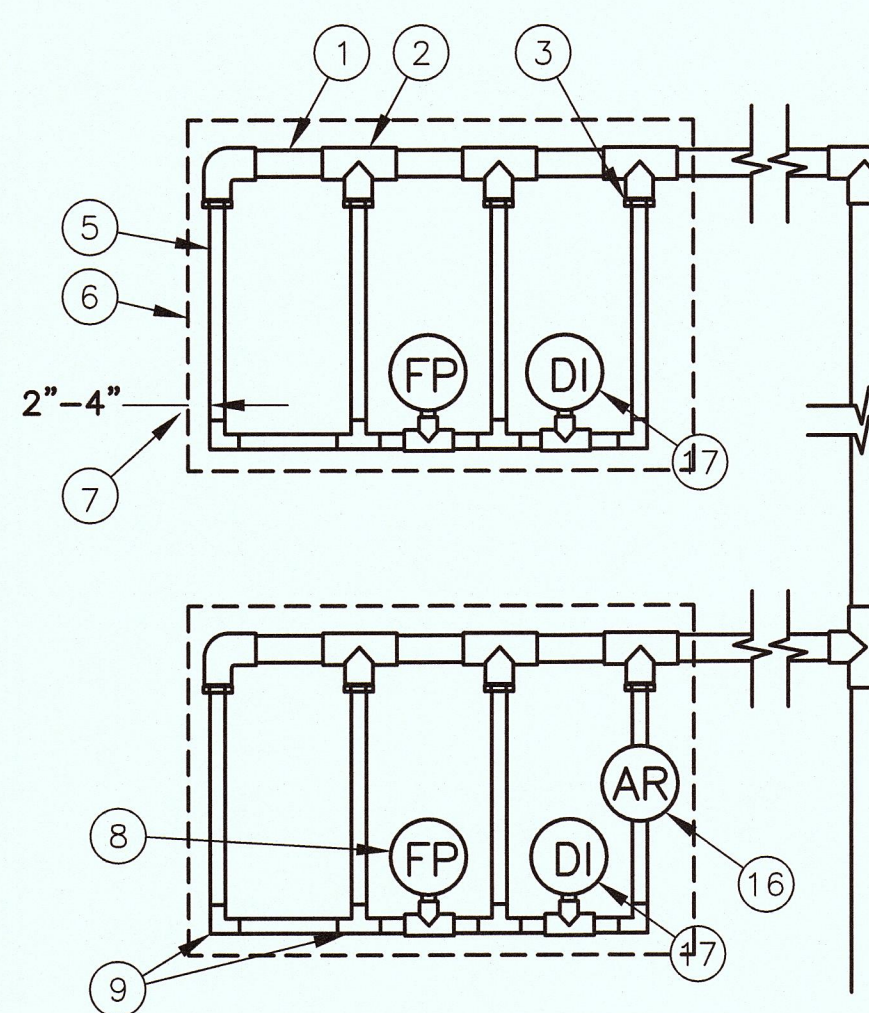
5 STAGGERED DRIP LINE EMITTER PATTERN
NTS AB-IR-DRI-DRIP-21

- ① QF-FLUSH HEADER/PVC OR ½" BLANK DRIP PIPE
- ② PRE-INSTALLED BARB FITTING IF USING QF HEADER
- ③ FLUSH POINT WITH PVC CAP OR OPTIONAL PVC BALL VALVE
- ④ PERIMETER OF AREA
- ⑤ PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- ⑥ SPECIFIED DRIPLINE (TYPICAL)
- ⑦ QF-SUPPLY HEADER/PVC OR BLANK DRIP TUBING
- ⑧ OPERATION INDICATOR RAIN BIRD MODEL: OPERIND
- ⑨ SPECIFIED DRIP LINE GRID PATTERN WITH STAGGERED EMITTERS.



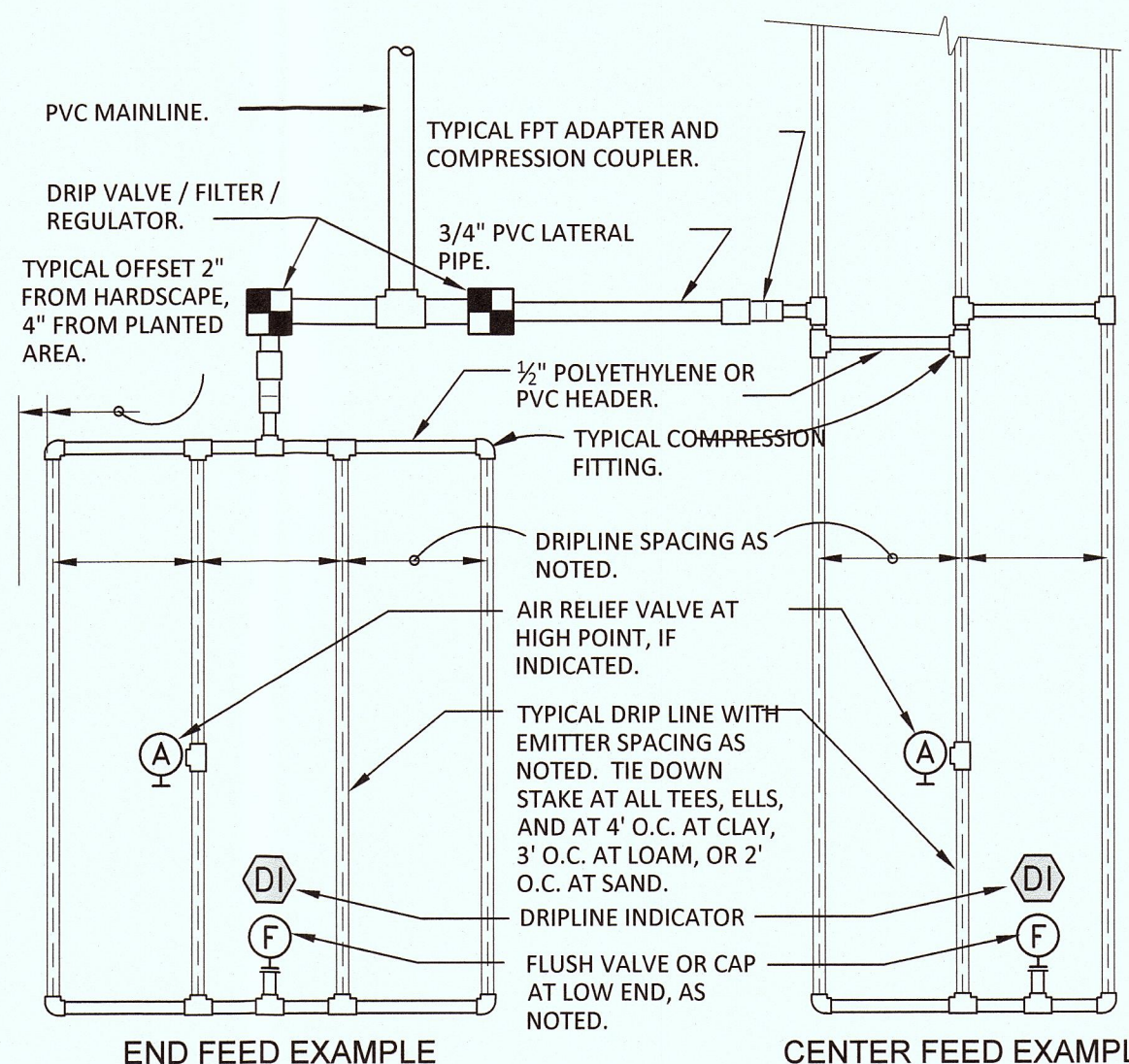
NOTES TO INSTALLER:
1. INSTALL FIRST DRIP LINE LOOP 18-INCHES FROM CENTER OF TREE TRUNK. INSTALL EACH ADDITIONAL LOOP 12" APART.
2. INSTALL DRIP LINE ON SURFACE TO MAXIMUM OF 6-INCHES BELOW GRADE, STAPLE IN PLACE PER MANUFACTURER'S RECOMMENDATIONS, BACKFILL AND SPREAD SURFACE TREATMENT AS DIRECTED BY OTHERS.
3. INSTALL DRIP LINE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION GUIDELINES
4. DRIP RINGS MUST BE 0.9 GPH 12" O.C EMITTER SPACING
5. TOTAL FLOW OF
2 DRIP RINGS IS 6 GPH (1.44"/H)
3 DRIP RINGS IS 18 GPH (1.44"/H)
4 DRIP RINGS IS 24 GPH (1.44"/H)

4 DRIP LINE TREE RING DETAIL
1" = 1" AB-IR-DRI-DRIP-09



- ① PVC SUPPLY HEADER
- ② PVC SCH 40 TEE OR EL (TYPICAL)
- ③ BARB X MALE FITTING
- ④ PVC DRIP MANIFOLD FROM MOCONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- ⑤ SUB-SURFACE DRIPLINE: SEE IRRIGATION LEGEND FOR SPECIFICATIONS
- ⑥ PERIMETER OF AREA
- ⑦ PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- ⑧ FLUSH POINT (TYPICAL) - SEE DETAILS FOR FLUSH POINT INSTALLATION
- ⑨ BARB X BARB INSERT TEE OR ELBOW
- ⑩ PVC RISER PIPE
- ⑪ PVC SUPPLY MANIFOLD
- ⑫ PVC SCH 40 SLEEVE PIPE SIZED TWICE THE SIZE OF MANIFOLD PIPE SIZE
- ⑬ PAVEMENT AND CURB
- ⑭ TURF OR MULCH
- ⑮ FINISH GRADE
- ⑯ ½" AIR RELIEF VALVE
- ⑰ DRIP INDICATOR

3 DRIP HEADER DETAIL
NTS AB-IR-DRI-DRIP-15



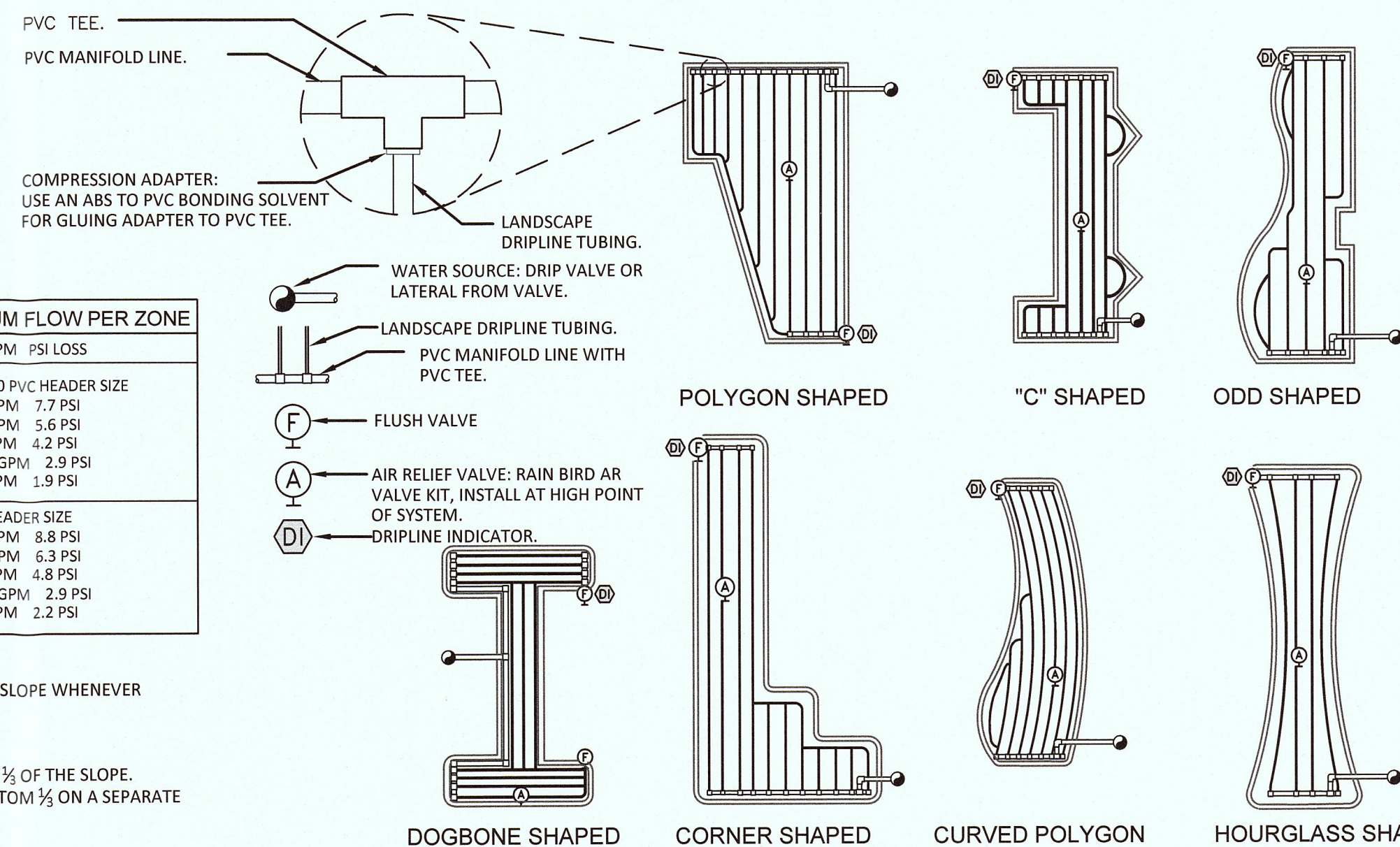
6 TYPICAL DRIPLINE REQUIREMENTS
NTS AB-IR-DRI-DRIP-19

PSI	MAXIMUM LATERAL LENGTH (FEET)					
	EMITTER FLOW RATE GPH					
	12" SPACING		18" SPACING		24" SPACING	
	0.6	0.9	0.6	0.9	0.6	0.9
10	125	96	175	135	218	171
20	249	191	350	271	442	340
30	307	236	434	333	550	422
40	350	268	495	380	627	471
50	125	96	175	135	218	171
60	125	96	175	135	218	171

EMITTER SPACING	GRID PRECIPITATION RATES (IN/HR)			
	LATERAL SPACING		EMITTER FLOW RATE	
			0.6	0.9
12	12	0.96	1.44	
18	18	0.69	1.03	
24	24	0.28	0.41	

EMITTER FLOW	LATERAL FLOW PER 100 FT (GPM)			
	Spacing	12"	18"	24"
		Spacing	Spacing	Spacing
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM	
0.9 GPH	1.5 GPM	1.0 GPM	0.75 GPM	

SLOPED CONDITION NOTE:
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.
2. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.
3. NORMAL SPACING WITHIN THE TOP ½ OF SLOPE.
4. INSTALL DRIPLINE AT 25% GREATER SPACING AT THE BOTTOM ½ OF THE SLOPE.
5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE BOTTOM ½ ON A SEPARATE VALVE.



"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."
DATED: 10/18/19
BY: Andrew Bolt



DRIP DETAILS

General Notes		
No.	Revision/Issue	Date
Firm Name and Address		
Project Name and Address		
COLUMBUS ST. EL GRANADA, CA		
Project	236-2019	Drawn By 4Binc.
Date	10/18/19	Checked By 4Binc.
Scale		Approved By
		Sheet
		IR-3.1

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General Notes

IRRIGATION NOTES

No. Revision/Issue Date

Firm Name and Address



Project Name and Address

COLUMBUS ST.
EL GRANADA, CA

Project 236-2019 Drawn By 4BInc.

Date 10/18/19 Checked By 4BInc.

Scale Approved By

Sheet

IR-4.0

"I HAVE COMPLIED WITH THE LANDSCAPE DESIGN CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THIS DESIGN."

DATED: 10/18/19

By: Andrew Bolt



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- A. All materials and equipment shall be stored properly and protected as required by the Contractor. The Contractor shall be entirely responsible for damages or loss by weather or other cause to work under the contract. Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of the work.
- B. Deliver the products to the job site in their original unopened container with labels intact and legible at time of use.
- C. Store in accordance with the manufacturer's recommendations.

1.17 PROTECTION

- A. The Contractor shall continuously maintain adequate protection of all their work from damage, destruction, or loss, and shall protect the owner's property from damage arising in connection with this contract. Contractor shall make good any such damage, destruction, loss or injury. Contractor shall adequately protect adjacent property as provided by law and the contract documents.
- B. The Contractor shall maintain sufficient safeguards, such as railings, temporary walks, lights, etc., against the occurrence of accidents, injuries or damage to any person or property resulting from their work, and shall alone be responsible for the same if such occurs.
- C. All existing paving, structures, equipment or other material shall be protected at all times, including the irrigation system related to plants, from damage by workers and equipment. The Contractor shall follow all protection requirements including plant protection provision of the general contract documents. All damages shall be repaired or replaced at the Contractor's expense. Repairs and/or replacement shall be to the satisfaction of the Owner's Representative, including the selection of a Contractor to undertake the repair or maintenance. Repairs shall be at no cost to the owner.
1. For trees damaged to the point where they will not be expected to survive or which are severely disfigured and that are too large to replace, the cost of damages shall be as determined by the Owner's arboret using accepted tree value evaluation methods.
- D. The Contractor shall refrain from trenching within the drip line of any existing tree to remain. The Owner's Representative may require the Contractor to relocate proposed irrigation work, bore lines beneath roots or use of spike technology to dig trenches through and under the root system to avoid damage to existing tree root areas.

1.18 EXCAVATING AROUND UTILITIES

- A. Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.
1. Do not begin any excavation until all underground utilities have been located and marked.
- Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate, as required. Maintain stakes and/or markings set by others until parties concerned mutually agree to their removal.
- B. Notification to 811 is required for all excavation around utilities. The Contractor is responsible for knowing the location and avoiding utilities that are not covered by the Local Utility Locator Service.
- C. Section 421842127 of the government code requires a dig-alert identification number be issued before a "permit to excavate" will be valid. For your dig-alert identification number call underground service alert toll free 1-800-422-4133 two working days before beginning construction.

1.19 POINT OF CONNECTION

Point of connection option 1 - Irrigation Contractor provided

- A. The point of connection of the irrigation system is to electrical power sources shall be provided by the irrigation installer. All connections shall be made by a licensed electrical Contractor per governing codes at the location shown on the drawings.
- B. The point of connection of the irrigation system to be potable and/or non-potable water sources, including the main shut-off valve and backflow preventer shall be provided by the irrigation installer. All connections shall be made by a licensed Contractor per governing codes, at the location shown on the drawings.

Point of connection option 2 - General Contractor provided

- A. The point of connection of the irrigation system to its electrical power sources shall be provided by the General Contractor's licensed electrical Contractor per governing codes at the location shown on the drawings.
- B. The point of connection of the irrigation system to be potable and/or non-potable water sources, including the main shut-off valve and backflow preventer shall be provided by the General Contractor's licensed plumbing Contractor per governing codes at the location shown on the drawings. The minimum size and water pressure of the pressurized line will be as noted on the irrigation drawing.

1.20 TEMPORARY UTILITIES

- A. All temporary piping, wiring, meters, panels and other related appurtenances required between source of supply and point of use shall be provided by the Contractor and coordinated with the Owner's Representative. Existing utilities may be used with the written permission of the owner.

1.21 CUTTING, PATCHING, TRENCHING AND DIGGING

- A. The Contractor shall do all cutting, filling, trenching or patching of their work that may be required to make its several parts come together as shown upon, or implied by, the drawings and specifications for the completed project.
- B. Digging and trenching operations shall be suspended when the soil moisture is above field capacity.

1.22 USE OF PREMISES

- A. The Contractor shall confine their apparatus, the storage of materials, and the operations of their workers to limits indicated by the law, ordinances, or permits and shall not unreasonably encumber the premises with their materials.
- B. Contractor parking, and material and equipment storage shall in areas approved by the Owner's Representative.

1.23 AS BUILT RECORD SET OF DRAWINGS

- A. Immediately upon the installation of any buried pipe or equipment, the Contractor shall indicate on the progress record drawings the locations of said pipe or equipment. The progress record drawings shall be made available at any time for review by the Owner's Representative.
- B. Before final acceptance of work, the Contractor shall provide an as built record set of drawings showing the irrigation system work as built. The drawings shall be transmitted to the Owner's Representative in paper format and as a pdf file of each document on compact disc or flash drive. The drawings shall include all information shown on the original contract document and revised to reflect all changes in the work. The drawings shall include the following additional information:
1. All valves shall be numbered by station and corresponding numbers shall be shown on the as built record set of drawings.
2. All main line pipe or irrigation equipment including sleeves, valves, controllers, irrigation wire runs which deviate from the mainline location, backflow preventers, remote control valves, grounding rods, shut-off valves, rain sensors, wire splice locations, and quick-coupling valves shall be located by two (2) measured dimensions, to the nearest one-half foot. Dimensions shall be given from permanent objects such as buildings, sidewalks, curbs, walls, structures and driveways. All changes in direction and depth of main line pipe shall be noted exactly as installed. Dimensions for pipes shall be shown at no greater than a 90° R maximum interval.
3. As built record set of drawings shall be signed and dated by the Contractor attesting to and certifying the accuracy of the as built record set of drawings. As built record set of drawings shall have "As Built Record Set of Drawings", company name, address, phone number and the name of the person who created the drawing and the dated name (if different).
- C. The Owner shall make the original contract drawing files available to the Contractor.

1.24 CONTROLLER CHARTS

- A. Provide one controller chart for each automatic controller installed.
1. On the inside surface of the cover of each automatic controller, prepare and mount a color-coded chart showing the valves, main line, and systems serviced by that particular controller. All valves shall be numbered to match the operation schedule and the drawings. Only those areas controlled by that controller shall be shown by this chart and shall show building, walls, sidewalks, curbs, walls, structures and driveways. All changes in direction and depth of main line pipe shall be noted exactly as installed. Dimensions for pipes shall be shown at no greater than a 90° R maximum interval.
2. The controller chart shall be completed and approved prior to acceptance of the work.

1.25 TESTING

- A. Provide all required system testing with written reports as described in part 3.

1.26 OPERATION AND MAINTENANCE MANUALS AND WARRANTIES

- A. Prepare and deliver to the Owner's Representative within ten calendar days prior to completion of construction, two 3-ring hard cover binders containing the following information:
1. Index sheet stating Contractor's address and telephone number, list of equipment with name and addresses of local manufacturers' representatives.
2. Catalog and parts sheets on all material and equipment.
3. Guarantee statement. The start of the guarantee period shall be the date the irrigation system is accepted by the Owner.
4. Complete operating and maintenance instruction for all major equipment.
5. Irrigation product manufacturers warranties.
- B. In addition to the above-mentioned maintenance manuals, provide the Owner's maintenance personnel with instructions for maintaining major equipment and show evidence in writing to the Owner's Representative at the conclusion of the project that this has been rendered.

PART 2 PRODUCTS

2.1 MATERIALS GENERAL

- A. All materials shall be of standard, approved and first grade quality and shall be new and in perfect condition when installed and accepted.
- B. See the parts schedule on the drawings for specific components and manufacturers. The use of a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and construction desired only. Other manufacturer's equipment may be submitted for approval with written approval by the Owner's Representative. Substituted equipment shall not substantially alter the operations of the system.
- C. Approval of any items or substitutions indicates only that the product(s) apparently meet the requirements of the drawings and specifications on the basis of the information or samples submitted to the Contractor and that the Contractor will be responsible for the performance of substituted items. If the substitution proves to be unsatisfactory or not compatible with other parts of the system, the Contractor shall replace said items with the originally specified items, including all necessary work and modifications to replace the items, at no cost to the owner.

2.2 RECLAIMED WATER SYSTEM DESIGNATION

- A. Where irrigation systems use reclaimed water, all products including valve boxes, lateral and main line pipe, etc. where applicable and/or required by local code shall have the reclaimed water purple color designation.

2.3 PIPING MATERIAL

- A. Individual types of pipe and fittings supplied are to be of compatible manufacturer unless otherwise approved. Pipe sizes shown are nominal inside diameter unless otherwise noted.
- B. Plastic pipe:
1. All pipe shall be free of blemishes, internal striations, cracks, or any other defects or imperfections. The pipe shall be continuously and permanently marked with the following information: manufacturer's name or trade mark, size, class and type of pipe pressure rating, quality control identifications, date of extrusion, and National Sanitation Foundation (NSF) rating.
2. Pressure main line for piping upstream of remote control valves and quick coupling valves:
- a. Pipe smaller than 2 inch diameter shall be plastic pipe for use with solvent weld or threaded fittings. Shall be manufactured rigid virgin polyvinyl chloride (PVC) 1220, Type 1, Grade 2 conforming to ASTM D 1785, designated as Schedule 40.
- b. Pipe 2 - 3 inch diameter shall be manufactured rigid virgin polyvinyl chloride (PVC), Type 1, Grade 1 conforming to ASTM D 1785, designated as bell gasket Class 315.
- c. Pipe larger than 3 inch diameter shall be manufactured rigid virgin polyvinyl chloride (PVC), Type 1, Grade 2 conforming to ASTM D 1785, designated as bell gasket Class 200-PVC.
3. Non-pressure lateral line for piping downstream of remote control valves: plastic pipe for use with solvent weld or threaded fittings. Shall be manufactured rigid virgin polyvinyl chloride PVC 1220 (type 1, grade 2) conforming to ASTM d 1785, designated as Class 200, 3/4 minimum size.
- C. Galvanized pipe shall be used for above ground connections to backflow prevention device assemblies, hose bibs, and booster pumps and as shown on the plans and details.
1. Pipe shall be not dip galvanized continuous welded, seamless, Schedule 40 conforming to applicable current ASTM standards.

2.4 FITTINGS AND CONNECTIONS:

- A. Polyvinyl chloride pipe fittings and connections: Type II, Grade 1, Schedule 40, high impact molded fittings, manufactured from virgin compounds as specified for piping listed socket or molded thread type, suitable for either solvent weld or screwed connections. Machine threaded fittings and plastic saddle and flange fittings are not acceptable. Furnish fittings permanently marked with following information: nominal pipe size, type and schedule of material, and National Sanitation Foundation (NSF) seal of approval. PVC fittings shall conform to ASTM D2464 and D2466.
- B. Brass pipe fittings, unions and connections: standard 125 pound class 85% red brass fittings and connections, IPS threaded.
- C. PVC Schedule 80 threaded risers and nipples: Type I, grade 1, Schedule 80, high impact molded, manufactured from virgin compounds as specified for piping and conforming to ASTM D-2464. Threaded ends shall be molded threads only. Machined threads are not acceptable.
- D. Galvanized pipe fittings shall be galvanized malleable iron ground pipe Schedule 40 conforming to applicable current ASTM standards.

2.5 SOLVENT CEMENTS AND THREAD LUBRICANT

- A. Solvent cements shall comply with ASTM D2954. Solder joints shall be made per recommended procedures for joining PVC plastic pipe and fittings with PVC solvent cement and primer by the pipe and fitting manufacturer and procedures outlined in the appendix of ASTM D2954.
- B. Thread lubricant shall be Teflon ribbon-type, or approved equal, suitable for threaded installations as per manufacturer's recommendations.
- C. Pipe Joint Compound (Pipe dope) shall be used on all galvanized threaded connections. Pipe Joint Compound is a white colored, non-separating thread sealant compound designed to seal threaded connections against leakage due to internal pressure. It shall contain PTFE (Polytetrafluoroethylene) to permit a tighter assembly with lower torque, secure permanent sealing of all threaded connections and allow for easy disassembly without stripping or damaging threads.

2.6 BACKFLOW PREVENTION DEVICES

- A. The backflow prevention device shall be certified to NSF/ANSI 372 shall be ASSE Listed 1013, rated to 180 degree F, and supplied with full port ball valves.

- B. The main body and access covers shall be low lead bronze (ASTM B 584).
- C. The seat ring and all internal polymers shall be NSF Listed Noryl and the seat disc elastomers shall be silicone.
- D. Backflow Preventer shall be as indicated on the drawings.

2.7 PRESSURE REGULATOR

- A. Pressure regulator shall certified to NSF/ANSI 372, consisting of low lead bronze body bell housing, a separate access cap shall be threaded to the body and shall not require the use of ferrous screws.
- B. The main valve body shall be cast bronze (ASTM B 584).
- C. The access covers shall be bronze (ASTM B 584 or Brass ASTM B 16).
- D. The assembly shall be of the balanced piston design and shall reduce the pressure in both flow and no flow conditions.
- E. Pressure regulator shall be as indicated on the drawings.

2.7.1 WYE STRAINER

- A. Strainer shall conform to MIL-S-15293, and be ANSI 3rd party certified to comply with the states lead plumbing law 0.25% maximum weighted average lead content.
- B. The main body shall be low lead bronze (ASTM B 584).
- C. The access covers shall be yellow brass or cast bronze (ASTM B 16 or ASTM B 584).
- D. Strainer screen shall be 300 series stainless steel available in 20, 40, 60, 80, or 100 mesh.
- F. Wye strainer shall be as indicated on the plans.

G. 2.8 BACKFLOW PREVENTER CAGE & FROST BLANKET

- H. A heavy-duty steel mesh cage with rust proof finish. The caging shall be sized to allow space for the entire piping assembly associated with the Backflow Preventer unit, and all associated equipment.
- I. The cage shall include the manufacturer's standard tamper proof locking mechanism.
- J. Provide a concrete base as detailed on the drawings.
- K. Backflow Preventer Cage type, manufacturer and color shall be as indicated on the plans.
- L. A Frost Blanket, manufacturer and color shall be as indicated on the plans.

2.9 BOOSTER PUMP (where applicable)

- A. Booster pump shall be housed in a sturdy, locking, weather-resistant case, furnished for maximum exterior protection.
- B. Booster pump shall be as indicated on the drawings.

2.10 BALL VALVES

- A. Ball valves for 3/4 inch through 2 - 1/2 inch shall be of PVC, block, tu-union design with EPDM seals and o-ring.
- B. Ball valves for 3 inch and larger shall be gate design and shall be iron body, brass or bronze mounted AWWA gate valves, and shall have a clear watertight seal to the full nominal diameter of the valve, and shall be rubber gasket, flanged or mechanical joint only, and shall be able to withstand a continuous working pressure of 150 PSI. Valve shall be equipped with a square-operating nut.
- C. All ball valves located in a valve manifold shall be the same size as the main line (1-1/2 inch size minimum). Provide pipe-reducing adapters down stream of valves, as required. All ball valves in line shall be the same size as the pipe.
- D. Ball valves shall be as indicated on the drawings.

2.11 CHECK VALVES

- A. Swing check valves 2 inch and smaller shall be 200 lbs., W.O.G., bronze construction with replaceable composition, neoprene or rubber disc and shall meet or exceed federal specification WW-V-55, Class A, type IV.
- B. Anti-drain valves shall be of heavy-duty virgin PVC construction with female iron pipe thread inlet and outlet. Internal parts shall be stainless steel and neoprene. Anti-drain valves shall be field adjustable against draw out from 5 to 40 feet of head.
- C. Check valves shall be as indicated on the drawings.

2.12 REMOTE CONTROL VALVES

- A. Remote control valves shall be electrically operated, single seat, normally closed configuration, equipped with flow control adjustment and capability for manual operation.
- B. Valves shall be actuated by a normally closed low voltage solenoid using 24 volts, 50/60 cycle solenoid power requirement. Solenoid shall be epoxy encased. A union shall be installed on the discharge end.
- C. Remote control valves shall be wired to controller in same numerical sequence as indicated on drawings.
- D. Remote control valves shall be as indicated on the drawings.

2.13 MASTER CONTROL VALVES

- E. Master Control Valve shall be compatible with the irrigation controller.
- F. Master control valves shall be as indicated on the drawings.

2.14 FLOW SENSOR

- A. Flow sensor shall be compatible with the irrigation controller.
- B. Flow sensor shall be as indicated on the drawings.

2.15 HYDROMETER

- C. Hydrometer shall be compatible with the irrigation controller.
- D. Hydrometer shall be as indicated on the drawings.

2.16 QUICK COUPLER VALVES

- A. Quick coupler valves shall be a one or two piece, heavy-duty brass construction with a working pressure of 150 PSI with a built in flow control and a self-closing valve.
- B. Quick coupler shall be equipped with locking red brass cap covered with durable yellow thermo-plastic rubber cover. Key size shall be compatible with quick coupler and of same manufacturer.
- C. Quick coupler valves shall be as indicated on the drawings.

2.17 SPRINKLER HEADS

- D. All sprinkler heads shall have check valves installed.
- E. All sprinkler heads shall be as indicated on the drawings.
- F. Riser nipples for all sprinkler heads shall be the same size as the riser opening in the sprinkler body and fabricated as shown on the drawings.

2.18 AUTOMATIC CONTROLLER

- A. Controller shall be housed in a sturdy, locking, weather-resistant case, furnished for maximum exterior protection.
- B. Controller shall be equipped with evapo-transpiration (ET) sensor, which adjusts the controller programming based on local climatic conditions. The sensor shall also have a rain sensing shut-off switch, wind sensing shut-off switch, and freeze sensing shut-off switch.
1. If a moisture sensor is used in lieu of an evapo-transpiration sensor an additional sensor, which has a rain-sensing shut-off switch, wind sensing shut-off switch, and freeze sensing shut-off switch shall be provided.
- C. Automatic controller shall be as indicated on the drawings.

2.19 CONTROLLER DECODERS

- D. All decoders shall be per the controller manufacturer's specifications.
- E. Decoder model number shall be as shown on the drawings.

2.20 ELECTRICAL CONTROL WIRING

- A. Low voltage
1. The electrical control wire shall be direct burial type UF, no. 14 AWG, solid, single conductor, copper wire UL approved or larger, if required to operate system as designed.
2. For 2-Wire controllers all irrigation wire for the controller, flow sensor, master valve, hydrometer, remote control valves and moisture sensors shall be per the controller manufacturer's specifications and recommendations.
3. Color code wires in each valve. Common wire shall be white.
4. If multiple controllers are being utilized, and wire paths of different controllers cross each other, both common and control wires from each controller to be of different colors.
5. Control wire splices: Splices are when required shall be placed in splice boxes.
6. Wire connections shall be per the controller manufacturer's specifications and recommendations.
- B. High voltage
1. Shall be of type as required by local codes and ordinances.
2. Shall be of proper size to accommodate needs of equipment it is to serve.

2.21 VALVE BOXES AND MATERIALS

- A. Valve boxes: valve boxes shall be constructed of ABS (acrylonitrile butadiene styrene) plastic, green in color, with rigid base and sides and shall be supplied with bolt lock cover secured with stainless steel bolts. Cover shall be identified as shown on drawings. Provide box extensions as required.
1. Master valves, flow sensors, remote control irrigation valves, gate valves, and ball valves 3 inch or less in size shall use a 14 inch x 19 inch x 12 inch rectangular box.
2. Quick coupler valves, wire splices, and grounding rods shall use a 10 inch circular box.

2.22 CONCRETE THRUST BLOCKS

- A. Concrete thrust blocks shall be sized per the pipe manufacturer's requirement or as indicated on the drawings.

2.23 VALVE IDENTIFICATION TAGS

- A. Valve Identification Tags shall be 2.25 inch x 2.85 inch polyurethane, color: potable water; yellow / Non-potable water; purple. Tags shall be permanently attached to each remote control valve with tamper proof seals as indicated on the drawings.

2.24 EQUIPMENT TO BE FURNISHED TO OWNER

- A. Two (2) sets of keys for each automatic controller.
- B. Two (2) 48 inch tee wrenches for operating the gate valves.
- C. Three (3) sets of special tools required for removing, disassembling and adjusting each type of sprinkler and valve supplied on this project.
- D. Five (5) Extra sprinkler heads, nozzles, shrub adapters, nozzle filter screens, for each type used on the project.
- E. Two (2) quick coupler keys to match manufacturer type of quick coupler.

2.25 INCIDENTAL MATERIALS AND EQUIPMENT

- A. Furnish all materials and equipment not specified above, but which are necessary for completion of the work as intended.

2.26 MAIN LINE LOCATOR TAPE

- A. 3- inch wide plastic detectable locator tape.

2.27 MAIN LINE AND LATERAL LINE BEDDING SAND

- A. Sand shall consist of natural or manufactured granular material, free of organic material, mica, loam, clay or other substances not suitable for the intended purpose.
- B. Sand shall be masonry sand ASTM C 144 or coarse concrete sand, ASTM C 33.

SECTION 32 8400 IRRIGATION

PART 1 GENERAL

1.1 SUMMARY

- A. Irrigation system required for this work includes but is not limited to the furnishing of all labor, tools, materials, appliances, tests, permits, taxes, etc., necessary for the installation of a landscape irrigation system as herein specified and shown on the drawings, and the removal of all debris from the site.
1. Locate, purchase, deliver and install piping, conduit, sleeves, 120 volt and low voltage electrical and water connections, valves, backflow preventer devices, controllers, rain sensors, spray and bubbler heads, drip irrigation lines, and associated accessories for a fully operational automatic irrigation system.
2. Trenching and water setting of backfill material.
3. Testing and startup of the irrigation system.
4. Prepare an as built record set of drawings.
5. Training of the Owner's maintenance personnel in the operational requirements of the irrigation system.
6. Clean up and disposal of all excess and surplus material.
7. Maintenance of the irrigation system during the prescribed maintenance period.
- B. The system shall efficiently and evenly irrigate all areas and be complete in every respect and shall be left ready for operation to the satisfaction of the Owner's Representative.
- C. Coordinate with other trades, as needed to complete work, including but not limited to Water Meter, Point of Connection (POC) and Backflow Preventer Device (BFPD) location and electrical hookups.

1.2 CONTRACT DOCUMENTS

- A. Shall consist of specifications and its general conditions and the drawings. The intent of these documents is to include all labor, materials, and services necessary for the proper execution of the work. The documents are to be considered as one. Whatever is called for by any part shall be as binding as if called for in all parts.

1.3 RELATED DOCUMENTS AND REFERENCES

- A. Related Documents: Refer to Landscape Documents or Landscape Architect provided documentation and specifications.
- References:
1. American Society of Testing Materials (ASTM), cited section numbers.
2. National Sanitation Foundation (NSF), rating system.
3. Irrigation Association: Turf & Landscape Irrigation Best Management Practices

1.4 VERIFICATION

- A. Irrigation piping and related equipment are drawn diagrammatically. Scaled dimensions are approximate only. Before proceeding with work, carefully check and verify dimensions and immediately notify the Owner's Representative of discrepancies between the drawings or specifications and the actual conditions. Although base and locations of plants are drawn to scale wherever possible, it is not within the scope of the drawings to show all necessary offsets, obstructions, or site conditions. The Contractor shall be responsible to install the work in a manner that will be in conformance to site conditions, complete, and in good working order.
- B. Piping and equipment shall be located within the designated planting areas wherever possible unless specifically defined or dimensioned otherwise.

1.5 PERMITS AND REGULATIONS

- A. The Contractor shall obtain and pay for all permits related to this section of the work unless previously excluded under provision of the contract or general conditions. The Contractor shall comply with all laws and ordinances bearing on the operation or conduct of the work as drawn and specified. If the Contractor observes that a conflict exists between permit requirements and the work outlined in the contract documents, the Contractor shall promptly notify the Owner's Representative in writing including a description of any necessary changes and changes to the contract price resulting from changes in the work.
- B. Wherever references are made to standards or codes in accordance with work to be performed or tested, the edition or revision of the standards and codes current on the effective date of this contract shall apply, unless otherwise expressly set forth.
- C. In case of conflict among any referenced standards or codes or between any referenced standards and codes and the specifications, the more restrictive standard shall apply or Owner's Representative shall determine which shall govern.

1.6 PROTECTION OF WORK, PROPERTY AND PERSON

- A. The Contractor shall adequately protect the work, adjacent property, and the public, and shall be responsible for any damages or injury due to the Contractor's actions.

1.7 CHANGES IN THE WORK

- A. The Owner's Representative may order changes in the work, and the contract sum being adjusted accordingly. All such orders and adjustments plus claims by the Contractor for extra compensation must be made and approved in writing before executing the work involved.
- B. All changes in the work, notifications and Contractor's request for information (RFI) shall conform to the contract general condition requirements.

1.8 CORRECTION OF WORK

- A. The Contractor shall re-execute any work that fails to conform to the requirements of the contract and shall remedy defects due to faulty materials or workmanship upon written notice from the Owner's Representative, at the soonest as possible time that can be coordinated with other work, and seasonal weather demands, but not more than 90 (ninety) days after notification.

1.9 DEFINITIONS

- A. Owner's Representative: The person appointed by the Owner to represent their interest in the review and approval of the work and to serve as the contracting authority with the Contractor. The Owner's Representative may appoint other persons to review and approve any aspects of the work.
- B. Substantial Completion Acceptance: The date at the end of the Planning, Planting Soil, and Irrigation installation where the Owner's Representative accepts that all work in these sections is complete and the Warranty period has begun. This date may be different than the date of substantial completion for the other sections of the project.
- C. Final Acceptance: The date when the Owner's Representative accepts that the plants and work in this section meet all the requirements of specification. It is intended that the materials and workmanship warranty for Planning, Planting Soil, and Irrigation work run concurrently.

1.10 SUBMITTALS

- A. See the contract General Conditions for policy and procedures related to submittals.
- B. Product data
1. Submit a minimum of (3) complete lists of all irrigation equipment to be used, manufacturer's brochures, maintenance manuals, warranties and operating instructions, within 15 days after the notice to proceed.
- a. This submission may be done digitally and all documents shall be submitted in one PDF document.
2. The submittals shall be packaged and presented in an organized manner, in the quantity described in Division 1 of the specifications. Provide a table of contents of all submitted items.
3. Clearly identify on each submitted sheet by underlining or highlighting (on each copy) the specific product being submitted for approval. Failure to clearly identify the specific product being submitted will result in a rejection for the entire submittal. No substitutions of material or procedures shall be made concerning these documents without the written consent by the Owner's Representative.
4. Equipment or materials installed or furnished without prior approval of the Owner's Representative, may be rejected by the Owner's Representative and the Contractor shall be required to remove such materials from the site at their own expense.
5. Approval of substitution of material and/or products, other than those specified shall not relieve the Contractor from complying with the requirements of the contract documents and specifications. The Contractor shall be responsible, at their own expense, for all changes that may result from the approved substitutions, which affect the installation or operations other items of their own work and/or the work of other Contractors.
6. Samples: Samples of the equipment may be required at the request of the Owner's Representative if the equipment is other than that specified.
- C. Other Submittals: Submit for approval:
1. Documentation of the installer's qualifications.
2. As built record set of drawings.
3. Testing data from all required pressure testing.
4. Backflow prevention device certification: Certification from the manufacturer or their representative that the back flow prevention device has been installed correctly according to the manufacturer's requirements.
5. Booster pump certification: Certification from the manufacturer or their representative that the booster pump has been installed correctly according to the manufacturer's requirements.
6. Irrigation controller certification: Certification from the manufacturer or an authorized distributor that the Controller has been installed correctly according to the manufacturer's requirements.

1.11 OBSERVATION OF THE WORK

- A. The Owner's Representative may inspect the work at any time. They may remove samples of materials for conformity to specifications. Rejected materials shall be immediately removed from the site and replaced at the Contractor's expense. The cost of testing materials not meeting specifications shall be paid by the Contractor.
- B. The Owner's Representative shall be informed of the progress of the work so the work may be observed at the following key times in the construction process. The Owner's Representative shall be afforded sufficient time to schedule visit to the site. Failure of the Owner's Representative to make field observations shall not relieve the Contractor from meeting all the requirements of the specification.
1. Trenching, directional boring, and sleeving review.
2. Hydrosat pressure testing.
3. Adjustment and coverage test.
4. Pre-maintenance observation.
5. Final acceptance / system malfunction corrections.

1.12 PRE-CONSTRUCTION CONFERENCE

- A. Schedule a pre-construction meeting with the Owner's Representative at least seven (7) days before beginning work to review any questions the Contractor may have regarding the work, administrative procedures during construction and project work schedule.

1.13 QUALITY ASSURANCE

- A. It is the intention of this specification to accomplish the work of installing an automatic irrigation system, which will operate in an efficient and satisfactory manner. The irrigation system shall be installed and made operational according to the workmanlike standards established for landscape installation and sprinkler irrigation operation as set forth by the most recent Best Management Practices (BMP) of the Irrigation Association.
- B. The specification can only indicate the intent of the work to be performed after a detailed description of the performance of the work. It shall be the responsibility of the Contractor to install said materials and equipment in such a manner that they shall operate efficiently and evenly and support optimum plant growth and health.
- C. The Owner's Representative shall be the sole judge of the true intent of the drawings and specifications and of the quality of all materials furnished in performance of the contract.
- D. The Contractor shall keep one copy of all drawings and specifications on the work site, in good order. The Contractor shall make these documents available to the Owner's Representative when requested.
- E. In the event of any discrepancies between the drawings and the specification, the final decision as to which shall be followed, shall be made by the Owner's Representative.
- F. In the event the installation is contradictory to the direction of the Owner's Representative, the installation shall be rectified by the Contractor at no additional cost to the Owner. The Contractor shall immediately bring any such discrepancies to the attention of the Owner's Representative.
- G. It shall be distinctly understood that no oral statement of any person shall be allowed in any manner to modify any of the contract provisions. Changes shall be made only on written authorization of the Owner's Representative.</

IRRIGATION NOTES

4Binc
Select  Certified
IRRIGATION ASSOCIATION
Experienced professionals. Efficient solutions.
LIC # 1012730 IA CERT # 57436

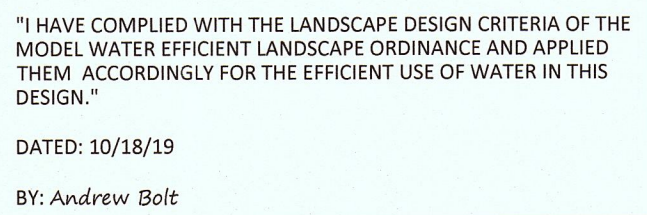

ASIC
COMMERCIAL
MEMBER

COLUMBUS ST.
EL GRANADA, CA

3.6 HYDROSTATIC PRESSURE TESTING

- I. Valve boxes:
 1. Install one valve box for each type of valve installed as per the details.
 2. Gravel sump shall be installed after compaction of all trenches. Final portion of gravel shall be placed inside valve box after valve is backfilled and compacted.
 3. Permanently label valve number and or controller letter on top of valve box lid using a method approved by the Owner.

END OF SECTION 32 8400



- Irrigation/Watering Responsibility
 - It is the responsibility of the Maintenance Contractor to operate the irrigation system in an efficient manner and to minimize water waste. It is the Maintenance Contractor's responsibility to adjust the system to apply water in accordance with plant requirements based on weather, soil, and site conditions. The irrigation program shall be scheduled to minimize water waste through runoff, excessive irrigation run times, utilize CYCLE SOAK scheduling when applicable. It is the responsibility of the Maintenance Contractor to operate the irrigation system based on local municipal guidelines.
- Irrigation Activation
 - Activate irrigation system in spring (or when weather permits). Charge mainline in February or March to check for leaks and/or malfunctioning valves.
 - Turn on backflow preventers, open gate valves and activate booster pumps if installed.
 - Set the irrigation controller to RUN MODE and verify that all programs are activated and set up to be run in Self Adjusted mode.
 - Site verification and adjustments. This includes turning on each zone, monitoring for leaks or malfunctioning parts, cutting grass away from sprinkler heads and adjusting sprinklers for proper arc and maximum efficiency.
 - Verify that drip irrigation is functional and that distribution tubing has not been cut or broken during non operational period.
 - Service, clean and adjust and weather sensor system. This is critical for ALL self adjusting controllers.
 - If applicable service irrigation booster pump, this need to be completed by the manufacturers certified technician.
- Irrigation Monitoring/Landscape Watering
 - Check the ET/Weather Based self adjusting system programming, Flow Sensor and Master Valve operation and programming; adjust as required to ensure proper operation.
 - ALL Backflow Prevention Devices are to be maintained as per Local city or county codes.
 - All turf areas shall be monitored to determine the need for supplemental irrigation. Frequency and duration of each watering will be dependent on local weather conditions. To determine the need for watering, Landscape Maintenance Contractor shall use a soil probe to examine the first 6-12" of the soil profile. If the soil is cool, damp and holds its shape, watering is not necessary. Plant material roots should be encourage to root as deep as possible, this is accomplished by deep root watering, longer irrigation run times and utilizing CYLCE SOAK method. Frequent shallow irrigation scheduling is ineffective and will only promote shallow rooting and require excessive water waste.
- Groundcover and shrub beds shall be watered using an automatic irrigation system. The entire groundcover/shrub bed shall be soaked to a depth to maximize healthy plant root growth. Irrigation run time to be based on irrigation device precipitation rate (not flow rate) and plant material irrigation demand. (Use WUCOLS reference for plant watering needs). In the event of establishing plants, or compromised soil profile, watering frequencies may be adjusted.
- Establish time settings and intervals of irrigation water application for each valve of all irrigation zones. Make adjustments when necessary to correspond to variable watering requirements. Check for coverage and plugged emission/nozzle devices. Clean devices and adjust devices while maintaining the system in proper working order.
- ALL automatic controllers will be programmed to apply water during hours as permitted by local town, city or county ordinances.

Irrigation System Repair

- Cleaning and adjusting the sprinklers heads are the Maintenance Contractor's responsibility. Repair and/or replacement of any vandalized or malfunctioning component beyond Maintenance Contractor's control is the responsibility of the Owner/Agent. Any damage caused by Maintenance Contractor will be repaired by Maintenance Contractor at no cost to the Owner/Agent.
- All irrigation repaired or replaced MUST be in accordance with the original irrigation design, local city or county guidelines and must provide the maximum efficiency as possible so as NOT to waste water.
- ALL Drip systems are to be manually flushed a minimum one time per year and filters to be cleaned on a regular basis.
- All damaged and repaired pipe MUST be flushed of all debris. Maintenance Contractor to guarantee full operational and efficient performance of repaired systems.
- Repairs to Backflow Prevention Devices must be conducted by a trained certified backflow technician.
- It is recommended that ALL irrigation maintenance and repair be performed by California Licensed and/or Certified contractor. Not maintaining irrigation systems in an efficient manner will result in plant and landscape degradation and additional maintenance costs.

Irrigation System Winterization

- Where applicable, shut off and drain irrigation system(s) at the end of the irrigation season. Turn off all main supply valves, open all manual drain valves, and bleed valves on backflow prevention devices. Perform winterization prior to November 1st.

Irrigation Start up

- Flush all drip lines at flush points.
- Remove and clean all filters and replace any damaged filters.
- Check that all weathers sensors are functioning and replace batteries as needed.

EMITTER COUNT FOR 1" VALVE					
GPM	GPH	GPH	GPM	DEVICES / 1" VALVE	FLOW GPM
0.25	15	0.5	0.01	1700	14.2
0.5	30	1	0.02	850	14.2
1	60	5	0.08	180	15.0
2	120	7	0.12	100	11.7
4	240	10	0.17	90	15.0
6	360	12	0.2	75	15.0
8	480	18	0.3	50	15.0
10	600	24	0.4	37	14.8
		30	0.5	30	15.0
		60	1	15	15.0

1" VALVE BASED ON 15 GPM MAX

DRIP LINE CHART					
GPH	GPM	SPACING	SQUARE FOOTAGE	FLOW GPM	PRECIP RATE
0.27	0.0045	12x12	100	0.44	0.42
0.27	0.0045	12x18	100	0.29	0.28
0.27	0.0045	12x24	100	0.22	0.21
0.27	0.0045	18x18	100	0.19	0.19
0.27	0.0045	18x24	100	0.13	0.14
0.27	0.0045	24x24	100	0.11	0.1
0.4	0.066	12x12	100	0.65	0.64
0.4	0.066	12x18	100	0.43	0.43
0.4	0.066	12x24	100	0.33	0.32
0.4	0.066	18x18	100	0.29	0.29
0.4	0.066	18x24	100	0.20	0.21
0.4	0.066	24x24	100	0.16	0.16
0.6	0.01	12x12	100	0.99	0.96
0.6	0.01	12x18	100	0.66	0.64
0.6	0.01	12x24	100	0.50	0.48
0.6	0.01	18x18	100	0.44	0.43
0.6	0.01	18x24	100	0.33	0.32
0.6	0.01	24x24	100	0.25	0.24
0.9	0.015	12x12	100	1.48	1.44
0.9	0.015	12x18	100	0.99	0.96
0.9	0.015	12x24	100	0.75	0.72
0.9	0.015	18x18	100	0.66	0.64
0.9	0.015	18x24	100	0.50	0.48
0.9	0.015	24x24	100	0.38	0.36

INLINE FORMULA
PR= 231.1 x Emitter Flow /Emitter Spacing x Row Spacing

DRIP PRECIPITATION RATES						
GPH	GPM	Wr	Cr	# Devices	WA	Precip Rate
1	0.017	1	1	1	3.1	0.51
2	0.033	1.5	1	1	7.1	0.45
5	0.083	2	1	1	12.6	0.64
7	0.117	2.5	1	1	19.6	0.57
10	0.167	3	1	1	28.3	0.57
12	0.2	3.5	1	1	38.5	0.50
18	0.3	4	1	1	50.2	0.58
24	0.4	4.5	1	1	63.6	0.61
30	0.5	5	1	1	78.5	0.61
60	1	7	1	1	153.9	0.63

WETTED AREA OF SOIL TYPES				LEGEND	
SOIL TYPE	Cr (FT)	SOIL TYPE	Cr (FT)		
CLAY	1.0	LOAM	0.7	Cr	Soil Coefficient
CLAY LOAM	1.0	LOAMY SAND	0.4	TWr	Total Wetted Area
COURSE SAND	0.2	SANDY LOAM	0.6	WA	Wetted Area
FINE SAND	0.3	SILT LOAM	0.9		

BASIC INTAKE RATE	
SOIL TYPE	BASIC INFILTRATION RATE
SANDY	Less than 1.5"/hr
SANDY LOAM	.75 - 1.25"/hr
LOAM	.75"/hr
CLAY LOAM	.40"/hr
CLAY	.20"/hr

TREE RINGS 12" O.C EMITTER SPACING. MIN 3 RINGS PER TREE						
RADIUS	CIRCUMF	TOTAL LF	FLOW RATE	TOTAL FLOW	PRECIP RATE	TOTAL FLOW/RING COUNT
18"	3.14"DIA	9.42	0.6 GPH	5 GPH	0.96"/HR	3 RINGS@ .6 GPH = 29 GPH
30"	3.14"DIA	15.7	0.6 GPH	9 GPH	0.96"/HR	4 RINGS@ .6 GPH = 47 GPH
48"	3.14"DIA	25.12	0.6 GPH	15 GPH	0.96"/HR	
60"	3.14"DIA	31.4	0.6 GPH	18 GPH	0.96"/HR	
18"	3.14"DIA	9.42	0.9 GPH	7.5 GPH	1.44"/HR	3 RINGS@ .9 GPH = 42.5 GPH
30"	3.14"DIA	15.7	0.9 GPH	13 GPH	1.44"/HR	4 RINGS@ .9 GPH = 69.5 GPH
48"	3.14"DIA	25.12	0.9 GPH	22 GPH	1.44"/HR	
60"	3.14"DIA	31.4	0.9 GPH	27 GPH	1.44"/HR	

Formula A 96.25 x GPH / 60 /Wetted Area*Cr
Formula B 1.605 x GPH / Wetted Area *Cr

IRRIGATION MAINTENANCE

Job Name: Columbus St. Res											
Date: 10/18/2019											
California Water Efficient Landscape Worksheet											
Reference Evapotranspiration (ET _a)			33.7		Project Type		Residential		0.55		
Rain Fall (Inches)					Usable Rain Fall (Inches)		0				
Hydrozone # / Planting Description ^a	Plant Factor (PF)	Irrigation Method ^b	Irrigation Efficiency (IE) ^c	ETAF (PF/IE)		Landscape Area (Sq. Ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^d	Gallons Per Minute GPM	% Landscape Area	
Zone# Regular Landscape Areas											
1	GRD. CVR- LOW	0.2	Drip	0.81	0.25	1,222	306	6383	4.78	33.60%	
2	GRD. CVR- LOW	0.2	Drip	0.81	0.25	1,262	316	6592	4.94	34.70%	
3	SHRUBS- LOW	0.2	Drip	0.81	0.25	449	111	2316	1.70	12.35%	
4	SHRUBS- LOW	0.2	Drip	0.81	0.25	209	52	1078	1.00	5.75%	
5	SHRUBS- MED	0.5	Drip	0.81	0.62	145	90	1870	0.90	3.99%	
6	TREES- LOW	0.2	Drip	0.81	0.25	150	37	774	2.12	4.12%	
7	TREES- LOW	0.5	Drip	0.81	0.62	200	123	2580	2.83	5.50%	
						Totals	3637	1033	21593	18.27	100.00%
Special Landscape Areas											