File No. 240386 **Committee Item No.** 1
Board Item No. _____

COMMITTEE/BOARD OF SUPERVISORS

AGENDA PACKET CONTENTS LIST

Committee: Land Use and Transportation **Date:** July 15, 2024
Board of Supervisors Meeting: **Date:** _____

Cmte Board

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☐	☐	**Ordinance**
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OTHER

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☒	☐	Planning Commission Motion No. 19523 – December 3, 2015
☒	☐	General Plan Referral – November 9, 2017
☒	☐	PW Order Nos. 187438 and 187659, April 25 and May 11, 2018
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☒	☐	Civil Grading Plans and Structural Rendering
☒	☐	Operation and Maintenance Manual
☒	☐	Public Works Memo – April 10, 2024
☐	☐	
☐	☐	
☐	☐	

Prepared by: John Carroll **Date:** July 11, 2024
Prepared by: _____ **Date:** _____
Prepared by: _____ **Date:** _____

[Street Encroachment Permit - Public Stair and Scenic Overlook on 22nd Street]

Resolution granting revocable permission to RP Pennsylvania, LLC to occupy and maintain a portion of 22nd Street, between Missouri and Texas Streets, fronting 1395 22nd Street and 790 Pennsylvania Avenue (Assessor's Parcel Block No. 4167, Lot No. 013), with a public stair and scenic overlook; adopting environmental findings under the California Environmental Quality Act; making findings of consistency with the General Plan, and the eight priority policies of Planning Code, Section 101.1; and to authorize the Director or Public Works to enter into amendments or modifications to the Permit with respect to the encroachments that do not materially increase the obligations or liabilities to the City and are necessary to effectuate the purposes of the Permit or this Resolution.

WHEREAS, Pursuant to Public Works Code, Sections 786 et seq., RP Pennsylvania, LLC (hereafter referred to as "Permittee"), requested permission to occupy and maintain a portion of the public right-of-way along 22nd Street between Missouri and Texas Streets fronting 1395 22nd Street and 790 Pennsylvania Avenue (Assessor's Parcel Block No. 4167, Lot No. 013) with a public stair and overlook; and

WHEREAS, The improvements include, but are not limited to: A publicly-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets; an entry plaza at Texas Street; a winding staircase; planters; public art; lighting; and an overlook at the top of the grade at Missouri Street (collectively referred to as the "Encroachments"); and

WHEREAS, The Permittee will construct the Encroachments in conjunction with its residential and Production, Distribution, and Repair project at 1395 22nd Street; and

WHEREAS, The Permittee has proposed to maintain the Encroachments for the life of the permit; and

WHEREAS, The Encroachments shall be constructed in substantial conformity with the accompanying documents and plans, copies of which are on file in the office of the Clerk of the Board of Supervisors in File No. 240386 and incorporated herein by reference; and

WHEREAS, The Planning Commission, on December 3, 2015, in Motion No. 19523, determined that the actions contemplated in this Resolution comply with the California Environmental Quality Act (California Public Resources Code, Sections 21000 et seq.) and adopted findings in regard to the Encroachments ("Environmental Findings"); and

WHEREAS, A copy of said Motion and Environmental Findings are on file with the Clerk of the Board of Supervisors in File No. 240386 and incorporated herein by reference; and

WHEREAS, The Planning Department, in a letter dated November 9, 2017 ("Planning Department Letter"), found that the Encroachments are in conformity with the General Plan, and are consistent with the eight priority policies of Planning Code, Section 101.1; and

WHEREAS, A copy of the Planning Department Letter is on file with the Clerk of the Board of Supervisors in File No. 240386 and incorporated herein by reference; and

WHEREAS, The Transportation Advisory Staff Committee, at its meeting of March 22, 2018, recommended approval of the proposed encroachments; and

WHEREAS, After a public hearing on April 25, 2018, Public Works recommended to the Board of Supervisors ("Board") approval of a street encroachment permit and associated encroachment permit and maintenance agreement (collectively, "Permit") for the maintenance of the Encroachments; and

WHEREAS, This recommendation is contained in PW Order No. 187659, dated May 11, 2018, a copy of which is on file with the Clerk of the Board of Supervisors in File No. 240386 and incorporated herein by reference; and

WHEREAS, The Permit is on file with the Clerk of the Board of Supervisors in File No. 240386 and incorporated herein by reference; and

WHEREAS, The final approved Permit shall be in substantially the same form as that in the Clerk of the Board of Supervisor's file; and

WHEREAS, In Public Works Order No. 187659, dated May 10, 2018, the Director recommended approval of the Encroachment Permit Agreement to the Board of Supervisors; and

WHEREAS, Pursuant to Public Works Code, Section 786.7(f)(1) the public right-of-way occupancy assessment fee shall be waived because the Encroachments will be installed in furtherance of the Better Streets Plan requirements under Planning Code, Section 138.1; and

WHEREAS, A copy of PW Order No. 187659, dated May 10, 2018, is on file with the Clerk of the Board of Supervisors in File No. 240386 and incorporated herein by reference; and

WHEREAS, The Permit for the Encroachments shall not become effective until:

(1) The Permittee executes and acknowledges the Permit and delivers said Permit and all required documents and fees to Public Works;

(2) Public Works records the Permit ensuring maintenance of the Encroachments in the County Recorder's Office; and

WHEREAS, The Permittee, at its sole expense and as is necessary as a result of this permit, shall make the following arrangements:

(1) To provide for the support and protection of facilities under the jurisdiction of Public Works, the Public Utilities Commission, the San Francisco Fire Department, other City Departments, and public utility companies;

(2) To provide access to such facilities to allow said entities to construct, reconstruct, maintain, operate, or repair such facilities as set forth in the Permit;

(3) To remove or relocate such facilities if installation of Encroachments requires said removal or relocation and to make all necessary arrangements with the owners of such facilities, including payment for all their costs, should said removal or relocation be required;

(4) The Permittee shall assume all costs for the maintenance and repair of the Encroachments pursuant to the Permit and no cost or obligation of any kind shall accrue to Public Works by reason of this permission granted; and

WHEREAS, No structures shall be erected or constructed within the public right-of-way except as specifically permitted herein; now, therefore, be it

RESOLVED, The Board adopts the Planning Commission's Environmental Findings as its own; and, be it

FURTHER RESOLVED, That the Board finds that the Permit is consistent with the General Plan, and the eight priority policies of Planning Code, Section 101.1 for the reasons set forth in the Planning Department Letter; and, be it

FURTHER RESOLVED, Pursuant to Public Works Code, Sections 786 et seq., the Board hereby grants revocable, personal, non-exclusive, and non-possessory permission to the Permittee, RP Pennsylvania, LLC, to occupy the public right-of-way with the Encroachments and maintain said Encroachments under the terms of the Permit; and, be it

FURTHER RESOLVED, The Board accepts the recommendations of the PW Order No. 187659 and approves the Permit with respect to the Encroachments; and, be it

FURTHER RESOLVED, The Board also authorizes the Director of Public Works to perform and exercise the City's rights and obligations with respect to the Encroachments under the Permit and to enter into any amendments or modifications to the Permit with respect to the Encroachments, which may include without limitation, those amendments or modifications that the Director of Public Works, in consultation with the City Attorney, determines are in the best interest of the City, do not materially increase the obligations or liabilities of the City or materially decrease the obligations of the Permittee or its successors, are necessary or advisable to effectuate the purposes of the Permit or this Resolution with respect to the Encroachments, and are in compliance with all applicable laws; and, be it

FURTHER RESOLVED, The Board, under Public Works Code, Section 786.7, acknowledges waiver of the public right-of-way occupancy assessment fee in accordance with the Public Works Director's determination.

1395 22nd Street Major Encroachment Project

SAN FRANCISCO
PUBLIC
WORKS

Public Stair connecting 22nd Street to Missouri Street

- Privately funded constructed and managed.


4099
4100
4101
4102
4163
4167
4167
4167
VACST
CONNECTICUT ST
500 - 699
MISSOURI ST
631 - 699
TEXAS ST
1255 - 1999
MISSISSIPPI ST
500 - 699
22ND ST
22ND ST
1500 - 1599
700 - 798
1 - 99
TURNER TER
775 - 898


500 - 699
CONNECTICUT ST
500 - 630
SIERRA ST
1 - 99
TEXAS ST
500 - 699
MISSISSIPPI ST
500 - 699
631 - 699
4101
1255 - 1399
1200 - 1298
22ND ST
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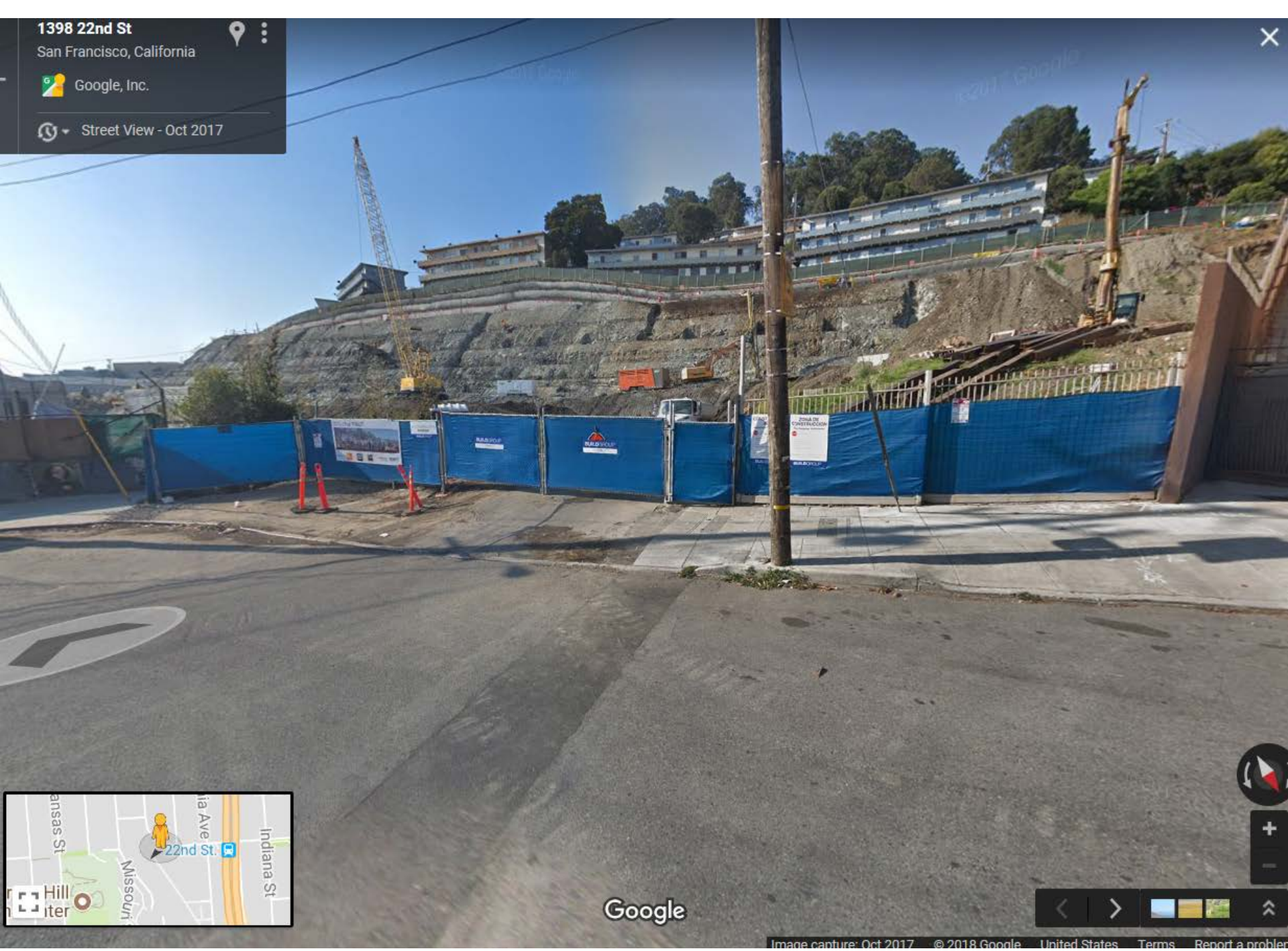
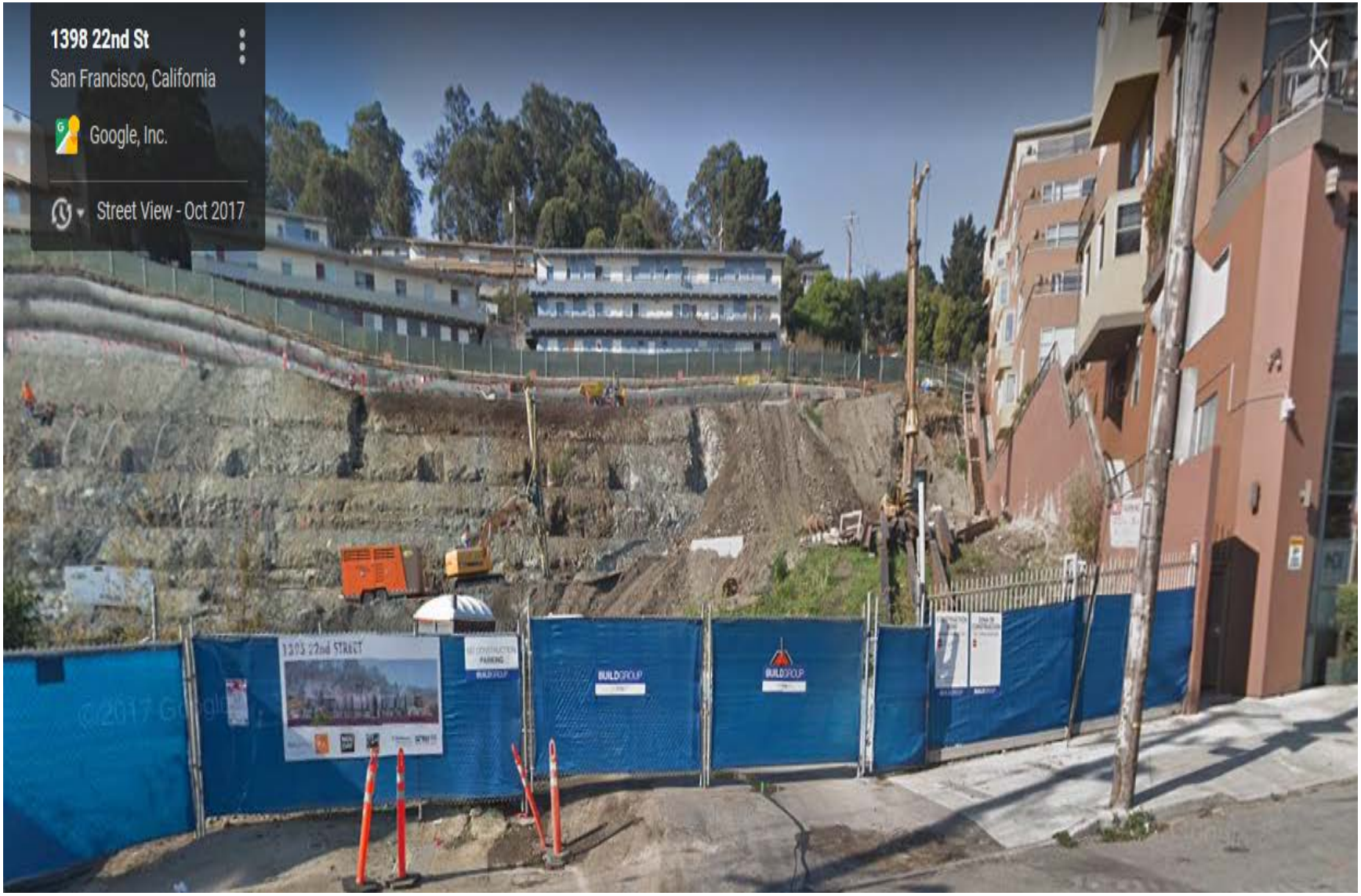
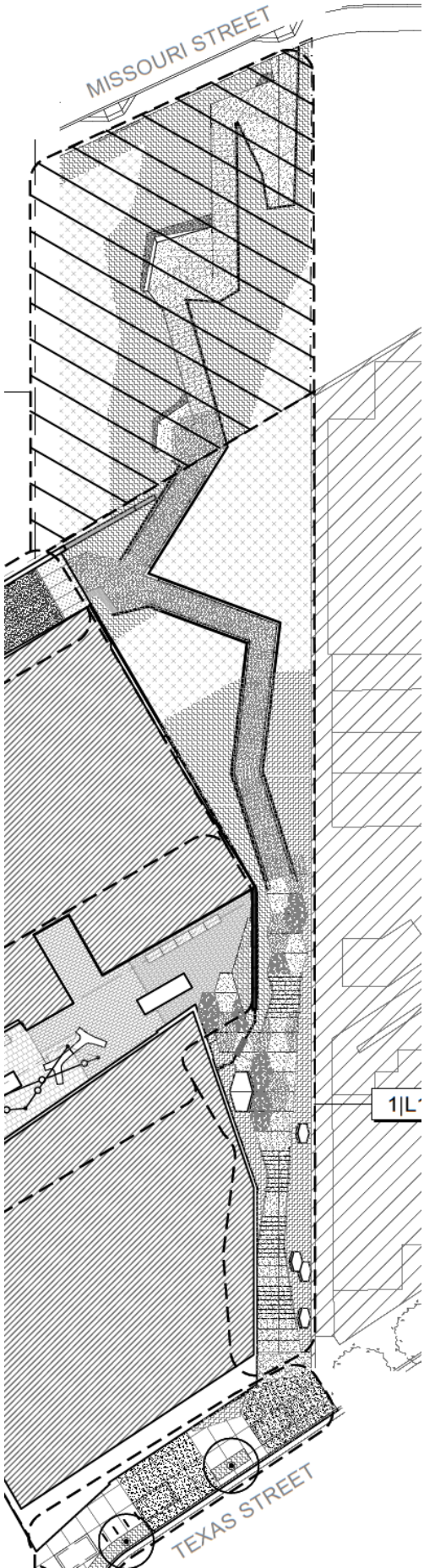
PENNSYLVANIA AVE
4167
4163
4167


1398 22nd St
San Francisco, California
Google, Inc.
Street View - Oct 2017
22nd St
Indiana St
Missouri
Google
Image capture: Oct 2017
© 2018 Google
United States
Terms


1398 22nd St
San Francisco, California
Google, Inc.
Street View - Oct 2017
1398 22nd STREET
BUILDGROUP
BUILDGROUP


691 Missouri St
San Francisco, California
Google, Inc.
Street View - Sep 2017
HILL
DOGPAT
1395 22nd St
CEN
WATE
Google
Image capture: Sep 2017 © 2018 Google United States Terms Report a problem

22ND ST
1500 - 1599
631 - 699
700 - 798
MISSOURI ST
775 - 898
TURNER TER
22ND ST
1255 - 1399


MISSOURI STREET
TEXAS STREET

1 PUBLIC STAIRS AT TEXAS ST.

NTS

The project was referred to

1. **City Planning/Historic preservation**
2. **San Francisco Municipal Transportation Agency (SFMTA)**
3. **Structural for review**

San Francisco Municipal Transportation Agency (SFMTA)
Recommended approval

- Transportation Advisory Staff Committee (TASC) had no objections to the general concept.

San Francisco Public Utility Commission-light SFPUC

SFPUC sewer as approved the relocation of the main sewer within the proposed roadway

Conditions that they are not required to replace the special paver

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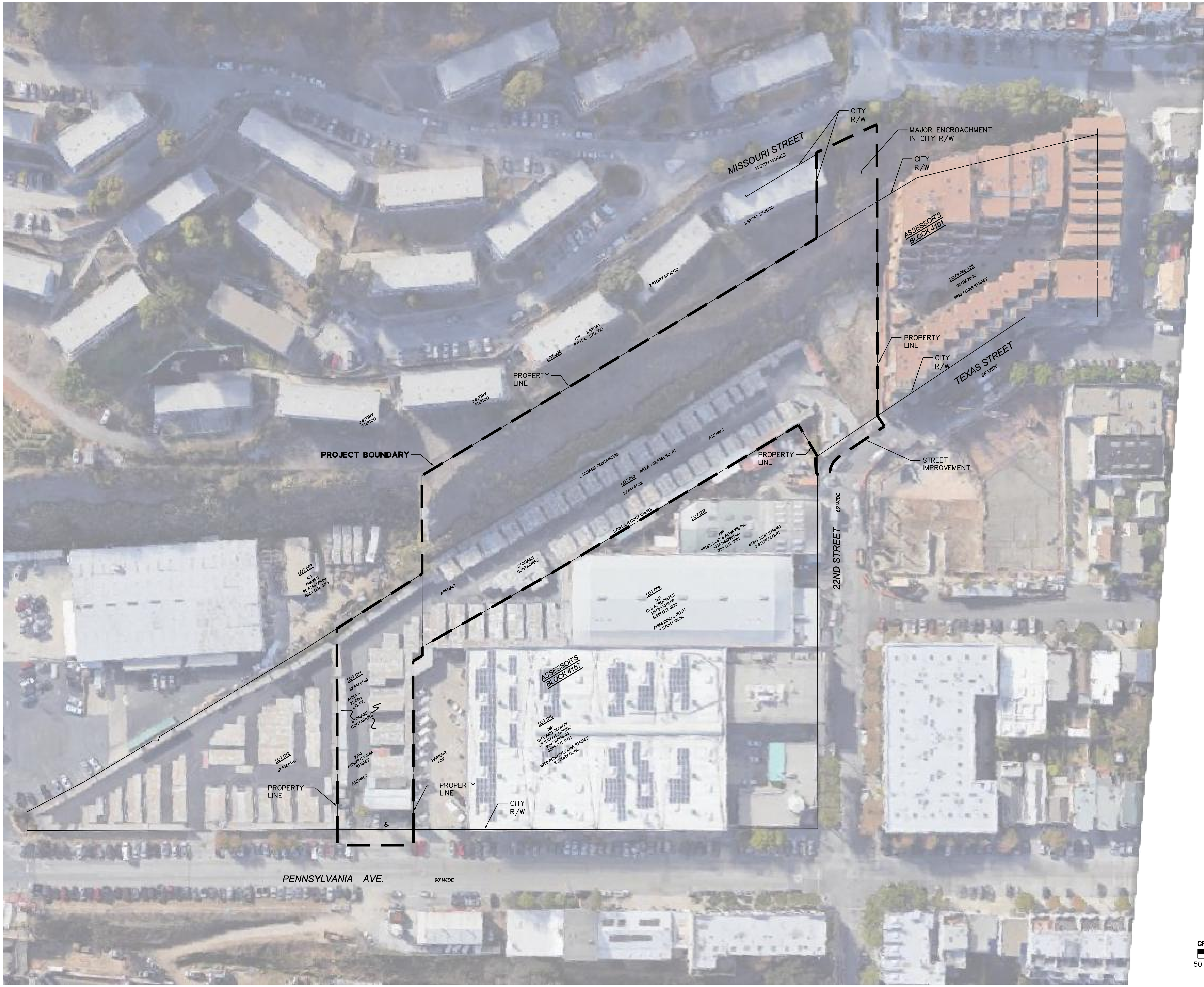
© BKF ENGINEERS



BKF
ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

1395 22ND STREET
MAJOR ENCROACHMENT PERMIT
LOCATION MAP

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

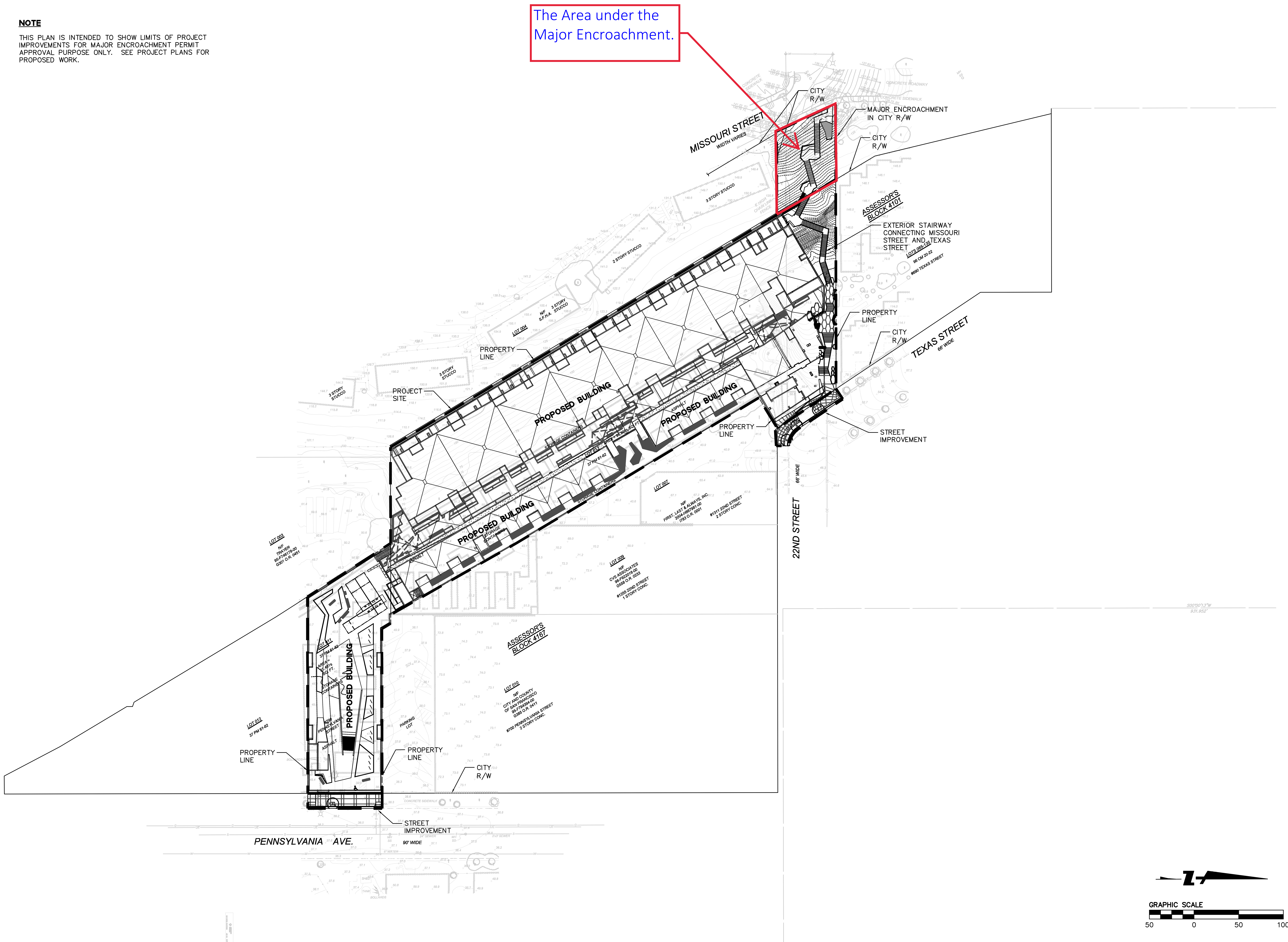
Date: 3-7-17
Scale: 1" = 50'
Design: MP
Drawn: MP
Approved: TH
Job No: 20150043

Drawing Number:
EX-1
1 OF 1

Ⓟ BKF ENGINEERS

NOTE

THIS PLAN IS INTENDED TO SHOW LIMITS OF PROJECT IMPROVEMENTS FOR MAJOR ENCROACHMENT PERMIT APPROVAL PURPOSE ONLY. SEE PROJECT PLANS FOR PROPOSED WORK.



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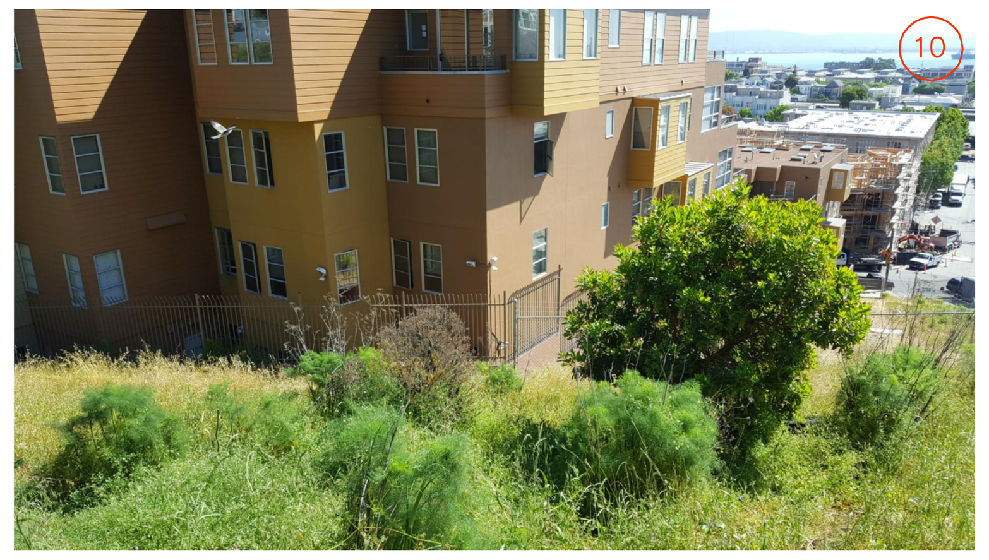
1395 22ND STREET
MAJOR ENCROACHMENT PERMIT
SITE PLAN

SAN FRANCISCO | SAN FRANCISCO COUNTY | CALIFORNIA

No.	Revisions

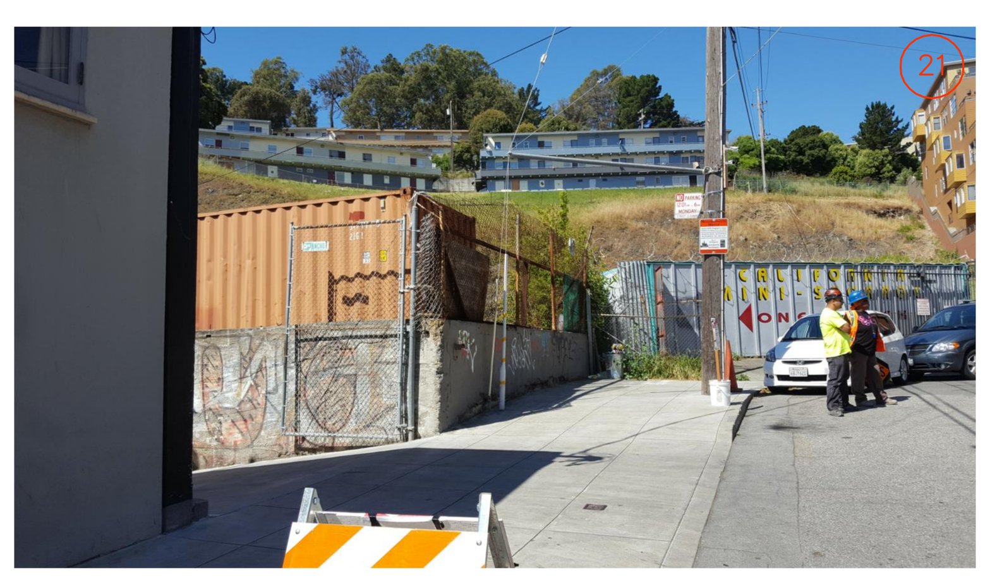
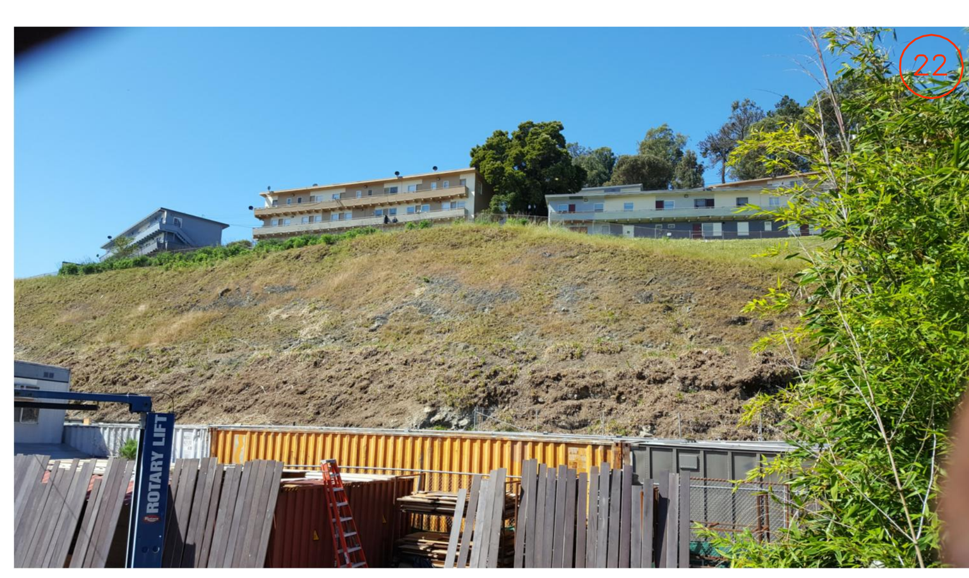
Date: 10-6-16
Scale: 1" = 50'
Design: MP
Drawn: MP
Approved: TH
Job No: 20150043

Drawing Number:
C-1
1 OF 2

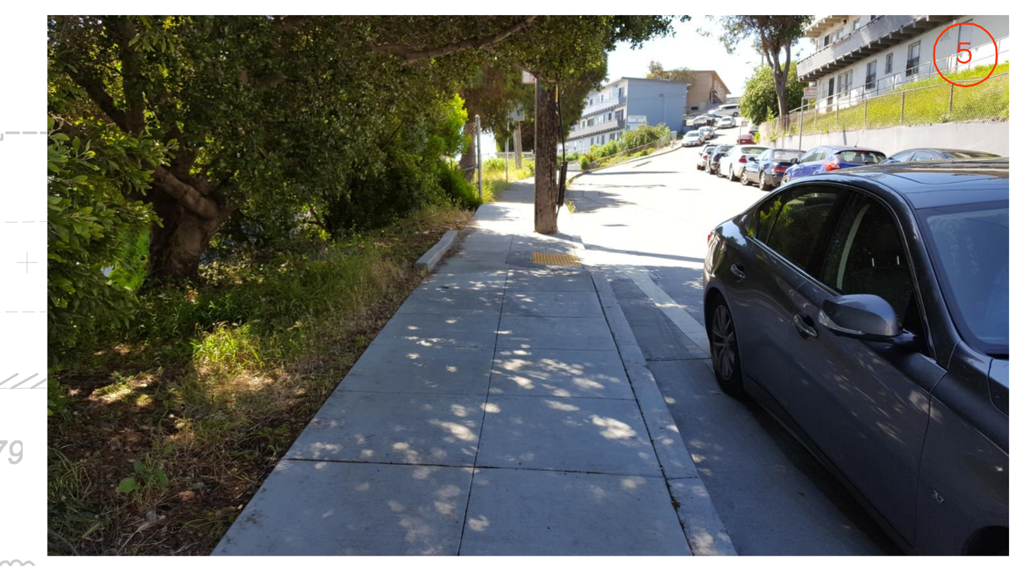


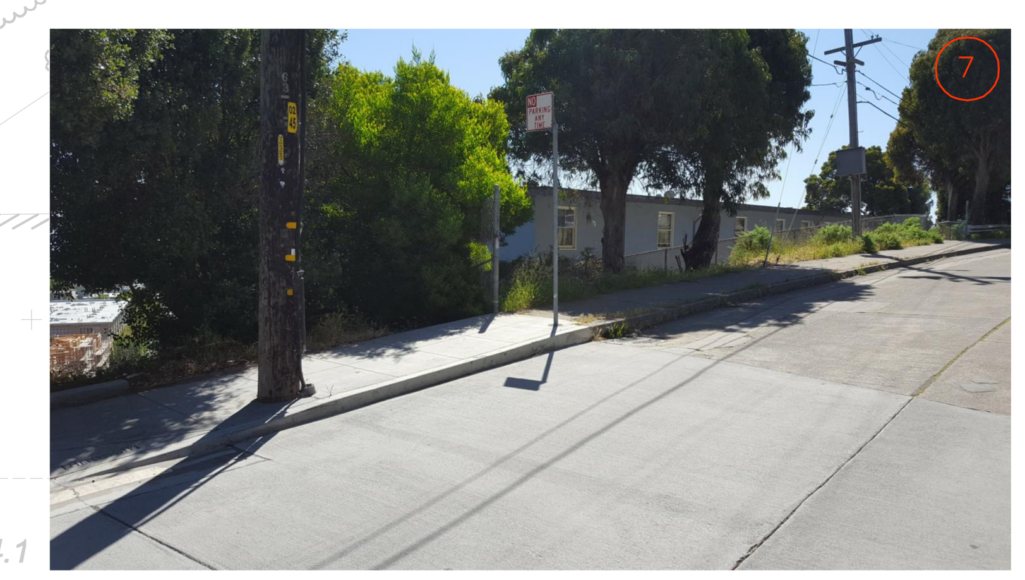
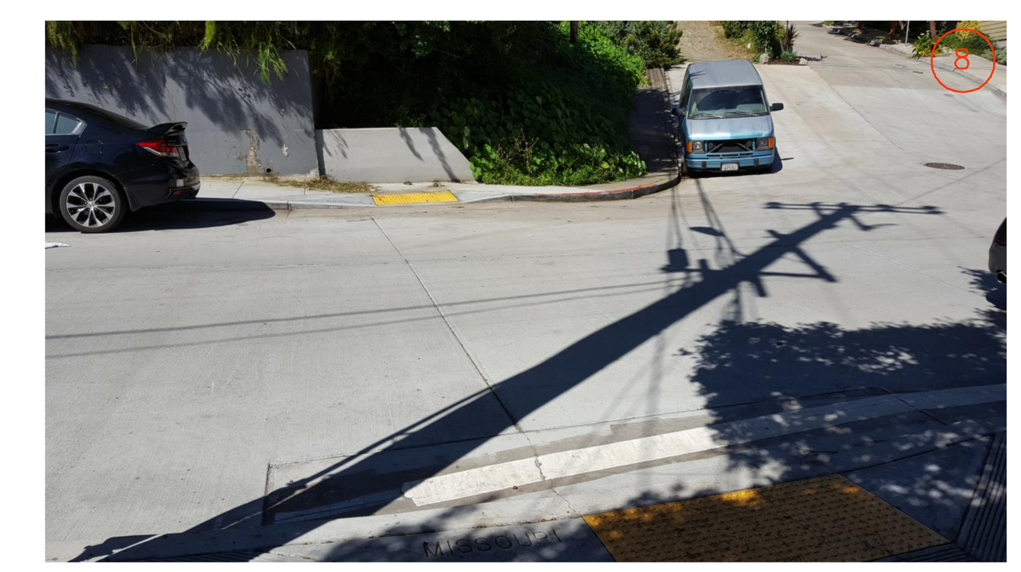










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1395 22ND STREET
MAJOR ENCROACHMENT PERMIT
PHTOGRAPH EXHIBIT

SAN FRANCISCO   SAN FRANCISCO COUNTY   CALIFORNIA

No.	Revisions

Date: 10-6-16
Scale: 1" = 20'
Design: MP
Drawn: MP
Approved: TH
Job No: 20150043

Drawing Number:
C-2
2 OF 2

ENCROACHMENT PERMIT AND MAINTENANCE AGREEMENT (for Fronting Property)

1. PARTIES

The City and County of San Francisco Public Works (the "**Department**") enters into this Encroachment and Maintenance Agreement ("**Agreement**") with RP Pennsylvania, LLC (the "**Permittee**"), on this date, _____, 2023. The Major Encroachment Permit or Permit collectively refers to the Encroachment Permit as shown on the Department approved plan(s), any associated Street Improvement, and this Agreement, including its Attachments and accompanying documents (the "**Permit**"). In this Agreement, "the **City**" refers to the City and County of San Francisco and all affiliated City agencies including, but not limited to, the Department, the San Francisco Public Utilities Commission ("**SFPUC**") and the San Francisco Municipal Transportation Agency ("**SFMTA**"). For purposes of the Permit, "**Fronting Property Owner**" shall mean the property owner(s) who front, abut, or are adjacent to the public right-of-way on which the Improvements and any other elements of the Permit are located.

2. PERMIT INFORMATION

2.1 Encroachment Permit No. ("Permit"): under Public Works Code Section 786(b). Other Public Works Permit number(s) if Public Works allowed construction prior to Board of Supervisors approval of the Encroachment Permit: 17ME-0003.

2.2 Description/Location of Fronting Property (See Attachment 1)

2.3 Description/Location of Permit Area (See Attachment 2)

2.4 General Description of Proposed Improvements (See Attachment 2)

*The term "**Improvements**" shall mean those improvements in the public right-of-way as described in the attachments listed in Section 2.8 and on the Construction Plans.*

2.5 Permit Type: Major Encroachment Permit

2.6 Developer/Builder/Owner of the Fronting Property: RP Pennsylvania, LLC 255 California Street, Suite 525 San Francisco, CA 94111 Eric Norden, Project Manager

2.7 Contact Information. The Permittee shall provide to Public Works, Bureau of Street Use and Mapping ("BSM"), SFMTA, 311 Service Division, and SFPUC the information below regarding a minimum of two (2) contact persons with direct relation to or association with, or is in charge of or responsible for, the Permit. Permittee shall notify both Public Works' Bureau of Street Use and Mapping and SFMTA within thirty (30) calendar days of any relevant changes in the Permittee's personnel structure, and submit the required contact information of the current and responsible contacts. If and when the City's 311 Service Division (or successor public

complaint system program) allows direct communications with the contact person(s) for the Permit, the Permittee shall participate in this program.

Contact Person Number 1

Last Name, First Name: Eric Norden
Title/Relationship to Owner: Project Director
Phone Numbers: 510-559-0725
Email Addresses: enorden@alignrealestate.com
Mailing Address: 255 California Street, Suite 525 San Francisco, CA 94111
Office Address: Same

Contact Person Number 2

Last Name, First Name: Julian Marsh
Title/Relationship to Owner: Principal
Phone Numbers: 415-351-9842
Email Addresses: jmarsh@alignrealestate.com
Mailing Address: 255 California Street, Suite 525 San Francisco, CA 94111
Office Address: Same

2.8 List of Attachments. The following additional documents are attached to or accompany this Permit. All attachments shall be on sheets sizing 8.5 by 11 inches so they can be easily inserted into this agreement as an attachment:

- Attachment 1: Property Information. Written description of the fronting property and location map identifying the property.

Attachment 2: "**Permit Area,**" which shall refer to areas that include Improvements and any real property subject to maintenance responsibilities that are Permittee's responsibility.

  - Written description of the area where the encroachment(s) exist and the boundaries,
  - Diagram showing the boundary limits of the Permit Area and identifying all Improvements in the Permit Area ("**Precise Diagram**"). The Precise Diagram shall be a separate document from the engineered construction plans for the encroachments submitted to Public Works for review and approval. ("**Construction Plans**").
  - Table listing all Improvements in the Permit Area and identifying the maintenance responsibility for them ("**Maintenance Table**"). The table shall include all physical treatments, facilities, and elements, whether standard or non-standard, to clarify responsibility.

- Attachment 3: Maintenance Plan. A written document that contains a detailed description of the means and methods to maintain the Improvements within the Permit Area (the "**Maintenance Plan**"). The Maintenance Plan shall identify the daily, weekly, monthly, and annual routine maintenance, repair and replacement tasks, as applicable ("**Permitted Activities**"). For each category of the Permitted Activities, Permittee shall provide the regular (e.g. daily, weekly, etc.) estimated expenses, including labor hours, cost per hour, and materials needed for maintenance. In addition, Permittee shall provide a total estimated annual operating expense and include: regular maintenance expenses, replacement costs, costs for any specialized equipment (in the event that the Improvements

incorporate such specialized equipment) necessary for continued operation of the Improvements, and the expected lifespan of any non-standard materials subject to regular use. The Maintenance Plan also shall identify whether a Community Benefit District, Business Improvement District, Community Facilities District or similar Special Tax-Based Entity (a "**Special Tax Entity**") will expend monetary or staff resources on the Permit Area for maintenance or other activities, and documentation, to the Director's satisfaction, that the monetary and/or staff resources are available and committed to perform the maintenance obligation.

- Attachment 4: Operations Manual. Permittee shall submit a document or manual describing how to operate any specialized equipment necessary for continued operation of the Improvements along with manufacturer's instructions for operation and maintenance ("**O&M Manuals**") and other pertinent information about the equipment. These documents are for Public Works file purposes and not attached to this Agreement. The City Engineer, in his or her discretion, may allow the Permittee to defer submission of the Operations Manual until completion of the Improvements in accordance with the Construction Plans.

The City Engineer shall review and certify the description of the Permit Area (Attachment 2), Maintenance Plan (Attachment 3), and O&M Manuals (Attachment 4). The Department shall not issue the permit until the City Engineer has completed his or her review and certified the required attachments.

3. EFFECTIVE DATE; REVOCABLE, NON-EXCLUSIVE PERMIT; RECORDATION

(a) Following Board of Supervisors approval and confirmation the Department has received all required permit documents and fees, the Department shall issue the approved Permit. The date the Permit is issued shall be the "**Effective Date.**"

(b) The privilege given to Permittee under this Agreement is revocable, personal, non-exclusive, non-possessory, and effective only insofar as the rights of City in the PROW are concerned.

This Permit does not grant any rights to construct or install Improvements in the Permit Area until the Public Works Director issues written authorization for such work.

(c) Upon Board of Supervisors' approval of this Permit, Permittee shall record this Permit against the Fronting Property.

4. MONITORING AND MAINTENANCE RESPONSIBILITIES

Permittee acknowledges its responsibility to monitor the Permit Area and its Improvements and document performance of the maintenance activities as described herein, and retain such documents for a minimum of three (3) years. Within three (3) days from the date of the Director's

written request for maintenance information, the Permittee shall provide proof that the maintenance activities have been performed.

The Permittee shall: 1) on a regular quarterly basis, document the general condition of the entire Permit Area and all elements with date stamped digital images in JPEG format, or other video or picture imaging acceptable to the Director, and 2) maintain a written and image log of all maintenance issues, including, but not limited to: defects, damages, defacing, complaints, and repairs performed on Permit elements and the Permit Area. The regular monitoring images and/or video shall be taken from all angles necessary to show the entirety of the Permit Area and all Improvements. The images for the logged maintenance issues and repairs shall clearly show the location and detail of the damaged or defaced element or area, and its repair and restoration. Permittee shall maintain all files and provide them in a format and media consistent with current standards for data retention and transfer, such as a USB flash drive with connective capability to a commonly available personal computer.

The maintenance log, at a minimum, shall include the following information: date and time of maintenance; description and type of encroachment element requiring repair, resolution, or restoration and method used to repair, resolve, or restore it; time and duration to repair, resolve, or restore such element; company (and contact information for the company) that performed the repair, resolution, or restoration.

If the Permit does not include any surface level or above grade elements, the Director shall not require the maintenance monitoring set forth in this Section.

5. CONDITIONS OF ENTRY AND USE

By entering into this Agreement, Permittee acknowledges its responsibility to comply with all requirements for maintenance of the Improvements as specified in this Agreement, Public Works Code Section 786, Article 2.4 of the Public Works Code ("**Excavation in the Public Right-of-Way**"), and as directed by the Director. Permittee shall comply and cause its agents to comply, with each of the following requirements in its performance of the Permitted Activities.

5.1 Permits and Approvals

5.1A Requirement to Obtain all Regulatory Permits and Approvals. Permittee shall obtain any permits, licenses, or approvals of any regulatory agencies ("**Regulatory Permits**") required to commence and complete construction of the Improvements and any of the Permitted Activities. Promptly upon receipt of any such Regulatory Permits, Permittee shall deliver copies to the Department. Permittee recognizes and agrees that City's approval of the Permit and this Agreement for purposes of construction of the Improvements and the Permitted Activities shall not be deemed to constitute the grant of any or all other Regulatory Permits needed for the Permitted Activities, and nothing herein shall limit Permittee's obligation to obtain all such Regulatory Permits, at Permittee's sole cost.

5.1B Subsequent Excavation within Permit Area. When maintenance of the Improvements requires excavation as described in Article 2.4 of the Public Works Code, or prevents public access through the Permit Area, or obstructs the movement of vehicles or bicycles where allowed by law, Permittee shall apply for applicable permits from the Department and any other affected City agencies. Permittee or agent of Permittee shall comply with all excavation permit bonding and security requirements that the Department deems necessary when performing or causing to be performed any excavations or occupancies within the Permit Area.

5.1C Additional Approvals. Further permission from the Department may be required prior to Permittee's performance of work within the Permit Area including, but not limited to, the restoration of a temporarily restored trench, removal and replacement of a tree or other landscaping, or repair of damaged or uplifted sidewalk or other paving material. This Agreement does not limit, prevent, or restrict the Department from approving and issuing permits for the Permit Area including, but not limited to, occupancy, encroachment, and excavation permits. The Department shall include as a condition in all subsequent permits issued in the Permit Area that any subsequent permittee notify and coordinate with the Permittee prior to occupying, encroaching, or excavating within the Permit Area.

5.2 Exercise of Due Care

During any entry on the Permit Area to perform any of the Permitted Activities, Permittee shall, at all times and at its sole cost, perform the Permitted Activities in a manner that maintains the Permit Area in a good, clean, safe, secure, sanitary, and attractive condition. Permittee shall use due care at all times to avoid any damage or harm to the Permit Area or any Improvements or property located thereon or adjacent to, and to take such soil and resource conservation and protection measures within the Permit Area as are required by applicable laws and as City may reasonably request in writing. Permittee shall not perform any excavation work without City's prior written approval. Under no circumstances shall Permittee knowingly or intentionally damage, harm, or take any rare, threatened, or endangered species on or about the Permit Area. While on the Permit Area to perform the Permitted Activities, Permittee shall use commercially reasonably efforts to prevent and suppress fires on and adjacent to the Permit Area attributable to such entry.

5.3 Cooperation with City Personnel and Agencies

Permittee shall work closely with City personnel to avoid unreasonable disruption (even if temporary) of access to the Improvements and property in, under, on or about the Permit Area and City and public uses of the Permit Area. Permittee shall perform work in accordance with the Permit and this Agreement. Permittee also shall perform work pursuant to one or more Street Improvement Permits or General Excavation Permits and in accordance with Public Improvement Agreements if either or both are applicable.

5.4 Permittee's Maintenance and Liability Responsibilities

5.4A Permittee's Maintenance and Liability. (a) Permittee acknowledges its maintenance and liability responsibility for the Improvements (including, but not limited to, materials, elements, fixtures, etc.) in accordance with the Permit and this Agreement, and all other

applicable City permits, ordinary wear and tear excepted. Permittee agrees to maintain said Improvements as described in the Permit, as determined by the Director, and in accordance with any other applicable City permits. Permittee shall reimburse the Department for any work performed by the Department as a result of the Permittee's failure to comply with the maintenance and restoration terms as specified in this Agreement under Section 8. Permittee is wholly responsible for any facilities installed in the Permit Area that are subject to this Permit's terms and for the quality of the work performed in the Permit Area under this Agreement. Permittee is liable for all claims related to the installed facilities and any condition caused by Permittee's performed work. Neither the issuance of any permit nor the inspection, nor the repair, nor the suggestion, nor the approval, nor the acquiescence of any person affiliated with the City shall excuse the Permittee from such responsibility or liability.

(b) Notwithstanding the foregoing, the City acknowledges that while the Permittee retains the primary responsibility for all construction, installation, maintenance and repair activities, certain limited or supplemental maintenance and repair activities may be performed by a Special Tax Entity (such activities shall be denoted on the Maintenance Plan) rather than the Permittee. Nevertheless, the Department shall hold the Permittee responsible for compliance with all provisions of the Permit and this Agreement without regard to whether the violation occurred through an act, omission, negligence, or willful misconduct of the Permittee or the Special Tax Entity. Only if Permittee can demonstrate to the satisfaction of the Director that the Special Tax Entity is solely responsible for the act, omission, negligence, or willful misconduct and the Director makes a written finding to this effect, shall the Director take action directly against the Special Tax Entity. Under such circumstances, the Permittee shall not be responsible and liable hereunder for the act, omission, negligence, or willful misconduct that the Director identifies in writing, and no Uncured Default (as hereinafter defined) shall be deemed to have occurred by the Permittee, as a result of the Special Tax Entity's acts, omissions, negligence or willful misconduct. In the event that the Special Tax Entity should cease to exist or that the Special Tax Entity's maintenance and repair responsibilities are changed, then Permittee shall be responsible or assume responsibility for all activities that are no longer the responsibility of or being performed by the Special Tax Entity.

(c) In the event that the Director agrees to maintain one or more of the Improvements pursuant to Section 5.9B of this Agreement, Permittee shall not be responsible for the quality of maintenance or restoration work performed, nor liable for the resulting consequences of City work.

5.4B Abatement of Unsafe, Hazardous, Damaged, or Blighted Conditions. Permittee acknowledges its maintenance responsibility to abate any unsafe, hazardous, damaged, or blighted conditions. Following receipt of a notice by the Department of an unsafe, damaged, or blighted condition of the Permit, Permittee shall immediately respond to the notice and restore the site to the condition specified on the Construction Plans within thirty (30) calendar days, unless the Department specifies a shorter or longer compliance period based on the nature of the condition or the problems associated with it; provided, however, to the extent that such restoration cannot be completed using commercially reasonable efforts within such thirty (30) calendar day period or other period specified by the Department, then such period shall be extended provided that the Permittee has commenced and is diligently pursuing such restoration. In addition, Permittee acknowledges its responsibility to abate any hazardous conditions as a direct or indirect result of

the Improvement (e.g., slip, trip, and fall hazards), promptly upon receipt of notice from the Department. For unsafe or hazardous conditions, the Permittee shall immediately place or cause to be placed temporary measures to protect the public. Failure to promptly respond to an unsafe or hazardous condition or to restore the site within the specified time may result in the Department's performing the temporary repair or restoration in order to protect the public health, safety, and welfare. Permittee shall reimburse the Department for any such temporary repair or restoration. Failure to abate the problem also may result in the Department's issuance of a Correction Notice or Notice of Violation citation and/or request for reimbursement fees to the Department for departmental and other City services necessary to abate the condition in accordance with Section 8.

5.4C Permittee Contact Information, Signage. Upon the Department's determination that the Permittee has completed the Improvements in accordance with the Construction Plans, Permittee shall post a sign(s) within the Permit Area, in conformity with any applicable signage program for the Permittee's property and in a location approved by the Department, that provides a telephone number and other Permittee contact information so that members of the public can contact the Permittee to report maintenance issues, problems, or any other complaints about the Permit.

5.4D Non-standard Materials and Features. If the Permittee elects to install materials, facilities, fixtures, or features ("**Non-standard Elements**") that do not meet the City's criteria for standard operation, maintenance, and repair, and the City approves such Non-standard Elements, the Permittee shall (i) acknowledge its responsibility for the operation, maintenance, repair, and replacement of the Non-standard Elements as constructed per the Construction Plans, (ii) separately meter any service utility required to operate the Non-standard Elements, and (iii) be responsible for providing such utility service at Permittee's own cost. As an exception, if the Non-standard Elements are facilities such as street lights, and they are installed in locations identified by the City as standard streetlight locations, the City may elect to power the streetlights and not require a separate meter. Permittee shall indemnify and hold City harmless against any claims related to Permittee's operation, maintenance, repair, and replacement of Non-standard Elements.

5.5 Permittee's Maintenance, Liability, and Notice Responsibilities.

The Permittee's maintenance responsibility shall be limited to the portion of the Permit Area, as described and shown in the attachments and as determined by the Director, and its immediate vicinity, including any sidewalk damage directly related to the Improvement or Permitted Activities. If it is unclear whether sidewalk maintenance is the responsibility of Permittee or a Fronting Property Owner who is not the Permittee under Public Works Code Section 706, the Department shall determine which party or parties are responsible. If the situation so warrants, the Department may assign responsibility for sidewalk maintenance to one or more parties, including a Fronting Property Owner who is not the Permittee.

If Permittee is the Fronting Property Owner, Permittee must notify any successor owner(s) of the existence of the Permit and the successor owner's obligations at the time of closing on the subject property. In addition, prior to the time of closing on the subject property, Permittee shall

record a Notice of Assignment that provides constructive notice to any successor owner(s) of the Permit and the Permittee's responsibilities thereunder.

5.6 Annual Certification of Insurance

Upon receipt of a written request by the Department, but no more than annually, Permittee shall submit written evidence to the Department indicating that the requirements of Section 7 (Insurance) and, if applicable, Section 8 (Security), have been satisfied.

5.7 Damage to and Cleanliness and Restoration of Permit Area and City Owned or Controlled Property

Permittee, at all times, shall maintain the Permit Area in a clean and orderly manner to the satisfaction of the Director. Following any construction activities or other activities on the Permit Area, Permittee shall remove all debris and any excess dirt from the Permit Area and Improvements.

If any portion of the Permit Area, any City-owned or controlled property located adjacent to the Permit Area, including other publicly dedicated PROW, or private property in the vicinity of the Permit area is damaged by any of the activities conducted by Permittee hereunder, Permittee shall immediately, at its sole cost, repair any and all such damage and restore the Permit Area or affected property to its previous condition to the satisfaction of the Director.

5.8 Excavation or Temporary Encroachment within the Permit Area

Permittee acknowledges its maintenance responsibility following any excavation or temporary encroachment of any portion or portions of the Permit Area as described below.

5.8A Excavation by City or UCP Holders. After providing public notice according to Article 2.4 of the Public Works Code, any City Agency or Public Utility may excavate within the PROW, which may include portions of the Permit Area. A "City Agency" shall include, but not be limited to, the SFPUC, SFMTA, and any City authorized contractor or agent, or their sub-contractor. "Public Utility" shall include any company or entity currently holding a valid Utility Conditions Permit ("**UCP**") or a valid franchise with the City or the California Public Utilities Commission. Permittee acknowledges that it will provide and not obstruct access to any utilities and facilities owned and operated by any City Agency or a Public Utility at any time within the Permit Area for maintenance, repair, and/or replacement.

Emergency work. In the case of an emergency, a City Agency or Public Utility need not notify the Permittee of the work until after the emergency situation has been abated at which point the Department will strive to cooperate with affected City department to provide written notice to the Permittee concerning the emergency work.

In the performance of any excavation in the Permit Area by a City Agency or Public Utility, it shall be the responsibility of the Permittee to coordinate with the City Agency or Public Utility and restore the site to the condition specified on the Construction Plans, provided, however,

the excavator shall implement commercially reasonable precautions to protect the Permit Area and any Improvements located within the Permit Area from injury or damage during the excavation or future work. Following excavation by a City Agency or Public Utility, (a) in the case where there are non-standard materials the excavator shall only be obligated to back-fill and patch the site to a safe condition; (b) in the case there are only City Standard materials the excavator shall be obligated to backfill the site to a safe condition, and where feasible restore the site to City Standards. The City Agency or Public Utility shall not replace non-City Standard materials or Improvements that the City may remove or damage in connection with such excavation or site access. Permittee shall be responsible for and bear all costs for the restoration of all disturbed Improvements to the condition as specified on the Construction Plans.

In the case where the excavated portion of the Permit Area consists of only City Standard materials, the City Agency or Public Utility shall complete its restoration work within thirty (30) calendar days following the completion of the excavation or temporary encroachment; provided, however, to the extent that such restoration cannot be completed within such thirty (30) calendar day period due to weather or unforeseen circumstances, then such period shall be extended provided that the excavator has commenced and is diligently pursuing such restoration.

In the case where the excavated portion of the Permit Area consists partially or fully of non-standard materials, the Permittee shall restore or cause to be restored the Improvements in the excavated portions of the Permit Area to the condition specified on the design for the Improvements within thirty (30) calendar days; provided, however, to the extent that such restoration cannot be completed using commercially reasonable efforts within such thirty (30) calendar day period, then the Department shall extend such period provided that the Permittee has commenced and is diligently pursuing such restoration.

The Permittee shall not seek or pursue compensation from a City Agency or a Public Utility for Permittee's coordination of work or the inability to use of the Permit Area for the duration of excavation or occupancy.

5.8B Excavation by Private Parties. Following any excavation of any portion or portions of the Permit Area by a private party (e.g., contractor, property owner, or resident), it shall be the responsibility of the private party and the Permittee to coordinate the restoration of the site and the private party shall bear all the cost of restoration; provided, however, that in all events the private party shall be required to restore the excavated portion or portions of the Permit Area to the condition specified on the design for the Improvements within thirty (30) calendar days after completion of the excavation or temporary encroachment, provided, however, to the extent that such restoration cannot be completed using commercially reasonable efforts within such thirty (30) calendar day period, then the Department shall extend such period provided that the private party has commenced and is diligently pursuing such restoration.

If the private party fails to perform such restoration, then the Permittee should notify the Department of such failure in writing and allow any Departmental corrective procedures to conclude prior to pursuing any and all claims against such private party related thereto should the permittee have such third-party rights. The City, through its separate permit process with that private party, shall require that private party to bear all the costs of restoration and cooperate with

the Permittee on how the restoration is performed and how any costs that the Permittee assumes for work performed (time and materials) are reimbursed.

The Permittee shall only seek or pursue compensation for work performed (time and materials) and shall not seek or request compensation for coordination or the inability to use of the Permit Area for the duration of excavation or occupancy, provided that Permittee is provided with access to Permittee's property.

5.8C Temporary Encroachments for Entities Other Than Permittee. In the case of temporary encroachments, which may include the temporary occupancy of portions of the Permit Area or the temporary relocation of Improvements (elements or fixtures) from the Permit Area, Permittee shall work collaboratively with the entity that will be temporarily encroaching the Permit Area ("Temporary Encroacher") to coordinate the temporary removal and storage of the Improvements from the affected portion of the Permit Area, when necessary. It shall be the responsibility of the Temporary Encroacher to protect in-place any undisturbed portion of the Permit Area.

Where the Temporary Encroacher is a private party, the private party shall be responsible for any costs for removal, storage, and maintenance of the Improvements, and restoration associated with restoration of the Permit Areas. The obligation to coordinate and restore under this section shall be a condition of the City permit issued to the Temporary Encroacher. If the Temporary Encroacher fails to coordinate with Permittee and compensate the Permittee or restore the Permit Area, then the Permittee should notify the Department of such failure in writing.

The Permittee may only seek or pursue compensation for costs incurred (time and materials) to temporarily relocate and replace Improvements, and shall not seek or request compensation for coordination or the inability to use of the Permit Area for the duration of the Temporary Encroacher's occupancy.

Where the Temporary Encroacher is a City Agency or a Public Utility, Permittee shall be responsible for any costs for removal, storage, maintenance, and restoration associated with the Improvements and any associated areas within the Permit Area, and the City Agency or Public Utility, as applicable, shall be responsible for restoration of any standard City features or improvements. The City Agency or the Public Utility or its contractors shall not be responsible for Permittee's temporary removal and storage costs.

The Permittee shall be responsible for ensuring the Permit Area has been restored within thirty (30) calendar days following the completion of the temporary encroachment; provided, however, to the extent that such restoration cannot be completed using commercially reasonable efforts within such thirty (30) calendar day period, then such period shall be extended provided that the Permittee has commenced and is diligently pursuing such restoration.

5.8D Additional Time to Complete Site Restoration Where Future Work Is Anticipated. Prior to the Permittee's undertaking of any restoration of the applicable portion of the Permit Area to the conditions specified in the Construction Plans, the Permittee and the City shall confer as to whether any party (e.g., any City Agency, Public Utility, or private party) intends

to perform any future work (e.g., any excavation or temporary encroachment) that would be likely to damage, disrupt, disturb or interfere with any restoration of the Permit Area.

If such future work is anticipated within six (6) months following completion of any then proposed excavation or temporary encroachment, then the Permittee's deadline for restoring the site shall be automatically extended. The Permittee may submit to the Department a written request for an extension to the restoration deadline if future work is anticipated to commence more than six (6) months from the completion of the prior excavation and temporary encroachment. If the restoration deadline is extended as set forth above, then the Permittee shall be obligated to complete the restoration within the timeframes specified in this Agreement.

5.9 Permit Revocation; Termination; Modification of Agreement

5.9A Permit Revocation or Termination.

Permittee acknowledges and agrees that the obligations of the Permittee, successor owner(s), or Permittee's successor(s) in interest to perform the Permitted Activities shall continue for the term of the Permit. The City reserves the right to revoke the Permit under the procedures set forth in the Public Works Code Sections 786 et seq. and, if applicable, as specified in the Board of Supervisors or Public Works Director's approval of this permit.

If the Permit is terminated by Permittee or revoked or terminated by City (each an "MEP Termination Event") with respect to a portion or portions of the Permit Area, Permittee shall convert the Improvements therein to a condition specified by City for a standard PROW or as the Director of Public Works deems appropriate under the circumstances, at Permittee's sole cost (the "**Right-of-Way Conversion** ") by (i) applying for, and providing the materials necessary to obtain, a street improvement permit or other authorization from City for the performance of such conversion work; (ii) performing such conversion work pursuant to the terms and conditions of such street improvement permit or other City authorization; and (iii) warrantying that the conversion work that meets the standards required by a Public Works street improvement permit with a duration not less than one (1) year from the date Public Works confirms that the work is complete.

A termination or revocation of the Permit under the procedures set forth in Public Works Code Sections 786 et seq. shall result in an automatic termination of this Agreement as to the affected portion of the Permit Area, and all of Permittee's responsibilities and obligations hereunder shall terminate, unless otherwise provided for in this Agreement. The City may partially terminate or revoke the Permit as to those portions of the Permit Area subject to default and the City may elect to allow the Permit to remain effective as to all portions of the Permit Area that are not subject to default.

The obligation of Permittee, successor owner, or Permittee's successor in interest to remove the Improvements and restore the PROW to a condition satisfactory to Director of Public Works shall survive the revocation, expiration, or termination of this Permit. Upon completion of the Right-of-Way Conversion, and subject to Section 5.9B, Permittee shall have no further obligations under the Permit for the portion of the Permit area subject to the Right-of-Way

Conversion and to the extent the Director has agreed to terminate the Permittee's obligations in regard to all or a portion of the Right-of-Way Conversion, except as to any applicable warranty.

The City and any and all City subdivisions or agencies shall be released from the responsibility to maintain the existence of the Improvements and shall not be required to preserve or maintain the Improvements in any capacity following the termination or revocation of the Permit unless the Department, in its discretion and in accordance with this Agreement, agrees to an alternative procedure.

5.9B Modification or Termination of the Agreement.

(a) This Agreement shall continue and remain in full force and effect at all times in perpetuity, except if City elects to terminate Permittee's maintenance obligations pursuant to this Section 5.9B and provides written notice to the address provided in Section 2.7. Under such circumstances, this Agreement shall terminate at the time specified in such written notice with exception to those terms as specified in this Agreement that apply to the any remaining Permit obligations. City shall record evidence of any such termination in the Official Records.

(b) At any time during the term of the Permit, Permittee may request to amend the scope of such Permitted Activities through a written amendment to this Agreement. The Director, in his or her sole discretion, may approve, approve with conditions, or deny the requested amendment. If the Director approves an amendment, both parties shall execute and record the approved amendment. Further, Permittee and Director may, but are not required to, execute a written modification of this Agreement to provide for the Department's maintenance of a portion or all of the Improvements as described in the Permit Area (Attachment 2). In the event of such modification of this Agreement, Department may require Permittee to pay the Department for the cost of maintaining specified Improvements as described in the Maintenance Plan (defined in Section 2.8) and Attachment 3. The Director's written modification shall, among other relevant terms, identify the specific portion of the Improvements that the Department shall maintain and the terms of Permittee's payments.

(c) In addition, Permittee and City may mutually elect to modify Permittee's obligation to perform the Right-of-Way Conversion described in Section 5.9.A including any modification necessary to address any Improvements that cannot be modified or replaced with a PROW improvement built according to the City's standard specifications. Any such modification may include, but not be limited to, Permittee's agreement to convert, at its sole cost, specified Improvements to a PROW built according to the City's standard specifications while leaving other specified Improvements in their as-is condition, with Permittee assuming a continuing obligation to pay for City's costs to maintain and replace such remaining Improvements. In addition, any such modification may address any applicable City requirements for maintenance security payment obligations and City's acquisition of specialized equipment needed to perform the maintenance work, however, no such specialized equipment shall be required for Improvements built to City standards. If City and the Permittee mutually agree to any modification to the Right-of-Way Conversion that results in Permittee assuming such a maintenance payment obligation, Permittee shall execute and acknowledge, and City shall have the right to record in the Official

Records of San Francisco County, an amendment to this Agreement that details such payment obligation.

5.10 Green Maintenance Requirements

In performing any Permitted Activities that require cleaning materials or tools, Permittee, to the extent commercially reasonable, shall use cleaning materials or tools selected from the Approved Alternatives List created by City under San Francisco Environmental Code, Chapter 2, or any other material or tool approved by the Director. Permittee shall properly dispose of such cleaning materials or tools.

6. USE RESTRICTIONS

Permittee agrees that the following uses of the PROW by Permittee or any other person claiming by or through Permittee are inconsistent with the limited purpose of this Agreement and are strictly prohibited as provided below. The list of prohibited uses includes, but is not limited to, the following uses.

6.1 Improvements

Permittee shall not make, construct, or place any temporary or permanent alterations, installations, additions, or improvements on the PROW, structural or otherwise, nor alter any existing structures or improvements on the PROW (each, a "**Proposed Alteration**"), without the Director's prior written consent in each instance. The in-kind replacement or repair of existing Improvements shall not be deemed a Proposed Alteration.

Permittee may request approval of a Proposed Alteration. The Director shall have a period of twenty (20) business days from receipt of request for approval of a Proposed Alteration to review and approve or deny such request for approval. Should the Director fail to respond to such request within said twenty (20) business day period, Permittee's Proposed Alteration shall be deemed disapproved. In requesting the Director's approval of a Proposed Alteration, Permittee acknowledges that the Director's approval of such Proposed Alteration may be conditioned on Permittee's compliance with specific installation requirements and Permittee's performance of specific on-going maintenance thereof or other affected PROW. If Permittee does not agree with the Director's installation or maintenance requirements for any Proposed Alteration, Permittee shall not perform the Proposed Alteration. If Permittee agrees with the Director's installation or maintenance requirements for any Proposed Alteration, prior to Permittee's commencement of such Proposed Alteration, Permittee and the Director shall enter into a written amendment to this Agreement that modifies the Permitted Activities to include such requirements. Prior approval from the Director shall not be required for any repairs made pursuant to and in accordance with the Permitted Activities.

If Permittee performs any City-approved Proposed Alteration, Permittee shall comply with all of the applicable terms and conditions of this Agreement, including, but not limited to, any and all conditions of approval of the Proposed Alteration(s).

Permittee shall obtain all necessary permits and authorizations from the Department and other regulatory agencies prior to commencing work for the Proposed Alteration. The Director's decision regarding a Proposed Alteration shall be final and not appealable.

6.2 Dumping

Permittee shall not dump or dispose of refuse or other unsightly materials on, in, under, or about the PROW.

6.3 Hazardous Material

Permittee shall not cause, nor shall Permittee allow any of its agents to cause, any Hazardous Material (as defined below) to be brought upon, kept, used, stored, generated, or disposed of in, on, or about the PROW, or transported to or from the PROW. Permittee shall immediately notify City if Permittee learns or has reason to believe that a release of Hazardous Material has occurred in, on, or about the PROW. In the event Permittee or its agents cause a release of Hazardous Material in, on, or about the PROW, Permittee shall, without cost to City and in accordance with all laws and regulations, (i) comply with all laws requiring notice of such releases or threatened releases to governmental agencies, and shall take all action necessary to mitigate the release or minimize the spread of contamination, and (ii) return the PROW to a condition which complies with applicable law. In connection therewith, Permittee shall afford City a full opportunity to participate in any discussion with governmental agencies regarding any settlement agreement, cleanup or abatement agreement, consent decree or other compromise proceeding involving Hazardous Material. For purposes hereof, "Hazardous Material" means material that, because of its quantity, concentration, or physical or chemical characteristics, is at any time now or hereafter deemed by any federal, state, or local governmental authority to pose a present or potential hazard to public health, welfare, or the environment. Hazardous Material includes, without limitation, any material or substance defined as a "hazardous substance, pollutant or contaminant" pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Sections 9601 et seq., or pursuant to Section 25316 of the California Health & Safety Code; a "hazardous waste" listed pursuant to Section 25140 of the California Health & Safety Code; any asbestos and asbestos containing materials whether or not such materials are part of the PROW or are naturally occurring substances in the PROW, and any petroleum, including, without limitation, crude oil or any fraction thereof, natural gas or natural gas liquids. The term "release" or "threatened release" when used with respect to Hazardous Material shall include any actual or imminent spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing in, on, under, or about the PROW.

Notwithstanding anything herein to the contrary, if the Director determines that neither Permittee nor its agents caused the release or threatened release of the Hazardous Material, Permittee shall have no liability whatsoever (including, without limitation, the costs of any investigation, any required or necessary repair, replacement, remediation, cleanup or detoxification, or preparation and implementation of any closure, monitoring, or other required plans) with respect to any release or threatened release of any Hazardous Material on, in, under or about the PROW. If the Director finds that neither Permittee nor its agents was the source and did

not cause the release of such Hazardous Material, Permittee shall not be listed or identified as the generator or responsible party of any waste required to be removed from the PROW, and will not sign any manifests or similar environmental documentation, with respect to any Environmental Condition (as hereinafter defined). . "Environmental Condition" shall mean any adverse condition relating to the release or discharge of any Hazardous Materials on, in, under, or about the PROW by any party other than Permittee or its agents.

6.4 Nuisances

Permittee shall not conduct any activities on or about the PROW that constitute waste, nuisance, or unreasonable annoyance (including, without limitation, emission of objectionable odors, noises, or lights) to City, to the owners or occupants of neighboring property, or to the public. The parties hereby acknowledge that customary use of landscaping and similar equipment (such as lawn mowers, clippers, hedge trimmers, leaf blowers, etc.) that would typically be used to perform the Permitted Activities shall not be considered a nuisance under this Section 6.4 if such equipment is used in compliance with all applicable laws.

6.5 Damage

Permittee shall use due care at all times to avoid causing damage to any of the PROW or any of City's property, fixtures, or encroachments thereon. If any of the Permitted Activities or Permittee's other activities at the PROW causes such damage, Permittee shall notify City, and, if directed by City, restore such damaged property or PROW to the condition it was in prior to the commencement of such Permittee activity to the Director's satisfaction; or, if the City chooses to restore the damaged property, Permittee shall reimburse City for its costs of restoration.

7. INSURANCE

7.1 As described below, Permittee shall procure and keep insurance in effect at all times during the term of this Agreement, at Permittee's own expense, and cause its contractors and subcontractors to maintain insurance at all times, during Permittee's or its contractors' performance of any of the Permitted Activities on the PROW. If Permittee fails to maintain the insurance in active status, such failure shall be a Permit default subject to the Department's to enforcement remedies. The insurance policy shall be maintained and updated annually to comply with the Department's applicable requirements. The following Sections represent the minimum insurance standard as of the Effective Date of this Permit.

7.1A An insurance policy or insurance policies issued by insurers with ratings comparable to A-VIII, or higher that are authorized to do business in the State of California, and that are satisfactory to the City. Approval of the insurance by City shall not relieve or decrease Permittee's liability hereunder;

7.1B Commercial General Liability Insurance written on an Insurance Services Office (ISO) Coverage form CG 00 01 or another form providing equivalent coverage with limits not less than Five Million Dollars ($5,000,000) each occurrence and Ten Million Dollars ($10,000,000) in the aggregate for bodily injury and property damage, including coverages for

contractual liability, personal injury, products and completed operations, independent permittees, and broad form property damage;

7.1C Commercial Automobile Liability Insurance with limits not less than One Million Dollars ($1,000,000) each occurrence, combined single limit for bodily injury and property damage, including coverages for owned, non-owned, and hired automobiles, as applicable for any vehicles brought onto PROW; and

7.1D Workers' Compensation Insurance, in statutory amounts, with Employer's Liability Coverage with limits of not less than One Million Dollars ($1,000,000) each accident, injury, or illness.

7.2 All liability policies required hereunder shall provide for the following: (i) name as additional insured the City and County of San Francisco, its officers, agents, and employees, jointly and severally; (ii) specify that such policies are primary insurance to any other insurance available to the additional insureds, with respect to any claims arising out of this Agreement; and (iii) stipulate that no other insurance policy of the City and County of San Francisco will be called on to contribute to a loss covered hereunder.

7.3 Limits may be provided through a combination of primary and excess insurance policies. Such policies shall also provide for severability of interests and that an act or omission of one of the named insureds which would void or otherwise reduce coverage shall not reduce or void the coverage as to any insured, and shall afford coverage for all claims based on acts, omissions, injury, or damage which occurred or arose (or the onset of which occurred or arose) in whole or in part during the policy period.

7.4 All insurance policies shall be endorsed to provide for thirty (30) days' prior written notice of cancellation for any reason, non-renewal or material reduction in coverage, or depletion of insurance limits, except for ten (10) days' notice for cancellation due to non-payment of premium, to both Permittee and City. Permittee shall provide a copy of any notice of intent to cancel or materially reduce, or cancellation, material reduction, or depletion of, its required coverage to Department within one business day of Permittee's receipt. Permittee also shall take prompt action to prevent cancellation, material reduction, or depletion of coverage, reinstate or replenish the cancelled, reduced or depleted coverage, or obtain the full coverage required by this Section from a different insurer meeting the qualifications of this Section. Notices shall be sent to the Department of Public Works, Bureau of Street Use and Mapping, 1155 Market Street, 3rd Floor, San Francisco, CA, 94103, or any future address for the Bureau. The permission granted by the Permit shall be suspended upon the termination of such insurance. Upon such suspension, the Department and Permittee shall meet and confer to determine the most appropriate way to address the Permit. If the Department and Permittee cannot resolve the matter, the Permittee shall restore the PROW to a condition acceptable to the Department without expense to the Department. As used in this Section, "Personal Injuries" shall include wrongful death.

7.5 Prior to the Effective Date, Permittee shall deliver to the Department certificates of insurance and additional insured policy endorsements from insurers in a form reasonably satisfactory to Department, evidencing the coverages required hereunder. Permittee shall furnish

complete copies of the policies upon written request from the City Attorney's Office. In the event Permittee shall fail to procure such insurance, or to deliver such certificates or policies (following written request), Department shall provide notice to Permittee of such failure and if Permittee has not procured such insurance or delivered such certificates within five (5) days following such notice, City may initiate proceedings to revoke the permit and require restoration of the PROW to a condition that the Director deems appropriate.

7.6 Should any of the required insurance be provided under a form of coverage that includes a general annual aggregate limit or provides that claims investigation or legal defense costs be included in such general annual aggregate limit, such general aggregate limit shall double the occurrence or claims limits specified above.

7.7 Should any of the required insurance be provided under a claims-made form, Permittee shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of three (3) years beyond the expiration of this Agreement, to the effect that, should any occurrences during the term of this Agreement give rise to claims made after expiration of this Agreement, such claims shall be covered by such claims-made policies.

7.8 Upon City's request, Permittee and City shall periodically review the limits and types of insurance carried pursuant to this Section. If the general commercial practice in the City and County of San Francisco is to carry liability insurance in an amount or coverage materially greater than the amount or coverage then being carried by Permittee for risks comparable to those associated with the PROW, then City in its sole discretion may require Permittee to increase the amounts or coverage carried by Permittee hereunder to conform to such general commercial practice.

7.9 Permittee's compliance with the provisions of this Section shall in no way relieve or decrease Permittee's indemnification obligations under this Agreement or any of Permittee's other obligations hereunder. Permittee shall be responsible, at its expense, for separately insuring Permittee's personal property.

8. VIOLATIONS; CITY ENFORCEMENT OF PERMIT AND AGREEMENT; SECURITY DEPOSIT. Permittee acknowledges that the Department may pursue the remedies described in this Section in order to address a default by Permittee of any obligation under this Permit with respect to any Permit Area for which Permittee is responsible pursuant to the relevant Notice of Assignment, if applicable. In addition to the procedures below and as set forth in Section 5.4B, if Permittee fails to promptly respond to an unsafe or hazardous condition or to restore the site within the time the Department specifies, the Department may perform the temporary repair or restoration in order to protect the public health, safety, and welfare. Permittee shall reimburse the Department for any such temporary repair or restoration.

(a) Correction Notice (CN). The Department may issue a written notice informing Permittee that there is an unsafe, hazardous, damaged, or blighted condition within the Permit Area, or stating that the Permittee has otherwise failed to maintain the Permit Area as required by this Permit or stating that the Permittee has otherwise failed to comply with a term or terms of this Agreement ("**Correction Notice**"). The Correction Notice shall identify the issue, deficiency, or maintenance obligation that is the subject of the notice with reasonable particularity and specify

the time for correction, which shall be no less than thirty (30) days; provided, however, to the extent that such correction cannot be completed using reasonable efforts within the initially specified timeframe, then such period shall be extended provided that the Permittee has commenced and is diligently pursuing such correction. In the event of an emergency or other situation presenting a threat to public health, safety, or welfare, the Director may require correction in less than thirty (30) days.

(b) Notice of Violation (NOV).

(i) The Department may issue a written notice of violation to the Permittee for failure to maintain the Permit Area and creating an unsafe, hazardous, damaged, or blighted condition within the Permit Area, failure to comply with the terms of this agreement, or failure to respond to the Correction Notice by abating the identified condition(s) within the time specified therein. The NOV shall identify each violation and any fines imposed per applicable code(s) or Agreement sections and specify the timeframe in which to cure the violation and pay the referenced fines ("**Notice of Violation**"), thirty (30) days if not specified.

(ii) Permittee shall have ten (10) days to submit to the Department, addressed to the Director via BSM Inspection Manager at 1155 Market St, 3rd Floor, San Francisco, CA 94103, or future Bureau address, a written appeal to the NOV or a written request for administrative review of specific items. If Permittee submits said appeal or request for review, the Director shall hold a public hearing on the dispute in front of an administrative hearing officer. The Director shall then issue a final written decision on his or her determination to approve, conditionally approve, modify, or deny the appeal based on the recommendation of the hearing officer and the information presented at the time of the hearing.

(c) Uncured Default. If the violation described in the Notice of Violation is not cured within ten (10) days after the latter of (1) the expiration of the Notice of Violation appeal period or (2) the written decision by the Director following the hearing to uphold the Notice of Violation or sections thereof, said violation shall be deemed an "**Uncured Default**." In the event of an Uncured Default, the Director may undertake either or both of the following:

(i) Cure the Uncured Default and issue a written demand to Permittee to pay the Department's actual reasonable costs to remedy said default in addition to any fines or penalties described in the Notice of Violation within ten (10) days (each such notice shall be referred to as a "**Payment Demand**").

(ii) Notify Permittee that it must submit a Security Deposit (as defined in Section 8(d)) for the maintenance obligation that is the subject of the Notice of Violation. Alternatively, the Director may initiate the procedures under Public Works Code Section 786 to revoke the Permit with respect to the particular portion of the Permit Area that is the subject of the Notice of Violation and require a Right-of-Way Conversion (as defined in Section 5.9.A) with respect to that area, in the Director's discretion.

(d) Security Deposit Required for Uncured Default.

If there is an Uncured Default as defined in Section 8(c) of this Agreement, then within thirty (30) business days of the Director's request, Permittee shall deposit with the Department via

the Permit Manager of the Bureau of Street Use and Mapping (or successor Bureau) the sum of no less than twice the annual cost of maintenance as set forth in the Maintenance Plan on file with the Director (the "**Security Deposit**") with respect to the maintenance obligation that is the subject of the Uncured Default, to secure Permittee's faithful performance of all terms and conditions of this Agreement, including, without limitation, its obligation to maintain the PROW in the condition that the Director deems acceptable. When Permittee delivers the Security Deposit to the Department pursuant to the foregoing sentence, the Department shall have the right to require Permittee to proportionately increase the amount of the Security Deposit by an amount that reflects the increase in the Consumer Price Index Urban Wage Earners and Clerical Workers (base years 1982-1984 = 100) for San Francisco-Oakland-San Jose area published by the United States Department of Labor, Bureau of Labor Statistics ("Index") published most immediately preceding the date the amount of the Security Deposit was established and the Index published most immediately preceding the date the Department delivers written notice of the increase in the Security Deposit. The amount of the Security Deposit shall not limit Permittee's obligations under this Agreement.

Permittee agrees that the Department may, but shall not be required to, apply the Security Deposit in whole or in part to remedy any damage to the PROW caused by Permittee, its agents, or the general public using the Permit Area to the extent that the Director of Public Works required Permittee to perform such remediation under this Agreement and Permittee failed to do so, or Permittee failed to perform any other terms, covenants, or conditions contained herein (including, but not limited to, the payment of any sum due to the Department hereunder either before or after a default). Notwithstanding the preceding, the Department does not waive any of the Department's other rights and remedies hereunder or at law or in equity against the Permittee should Department use all or a portion of the Security Deposit. Upon termination of the Permitted Activities after an MEP Termination Event as described herein, the Department shall return any unapplied portion of the Security Deposit to Permittee, less any administrative processing cost.

Should the Department use any portion of the Security Deposit to cure any Uncured Default, Permittee shall replenish the Security Deposit to the original amount within ten (10) days of the date of a written demand from the Department for reimbursement of the Security Deposit. Subject to the following sentence, the Permittee's obligation to replenish the Security Deposit shall continue for two (2) years from the date of the initial payment of the Security Deposit unless the Director, in his or her sole discretion, agrees to a shorter period; provided, however, that if the Director does not issue a new Notice of Violation related to the issues triggering the MEP Termination Event for a period of one year from the date of the initial payment of the Security Deposit, then, upon Permittee's written request, the Director shall submit a check request to City's Controller's Office to have any remaining Security Deposit, less any administrative processing cost, delivered to Permittee. The Department's obligations with respect to the Security Deposit are solely that of debtor and not trustee. The Department shall not be required to keep the Security Deposit separate from its general funds, and Permittee shall not be entitled to interest on the Security Deposit. The amount of the Security Deposit shall in no way limit the liabilities of Permittee under any provision of the Permit or this Agreement. Upon termination of the Permitted Activities after an MEP Termination Event, the Department shall return any unapplied portion of the Security Deposit to Permittee, less any administrative processing cost.

(e) Demand for Uncured Default Costs. Where the Permittee, or the owner of the Fronting Property associated with the Permit Area that is the subject of the Notice of Violation, has failed to timely remit the funds described in a Payment Demand, the Security Deposit, or to pay the City's costs associated with the City's performance of a Right-of-Way Conversion (collectively, "**Uncured Default Costs**"), the Director may initiate lien proceedings against the Fronting Property Owner for the amount of the Uncured Default Costs pursuant to Public Works Code Sections 706.4 through 706.7, Public Works Code Section 706.9, Administrative Code Section 80.8(d), or any other remedy in equity or at law.

9. COMPLIANCE WITH LAWS

Permittee shall, at its expense, conduct and cause to be conducted all activities under its control on the PROW allowed hereunder in a safe and prudent manner and in compliance with all laws, regulations, codes, ordinances, and orders of any governmental or other regulatory entity (including, without limitation, the Americans with Disabilities Act and any other disability access laws), whether presently in effect or subsequently adopted and whether or not in the contemplation of the parties. Permittee shall, at its sole expense, procure and maintain in force at all times during its use of the PROW any and all business and other licenses or approvals necessary to conduct the Permitted Activities. Nothing herein shall limit in any way Permittee's obligation to obtain any required regulatory approvals from City departments, boards, or commissions or other governmental regulatory authorities or limit in any way City's exercise of its police powers. At the Director's written request, Permittee shall deliver written evidence of any such regulatory approvals Permittee is required to obtain for any of the Permitted Activities.

10. SIGNS

Permittee shall not place, erect, or maintain any sign, advertisement, banner, or similar object on or about the PROW without the Director's written prior consent, which the Director may give or withhold in its sole discretion; provided, however, that Permittee may install any temporary sign that is reasonably necessary to protect public health or safety during the performance of a Permitted Activity.

11. UTILITIES

The Permittee shall be responsible for locating and protecting in place all above and below grade utilities from damage, when Permittee, or its authorized agent, elects to perform any work in, on, or adjacent to the Permit Area. If necessary prior to or during the Permittee's execution of any work, including Permitted Activities, a utility requires temporary or permanent relocation, the Permittee shall obtain written approval from the utility owner and shall arrange and pay for all costs for relocation. If Permittee damages any utility during execution of its work, the Permittee shall notify the utility owner and arrange and pay for all costs for repair. Permittee shall be solely responsible for arranging and paying directly to the City or utility company for any utilities or services necessary for its activities hereunder.

Permittee shall be responsible for installing, maintaining, and paying for utility services necessary to support any Improvements, such as light fixtures, water fountains, storm drains, etc. in the Permit Area that are included in the Permit.

12. NO COSTS TO CITY; NO LIENS

Permittee shall bear all costs or expenses of any kind or nature in connection with its use of the PROW pursuant to this Agreement, and shall keep the PROW free and clear of any liens or claims of lien arising out of or in any way connected with its (and not others') use of the PROW pursuant to this Agreement.

13. "AS IS, WHERE IS, WITH ALL FAULTS" CONDITION OF PROW; DISABILITY ACCESS; DISCLAIMER OF REPRESENTATIONS

Permittee acknowledges and agrees that Permittee shall install the Improvements contemplated in the permit application for the Improvements and has full knowledge of the condition of the Improvements and the physical condition of the PROW. Permittee agrees to use the PROW in its "AS IS, WHERE IS, WITH ALL FAULTS" condition, without representation or warranty of any kind by City, its officers, agents, or employees, including, without limitation, the suitability, safety, or duration of availability of the PROW or any facilities on the PROW for Permittee's performance of the Permitted Activities. Without limiting the foregoing, this Agreement is made subject to all applicable laws, rules, and ordinances governing the use of the PROW, and to any and all covenants, conditions, restrictions, encroachments, occupancy, permits, and other matters affecting the PROW, whether foreseen or unforeseen, and whether such matters are of record or would be disclosed by an accurate inspection or survey. It is Permittee's sole obligation to conduct an independent investigation of the PROW and all matters relating to its use of the PROW hereunder, including, without limitation, the suitability of the PROW for such uses. Permittee, at its own expense, shall obtain such permission or other approvals from any third parties with existing rights as may be necessary for Permittee to make use of the PROW in the manner contemplated hereby.

Under California Civil Code Section 1938, to the extent applicable to this Agreement, Permittee is hereby advised that the PROW has not undergone inspection by a Certified Access Specialist ("CAS") to determine whether it meets all applicable construction-related accessibility requirements.

14. TERMS OF ASSIGNMENT; PERMIT BINDING UPON SUCCESSORS AND ASSIGNEES; NOTICE OF ASSIGNMENT

(a) This Agreement shall be the obligation of Permittee and each future fee owner of all or any of the Permittee's Property, and may not be assigned, conveyed, or otherwise transferred to any other party, including a homeowners' association or commercial owners' association established for the benefit of the Permittee, unless approved in writing by the Director. This Agreement shall bind Permittee, its successors and assignees, including all future fee owners of all or any portion of the Fronting Property, with each successor or assignee being deemed to have assumed the obligations under this Agreement at the time of acquisition of fee ownership or assignment; provided, however, that if any or all of the Fronting Property is converted into condominiums, the obligations of Permittee under this Agreement shall be those of the

homeowners' association or commercial owners' association established for such condominiums, except the individual owners of such condominiums shall assume the Permittee's obligations in the event the homeowners association ceases to exist or fails to remit the Uncured Default Costs in the time that the Director specifies in the Payment Demand.

It is intended that this Agreement binds the Permittee and all future fee owners of all or any of the Fronting Property only during their respective successive periods of ownership; and therefore, the rights and obligations of any Permittee or its respective successors and assignees under this Agreement shall terminate upon transfer, expiration, or termination of its interest in the Fronting Property, except that its liability for any violations of the requirements or restrictions of this Agreement, or any acts or omissions during such ownership, shall survive any transfer, expiration, or termination of its interest in the Fronting Property.

Subject to the approval of the Director, which shall not unreasonably be withheld, Permittee may assign this permit to a homeowners' association (for residential or mixed-use properties), a commercial owners' association (for commercial properties) or a master association with jurisdiction over the Fronting Property by submitting a "**Notice of Assignment**" to the Department.

The **Notice of Assignment** shall include:

(1) Identification of the Assignee and written acknowledgment of the Assignee's acceptance of the responsibilities under this permit;

(2) The contact person for the Assignee and the contact information as required under Section 2.7;

(3) If the Assignee is a homeowners' association or commercial owners' association, a copy of recorded CC&Rs, if there are such CC&Rs evidencing (a) the homeowners' association's or commercial owners' association's obligation to accept maintenance responsibility for the subject Improvements consistent with this Agreement upon assignment; and (b) City's right to enforce maintenance obligations as a third-party beneficiary under such CC&Rs and the San Francisco Municipal Code; and

(4) A statement identifying whether a Community Facilities District or other Special Tax Entity will expend monetary or staff resources on the Permit area for maintenance or other activities;

(5) A copy of the Assignee's general liability insurance that satisfies Section 7 and security under Section 8 if applicable;

(6) For encroachments with a construction cost of $1 million or greater, Assignee must provide security in the form of a bond, other form of security acceptable to the Department, or payment into the Maintenance Endowment Fund in an amount required to restore the public right-of-way to a condition satisfactory to the Public Works Director based on a cost that the City Engineer determines; and

(7) Any other considerations necessary to promote the health, safety, welfare, including demonstration to the Director's satisfaction that the Assignee has the monetary and/or staff resources are available and committed to perform the maintenance obligation.

Permittee shall submit to Public Works a Notice of Assignment in a form acceptable to Public Works. Prior to approval from the Director, the Department shall provide a written determination that the proposed assignee satisfies Section 7 (Insurance) and Section 8 (Security). Following such assignment, the obligations of the assigning Permittee shall be deemed released and the assigning Permittee shall have no obligations under this Agreement.

(b) Lender. A "**Lender**" means the beneficiary named in any deed of trust that encumbers all or a portion of the Fronting Property and is recorded in the Official Records of San Francisco County (the "Deed of Trust"). All rights in the Fronting Property acquired by any party pursuant to a Deed of Trust shall be subject to each and all of the requirements and obligations of the Permit and this Agreement and to all rights of City hereunder. Any Lender that takes possession or acquires fee ownership of all or a portion of the Fronting Property shall automatically assume the Owner's obligations under the Permit and this this Agreement for the period that Lender holds possession or fee ownership in the Fronting Property. None of such requirements and obligations is or shall be waived by City by reason of the giving of such Deed of Trust, except as specifically waived by City in writing.

15. TRANSFER AND ACCEPTANCE PROCEDURES

This Permit, and the accompanying benefits and obligations are automatically transferred to any successor property owner(s). If the Permittee is selling the property, the successor owner(s) shall submit contact information to the Department immediately upon closing on the property sale along with an acknowledgement that the successor owner(s) shall accept and assume all Permit responsibilities. The Department may require that such a transfer be evidenced by a new written Agreement with the Director and require evidence of insurance to be submitted within a specified period of time.

16. POSSESSORY INTEREST TAXES

Permittee recognizes and understands that this Agreement may create a possessory interest subject to property taxation with respect to privately-owned or occupied property in the PROW, and that Permittee may be subject to the payment of property taxes levied on such interest under applicable law. Permittee agrees to pay taxes of any kind, including any possessory interest tax, if any, that may be lawfully assessed on Permittee's interest under this Agreement or use of the PROW pursuant hereto and to pay any other taxes, excises, licenses, permit charges, or assessments based on Permittee's usage of the PROW that may be imposed upon Permittee by applicable law (collectively, a "Possessory Interest Tax"). Permittee shall pay all of such charges when they become due and payable and before delinquency. The parties hereto hereby acknowledge that the PROW will be a public open space during the term of this Agreement and Permittee's use of the PROW pursuant to this Agreement is intended to be non-exclusive and non-possessory.

17. PESTICIDE PROHIBITION

Permittee shall comply with the provisions of Section 308 of Chapter 3 of the San Francisco Environment Code (the "Pesticide Ordinance") which (a) prohibit the use of certain pesticides on PROW, (b) require the posting of certain notices and the maintenance of certain records regarding pesticide usage and (c) require Permittee to submit to the Director an integrated pest management ("**IPM**") plan that (i) lists, to the extent reasonably possible, the types and estimated quantities of pesticides that Permittee may need to apply to the PROW during the term of this Agreement, (ii) describes the steps Permittee will take to meet the City's IPM Policy described in Section 300 of the Pesticide Ordinance, and (iii) identifies, by name, title, address and telephone number, an individual to act as the Permittee's primary IPM contact person with the City. In addition, Permittee shall comply with the requirements of Sections 303(a) and 303(b) of the Pesticide Ordinance. Nothing herein shall prevent Permittee, through the Director, from seeking a determination from the Commission on the Environment that it is exempt from complying with certain portions of the Pesticide Ordinance as provided in Section 303 thereof.

18. PROHIBITION OF TOBACCO SALES AND ADVERTISING

Permittee acknowledges and agrees that no sale or advertising of cigarettes or tobacco products is allowed on the PROW. This advertising prohibition includes the placement of the name of a company producing, selling or distributing cigarettes or tobacco products or the name of any cigarette or tobacco product in any promotion of any event or product. This advertising prohibition does not apply to any advertisement sponsored by a state, local, nonprofit, or other entity designed to (a) communicate the health hazards of cigarettes and tobacco products, or (b) encourage people not to smoke or to stop smoking.

19. PROHIBITION OF ALCOHOLIC BEVERAGE ADVERTISING

Permittee acknowledges and agrees that no advertising of alcoholic beverages is allowed on the PROW. For purposes of this Section, "alcoholic beverage" shall be defined as set forth in California Business and Professions Code Section 23004, and shall not include cleaning solutions, medical supplies, and other products and substances not intended for drinking. This advertising prohibition includes the placement of the name of a company producing, selling, or distributing alcoholic beverages or the name of any alcoholic beverage in any promotion of any event or product. This advertising prohibition does not apply to any advertisement sponsored by a state, local, nonprofit, or other entity designed to (a) communicate the health hazards of alcoholic beverages, (b) encourage people not to drink alcohol or to stop drinking alcohol, or (c) provide or publicize drug or alcohol treatment or rehabilitation services.

20. CONFLICTS OF INTEREST

Through its execution of this Agreement, Permittee acknowledges that it is familiar with the provisions of Section 15.103 of the San Francisco Charter, Article III, Chapter 2 of City's Campaign and Governmental Conduct Code, and Sections 87100 et seq. and Sections 1090 et seq. of the Government Code of the State of California, and certifies that it does not know of any facts

which would constitute a violation of said provisions, and agrees that if Permittee becomes aware of any such fact during the term of this Agreement, Permittee shall immediately notify the City.

21. FOOD SERVICE WASTE REDUCTION

If there is a City permit or authorization for the Permit Area that will allow food service, Permittee agrees to comply fully with and be bound by all of the provisions of the Food Service Waste Reduction Ordinance, as set forth in the San Francisco Environment Code, Chapter 16, including the remedies provided therein, and implementing guidelines and rules. The provisions of Chapter 16 are incorporated herein by reference and made a part of this Agreement as though fully set forth herein and the Permittee will be treated as a lessee for purposes of compliance with Chapter 16. This provision is a material term of this Agreement. By entering into this Agreement, Permittee agrees that if it breaches this provision, City will suffer actual damages that will be impractical or extremely difficult to determine. Without limiting City's other rights and remedies, Permittee agrees that the sum of One Hundred Dollars ($100.00) liquidated damages for the first breach, Two Hundred Dollars ($200.00) liquidated damages for the second breach in the same year, and Five Hundred Dollars ($500.00) liquidated damages for subsequent breaches in the same year is a reasonable estimate of the damage that City will incur based on the violation, established in light of the circumstances existing at the time this Agreement was made. Such amounts shall not be considered a penalty, but rather as mutually agreed upon monetary damages sustained by City because of Permittee's failure to comply with this provision.

22. GENERAL PROVISIONS

Unless this Agreement provides otherwise: (a) This Agreement may be amended or modified only in writing and signed by both the Director and Permittee; provided that the Director shall have the right to terminate or revoke the Permit in accordance with this Agreement. (b) No waiver by any party of any of the provisions of this Agreement shall be effective unless in writing and signed by an officer or other authorized representative, and only to the extent expressly provided in such written waiver. (c) All approvals and determinations of City requested, required, or permitted hereunder may be made in the sole and absolute discretion of the Director or other authorized City official. (d) This Agreement (including its Attachments and associated documents hereto), the Permit, the Board of Supervisors legislation approving the Permit, and any authorization to proceed, discussions, understandings, and agreements are merged herein. (e) The section and other headings of this Agreement are for convenience of reference only and shall be disregarded in the interpretation of this Agreement. Director shall have the sole discretion to interpret and make decisions regarding any and all discrepancies, conflicting statements, and omissions found in the Permit, Agreement, the Agreement's Attachments and associated documents, and Construction Plans, if applicable. (f) Time is of the essence in each and every provision hereof. (g) This Agreement shall be governed by California law and the City's Charter. (h) If either party commences an action against the other or a dispute arises under this Agreement, the prevailing party shall be entitled to recover from the other reasonable attorneys' fees and costs. For purposes hereof, reasonable attorneys' fees of City shall be based on the fees regularly charged by private attorneys in San Francisco with comparable experience, notwithstanding the City's use of its own attorneys. (i) If Permittee consists of more than one person, then the obligations of each person shall be joint and several. (j) This Agreement shall be binding upon and inure to the benefit

of the parties and their respective heirs, representatives, successors, and assigns. (k) City is the sole beneficiary of Permittee's obligations under this Agreement. Nothing contained herein shall be deemed to be a gift or dedication to the general public or for any public purposes whatsoever, nor shall it give rights to the parties expressly set forth above. Without limiting the foregoing, nothing herein creates a private right of action by any person or entity other than the City. (l) This Agreement does not create a partnership or joint venture between the City and Permittee as to any activity conducted by Permittee in its performance of its obligations under this Agreement. Permittee shall not be deemed a state actor with respect to any activity conducted by Permittee on, in, around, or under the Improvements pursuant to this Agreement.

23. INDEMNIFICATION

Permittee, on behalf of itself and its successors and assigns ("Indemnitors"), shall indemnify, defend, and hold harmless ("Indemnify") the City including, but not limited to, all of its boards, commissions, departments, agencies, and other subdivisions, including, without limitation, the Department, and all of the heirs, legal representatives, successors, and assigns (individually and collectively, the "Indemnified Parties"), and each of them, for any damages the Indemnified Parties may be required to pay as satisfaction of any judgment or settlement of any claim(collectively, "Claims"), incurred in connection with or arising in whole or in part from: (a) any accident, injury to or death of a person, or loss of or damage to property, howsoever or by whomsoever caused, occurring in or about the Permit Area arising from the Permitted Activities, with the exception of Claims arising from the City's failure to maintain one or more Improvements after agreeing to perform such maintenance and accepting funding from Permittee for that purpose; (b) any default by such Indemnitors in the observation or performance of any of the terms, covenants, or conditions of this Permit to be observed or performed on such Indemnitors' part; and (c) any release or discharge, or threatened release or discharge, of any Hazardous Material caused or allowed by Indemnitors in, under, on, or about the Permit Area arising from the Permitted Activities. Permittee on behalf of the Indemnitors specifically acknowledges and agrees that the Indemnitors have an immediate and independent obligation to defend the City from any claim which actually or potentially falls within this Indemnity even if such allegation is or may be groundless, fraudulent, or false, which obligation arises at the time such Claim is tendered to such Indemnitors by the City and continues at all times thereafter. Permittee agrees that the indemnification obligations assumed under this Permit shall survive expiration of the Permit or completion of work. It is expressly understood and agreed that the applicable Indemnitor shall only be responsible for claims arising or accruing during its period of ownership of the Fronting Property.

24. SEVERABILITY

If any provision of this Agreement or the application thereof to any person, entity or circumstance shall be invalid or unenforceable, the remainder of this Agreement, or the application of such provision to persons, entities, or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each other provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law, except to the extent that enforcement of this Agreement without the invalidated provision would be unreasonable or inequitable under all the circumstances or would frustrate a fundamental purpose of this Agreement.

25. FORCE MAJEURE

If Permittee is delayed, interrupted, or prevented from performing any of its obligations under this Agreement, excluding all obligations that may be satisfied by the payment of money or provision of materials within the control of Permittee, and such delay, interruption, or prevention is due to fire, natural disaster, act of God, civil insurrection, federal or state governmental act or failure to act, labor dispute, unavailability of materials, or any cause outside such Party's reasonable control, then, provided written notice of such event and the effect on the Party's performance is given to the other Party within thirty (30) days of the occurrence of the event, the time for performance of the affected obligations of that Party shall be extended for a period equivalent to the period of such delay, interruption, or prevention.

[*Signature Page to Follow*]

In witness whereof the undersigned Permittee(s) have executed this agreement this 12 day of JANUARY, 2022.

PERMITTEE:

Fronting Property Owner or Official authorized to bind Permittee

Secondary Official authorized to bind Permittee

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS, a municipal corporation

City Engineer of San Francisco

Director of Public Works

ATTACHMENT 1
DESCRIPTION/LOCATION OF PERMITTEE'S PROPERTY

See documents next 2 pages.

All that certain real property situated in the County of San Francisco, State of California, described as follows:

City of San Francisco

PARCEL ONE:

Lot 11, as shown on that certain Map entitled, "Parcel Map, being a portion of Portrero Nuevo Blocks 263, 264, 265, 284, 285 and 299, also being a portion of Assessor's Blocks 4101 and 4167", which Map was filed for record in the Office of the recorder of the City and County of San Francisco, State of California, on June 9, 1988, in Book 37 of Parcel Maps at Pages 61 and 62, inclusive together with a Certificate of Correction recorded February 7, 1989, in Book E803 Official Records Page 747.

EXCEPTING THEREFROM: All minerals and all mineral rights of every kind and character now know to exist or hereafter discovered, including, without limiting the generality of foregoing, oil and gas and rights thereto, together with the sole, exclusive and perpetual right to explore for, remove and dispose of, said minerals by any means or method suitable to Grantor, its successors and assigns, but without entering upon or using the surface of said lands or to interfere with the use thereof by Grantee, its successors or assigns, provided, however, that Grantor, its successors and assigns, without the prior written permission of Grantee, its successors or assigns, shall not conduct any mining activities above a plane fifty feet (50') below the surface of the land, as reserved in the Deed from Union Pacific Railroad Company, a Utah Corporation, Successor by Merger to the Western Pacific Railroad Company a Delaware Corporation, to Pennsylvania Avenue Associates, a California limited partnership recorded April 28, 1988 in Book E585, Official Records, Page 602.

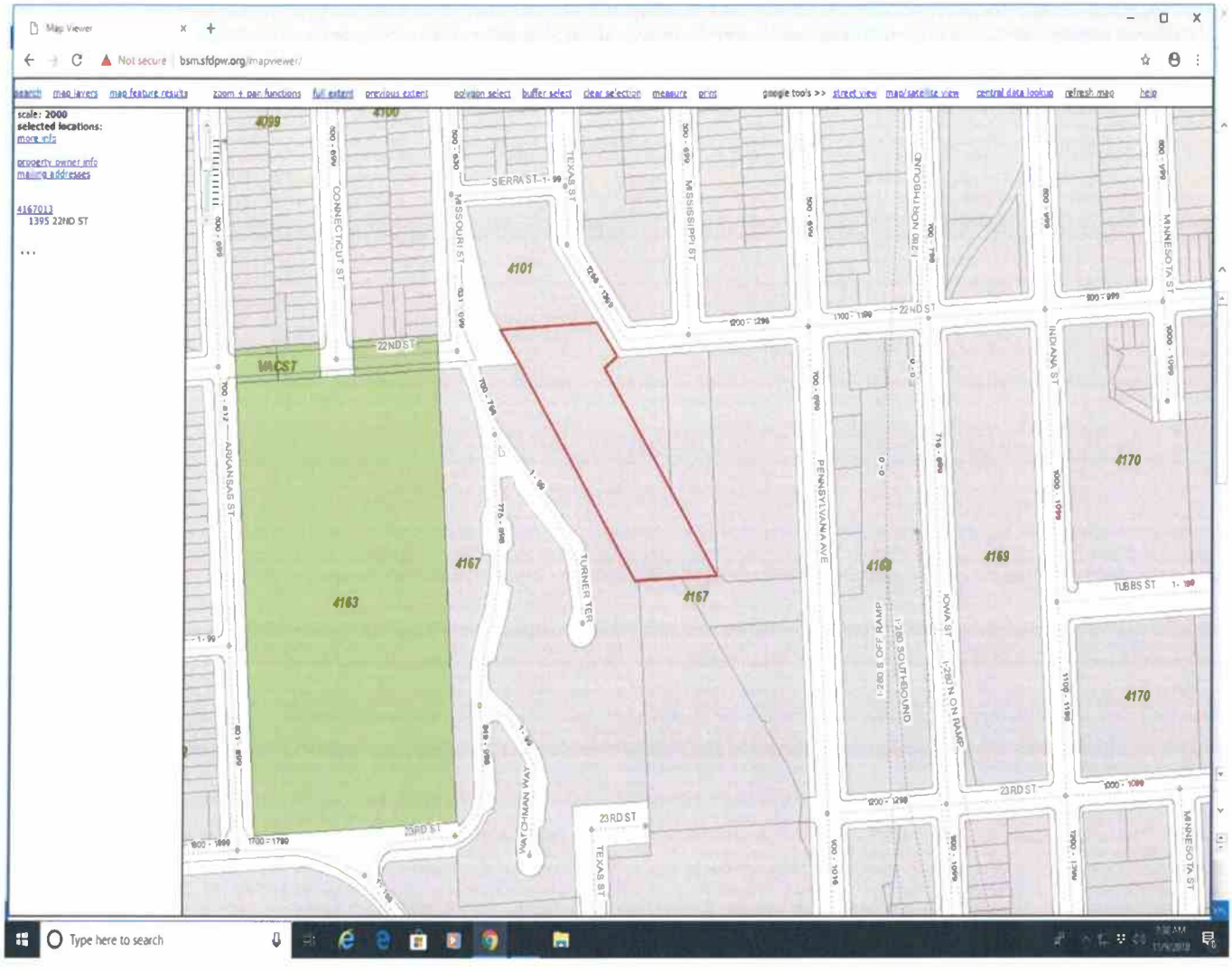
APN: Lot 011, Block 4167

PARCEL TWO:

Lot 13, as shown on that certain Map entitled, "Parcel Map being a portion of Potrero Nuevo Blocks 263, 264, 265, 284, 285 & 299, Also being a portion of Assessor's Blocks 4101 & 4167", which Map was filed for record in the Office of the Recorder of the City and County of San Francisco, State of California, on June 9, 1988, in Book 37 of Parcel Maps at Pages 61 to 62, inclusive, together with a Certificate of Correction recorded February 7, 1989, in Reel E803 Official Records Image 747 under Recorder's Serial Number E318385 (collectively, the "Map").

Excepting therefrom: all minerals and all mineral rights of every kind and character now known to exist or hereafter discovered, including, without limiting the generality of the foregoing, oil and gas and rights thereto, as reserved in the Deed from Union Pacific Railroad Company, a Utah Corporation, Successor by Merger to the Western Pacific Railroad Company, a Delaware Corporation ("Union Pacific"), to Pennsylvania Avenue Associates, a California Limited Partnership recorded April 28, 1988 in Reel E582, Official Records, Image 602 under Recorder's Serial Number E165832, together with the sole, exclusive and perpetual right to explore for, remove and dispose of, said minerals by any means or method suitable to Union Pacific, its successors and assigns, but without entering upon or using the surface of the lands hereby granted, and in such manner as not to damage the surface of said lands or to interfere with the use thereof by Grantee, its successors or assigns, provided, however, that Union Pacific, its successors and assigns, without the prior written permission of Grantee, its successors or assigns, shall not conduct any mining activities above a plane Fifty feet (50') below the surface of the land.

APN: Lot 013, Block 4167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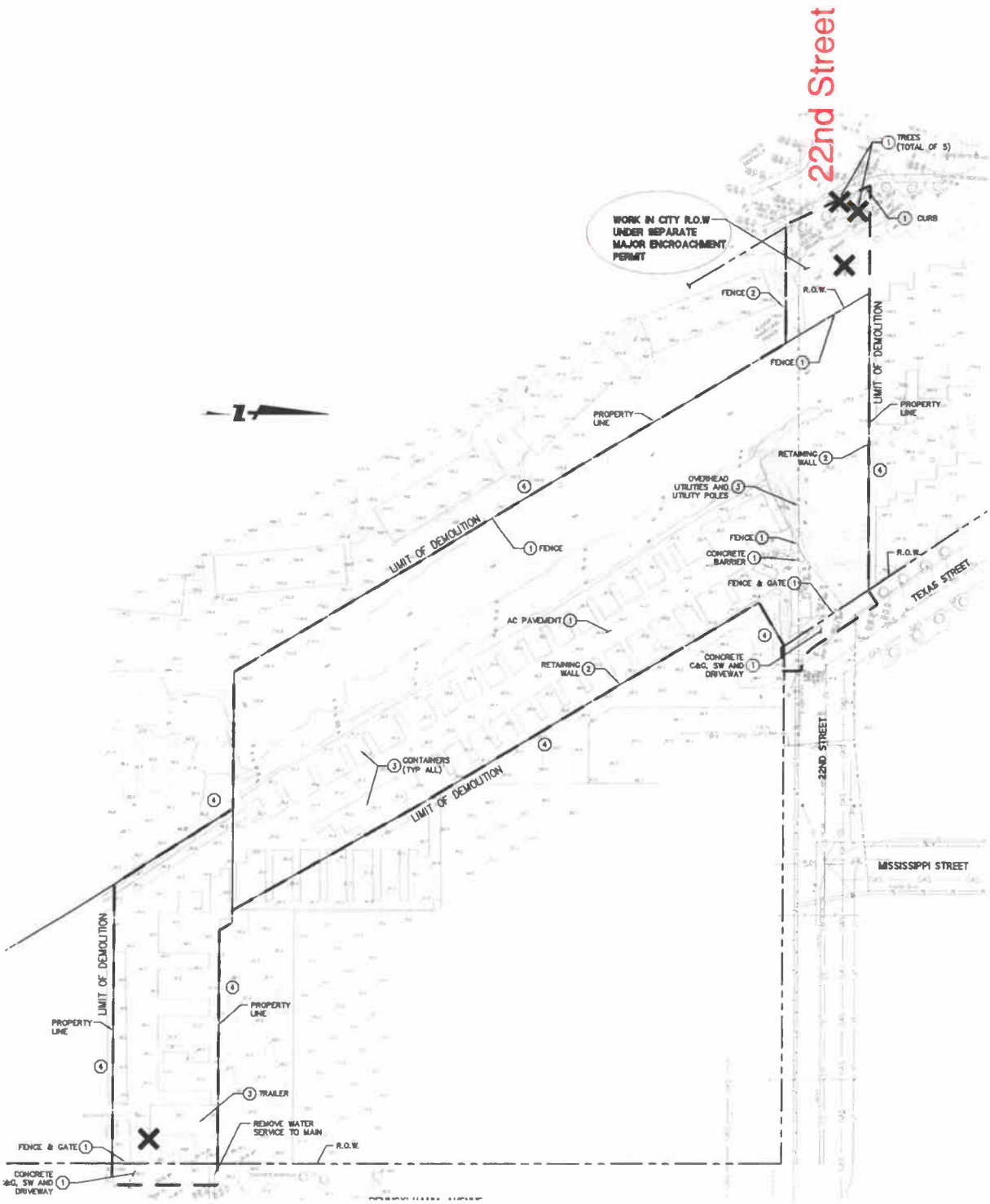
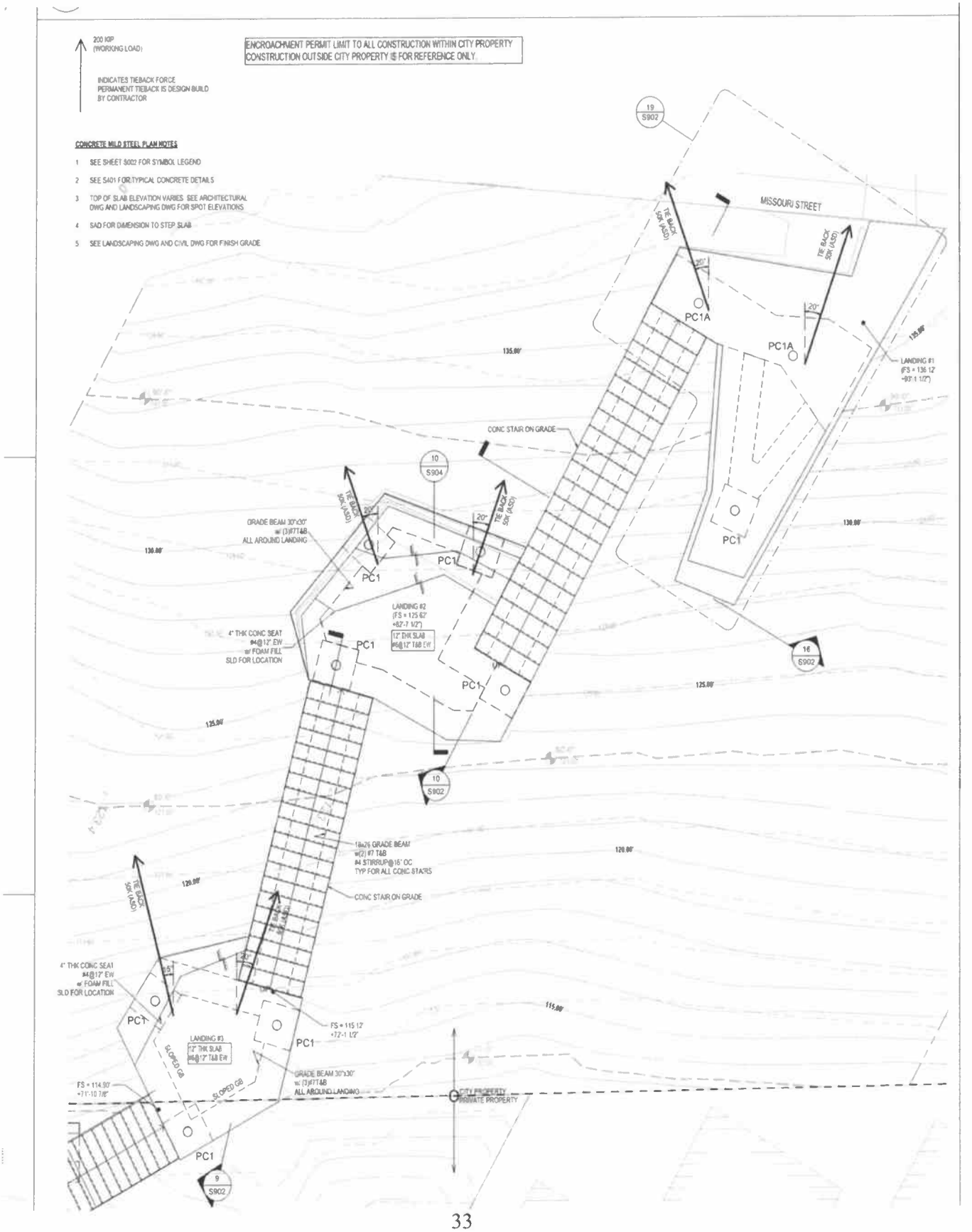
print
google tool's >>
street view
map/satellite view
central data lookup
refresh map
help
scale: 2000
selected locations:
more info
property owner info
mailing addresses
4167013
1395 22ND ST
4099
4100
4101
4163
4167
4170
22ND ST
23RD ST
CONNECTICUT ST
MISSOURI ST
TEXAS ST
MISSISSIPPI ST
SIERRA ST
ARKANSAS ST
PENNSYLVANIA AVE
INDIANA ST
MINNESOTA ST
TUBBS ST
IOWA ST
TURNER TER
WATCHMAN WAY
I-280 S OFF RAMP
I-280 SOUTHBOUND
I-280 N ON RAMP
I-280 NORTHBOUND
Type here to search

ATTACHMENT 2

DESCRIPTION/LOCATION OF PERMIT AREA AND THE IMPROVEMENTS




200 KIP
(WORKING LOAD)
INDICATES TIEBACK FORCE
PERMANENT TIEBACK IS DESIGN BUILD
BY CONTRACTOR
ENCROACHMENT PERMIT LIMIT TO ALL CONSTRUCTION WITHIN CITY PROPERTY
CONSTRUCTION OUTSIDE CITY PROPERTY IS FOR REFERENCE ONLY.
CONCRETE MILD STEEL PLAN NOTES
1 SEE SHEET S002 FOR SYMBOL LEGEND
2 SEE S401 FOR TYPICAL CONCRETE DETAILS
3 TOP OF SLAB ELEVATION VARIES SEE ARCHITECTURAL DWG AND LANDSCAPING DWG FOR SPOT ELEVATIONS
4 SAD FOR DIMENSION TO STEP SLAB
5 SEE LANDSCAPING DWG AND CIVIL DWG FOR FINISH GRADE
MISSOURI STREET
TIE BACK 50K (ASD)
PC1A
PC1
CONC STAIR ON GRADE
GRADE BEAM 30"x30" w/ (3)#7 T&B ALL AROUND LANDING
LANDING #2 (FS = 125.62' +62'-1 1/2")
12" THK SLAB #6@12" T&B EW
4" THK CONC SEAT #4@12" EW w/ FOAM FILL SLD FOR LOCATION
18x26 GRADE BEAM w/(2) #7 T&B #4 STIRRUP@16" OC TYP FOR ALL CONC STAIRS
LANDING #1 (FS = 136.12' +93'-1 1/2")
LANDING #3
FS = 115.12' +72'-1 1/2"
FS = 114.90' +71'-10 7/8"
SLOPED GB
CITY PROPERTY
PRIVATE PROPERTY
19 S902
10 S904
10 S902
16 S902
9 S902

ATTACHMENT 3
MAINTENANCE PLAN
(LIST OF TASKS/SERVICES AND COSTS)

1395 Maintenance Program.pdf

2018-9-20 - Maintenance Letter.pdf

ATTACHMENT 4
OPERATION AND MAINTENANCE MANUALS
(IF APPLICABLE)

361719 O&M MANUAL.pdf

ALIGN

RESIDENTIAL

STAIRWAY MAINTENANCE PLAN

1395 22nd street

San Francisco, CA 94107

ALIGN

RESIDENTIAL

Landscaping Maintenance:

- Maintenance team will procure a landscaping contract for the entire property which will also include the staircase space.
- Maintenance team will also procure a pest control contract which will include the staircase space.
- Landscapers will perform work weekly which will include: mowing, trimming, edging, and blowing.
- Will ensure that surrounding plant materials are not burning or obstructing lighting.
- All irrigations systems will be monitored throughout the year for proper operation.
- Will perform fertilization to areas as needed.
- Trees, shrubs, and other related plants will be sprayed for insect and disease control as needed.

Graffiti & Vandalism Maintenance:

- Maintenance team will inspect entire staircase daily for graffiti or vandalism.
- Any graffiti will be immediately addressed and treated with environmentally friendly remover. I.e. Purasolve Envirofluid Graffiti Remover.
- We are strategic when selecting landscaping for the surrounding areas. There are number of thorny plants that assist in restricting vandal access.
- Will have security cameras installed in addition to onsite teams monitoring the space.
- Necessary signage will be reviewed if needed.
- Onsite team is trained to spot and report graffiti and vandalism acts as well.

Trash Upkeep and General Cleaning:

- Will have an onsite maintenance and housekeeping staff of at least 5 employees.
- Maintenance team will be trained and held accountable for ongoing daily upkeep of the space, free of all trash and debris.
- Entire space will be power-washed monthly.
- Staff will be using environmentally friendly products at all seating areas, stairs, and railings.

Lighting Maintenance:

- When walking space, staff is trained to listen and look for buzzing, humming, and lights-outs.
- All lighting will be maintained on a proper lighting schedule.
- Lighting fixture schedule and inventory will be a part of building maintenance manual.
- Will ensure all equipment is lamped with correct lamp type, wattage and beam spread.
- Lighting chosen will have an extended lamp life.
- All lights will be replaced at planned intervals, also known as “Group replacement”.
    - Electric Advantages: Reduces risk of damage to control gear caused by faulty operation of lamps nearing the end of useful life.
    - Visual Advantages: Ensures a uniform appearance for the pubic space.
- Will ensure all dirt from lighting fixtures is removed appropriately.
    - Will ensure foliage is pruned and trimmed on a regular basis to avoid these problems.

MAINTENANCE TECHNOLOGY

- Our team will maintain the space by utilizing the **work-orders function** within our property management system (Yardi). Our maintenance supervisor will be responsible for setting re-occurring work-orders, specifically related to the public staircase.
    - These work orders will include but will not be limited to lighting, graffiti, landscaping, trash, vandalism, railings, and safety hazards.
- Staff will be required to enter detailed notes and pictures within work-orders.
- If the space needs to be treated, maintenance supervisor will obtain necessary quotes if needed, schedule work with appropriate vendor, or perform/fix problem himself.
    - If the space requires larger lifting or blockage of passage for any reason, maintenance supervisor will submit for proper approval.
- Work-orders will remain in the system until completed or “closed”.

MARINA
Still Growing

landscape construction
landscape maintenance
landscape architecture
erosion control
design build

Landscape Maintenance Plan

1395 22nd Street Project
San Francisco, Ca

Scope of work:

- Monitor site and locate any damaged areas
- Prune trees / shrubs for removal of branches, buds, or roots
- Deadheading/ tip pruning for removal of dead, damaged, diseased, or unattractive placed branches
- Fertilizer- slow release placed at each tree/ shrubs for steady amount of nutrients (fall use)
- Rapid fertilizer spread at the tree / shrubs (spring use)
- Cut back perennials / grasses of any dead flowers
- Mulch any areas with no mulch
- Leaf removal
- Seeding any area dead spots (if needed)
- Check irrigation system for any brokes / damages

Schedule:

- Work will be performed 1 day every week for 12 months after acceptance of work. Please see attached maintenance schedule.

Fee payment and schedule:

The payment for the above services shall be as following:

- $86 per each visit for the 12 months
- Total : $4,472.00

MARINA LANDSCAPE, INC
11535 N. Davis Road • Lodi, Ca 95242 • P 243.243.0288 • F 925.243.0988 • W Marinaco.com • License #492862, A, B, C27, C36

1395 22ND STREET

MAINTENANCE PLAN

MAINTENANCE TASK	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEPT.	OCT.	NOV.	DEC.
MONITORING	X	X	X	X	X	X	X	X	X	X	X	X
PRUNING (IF NEEDED)	X	X	X	X	X				X	X	X	X
DEADHEADING/ TIP PRUNING	X	X	X	X	X				X	X	X	X
FERTILIZER- SLOW RELEASING									X			
FERTILIZING - RAPID	X	X	X	X					X	X	X	X
CUT BACK PERENNIALS & GRASSES			X	X								
MULCHING (IF NEEDED)	X	X	X	X	X			X	X	X	X	X
LEAF REMOVAL				X					X	X		
SEEDING (IF NEEDED)									X			

NOTE: ONE (1) MAINTENANCE VISIT PER WEEK

REUBEN, JUNIUS & ROSE, LLP

June 20, 2017

VIA HAND DELIVERY

Mr. Mohammed Nuru, Director
Department of Public Works
1155 Market Street, 3rd Floor
San Francisco, CA 94103

Re: Application for Major Encroachment Permit
1395 22nd Street & 790 Pennsylvania Avenue
Assessor's Block 4167/Lot 013
Our File No.: 7829.02B

Dear Mr. Nuru:

This office represents RP Pennsylvania, LLC, project sponsor of the mixed-use residential development project (the "Project") located at 1395 22nd Street & 790 Pennsylvania Avenue, Block 4167/Lot 013 (the "Property"). By this letter, we request approval of a Major Encroachment Permit ("MEP") for the construction of a portion of a public stair connecting 22nd Street and Missouri Street, and providing access to a scenic overlook. This public stair, the scenic overlook, and associated planters, public art, and lighting are required by the Planning Commission's approval of the Project. Included with this MEP application is a General Plan Referral application.

Public Works Code Section 786.6 authorizes the Director of Public Works to forward to the Board of Supervisors a recommendation for approval, disapproval or modification, including applicable conditions, of an application for a revocable permit (Major Encroachment Permit, or MEP) for an encroachment of a public street or place. Here, approval of an MEP is sought for construction of a publically-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets. The stair includes an entry plaza at Texas Street, a winding staircase, planters, public art, lighting and an overlook at the top of the grade at Missouri Street.

Six sets of plans showing the design, location and nature of the encroachment and proposed improvements are attached hereto as **Exhibit A**.

James A. Reuben | Andrew J. Junius | Kevin H. Rose | Daniel A. Frattin | John Kevlin
Tuija I. Catalano | Jay F. Drake | Matthew D. Visick | Lindsay M. Petrone | Sheryl Reuben[1]
Thomas Tunny | David Silverman | Melinda A. Sarjapur | Mark H. Loper | Jody Knight
Chloe V. Angelis | Louis J. Sarmiento, Jr. | Corie A. Edwards | Jared Eigerman[2,3] | John McInerney III[2]
1. Also admitted in New York 2. Of Counsel 3. Also admitted in Massachusetts

San Francisco Office
One Bush Street, Suite 600, San Francisco, CA 94104
tel: 415-567-9000 | fax: 415-399-9480

Oakland Office
827 Broadway, Suite 205, Oakland, CA 94607
tel: 510-257-5589

www.reubenlaw.com

Approval of the MEP is warranted because the proposed improvements are required by the Project's entitlements and the City's Better Streets Plan. Planning Commission Motion No. 19523, Approval Finding 6.F. provides as follows:

> **Streetscape and Pedestrian Improvements.** Planning Code Section 138.1 requires a streetscape plan in compliance with the Better Streets Plan for new construction on a lot that is greater than one-half acre in area. The Project includes the new construction of a three-story PDR building on Pennsylvania Avenue and four-to-eight [story] residential building along 22nd Street on two lots with a collective area of 119,885 square feet. In compliance with the Better Streets Plan, the Project minimizes the number of vehicular openings to two along Pennsylvania Avenue and one along 22nd Street. The Project includes several streetscape improvements, including new street trees, sidewalk improvements, site furnishings and construction of a publically-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets. The stair includes an entry plaza at Texas Street, a winding staircase, planters, public art, lighting and an overlook at the top of the grade at Missouri Street. Therefore, the Project complies with Planning Code Section 138.1.

The Planning Commission's approval Motion for the project is attached hereto as **Exhibit B**.

Approval of the MEP to construct the proposed improvements is called for by the Project's entitlements, and will provide a unique and exceptional public amenity to be enjoyed by the immediate neighborhood and visitors from beyond. We urge you to approve this MEP application and allow this proposal to proceed.

Thank you for your consideration.

Very truly yours,

REUBEN, JUNIUS & ROSE, LLP

Thomas Tunny

Enclosures
cc: Align Real Estate, LLC

RECEIVED
BUREAU OF STREET USE & MAPPING
JUN 20 2017
DEPT OF PUBLIC WORKS

San Francisco Office
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tel: 415-567-9000 | fax: 415-399-9480

Oakland Office
827 Broadway, Suite 205, Oakland, CA 94607
tel: 510-257-5589

www.reubenlaw.com

SAN FRANCISCO
PLANNING DEPARTMENT

Subject to: (Select only if applicable)

- ☑ Affordable Housing (Sec. 415)
- ☐ Jobs Housing Linkage Program (Sec. 413)
- ☐ Downtown Park Fee (Sec. 412)
- ☑ First Source Hiring (Admin. Code)
- ☐ Child Care Requirement (Sec. 414)
- ☑ Other (TIDF, Sec. 411 & EN Impact Fees, Sec. 423)

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Planning Commission Motion No. 19523

HEARING DATE: DECEMBER 3, 2015

Date:	December 3, 2015
Case No.:	**2011.0671X**
Project Address:	**1395 22nd STREET & 790 PENNSYLVANIA AVENUE**
Zoning:	UMU (Urban Mixed-Use) Zoning District & PDR-1-G (Production, Distribution & Repair-General) Zoning District 40-X Height and Bulk District
Block/Lot:	4167/011 & 013
Project Sponsor:	Redmond Lyons, R Group 650 Texas Street San Francisco, CA 94107
Staff Contact:	Richard Sucre – (415) 575-9108 richard.sucre@sfgov.org

ADOPTING FINDINGS RELATING TO A LARGE PROJECT AUTHORIZATION PURSUANT TO PLANNING CODE SECTION 329, TO ALLOW EXCEPTIONS TO 1) REAR YARD PURSUANT TO PLANNING CODE SECTION 134, 2) DWELLING UNIT EXPOSURE PURSUANT TO PLANNING CODE SECTION 140, AND 3) OFF-STREET PARKING PURSUANT TO PLANNING CODE SECTION 15.1, TO ALLOW CONSTRUCTION OF A NEW THREE-STORY PDR BUILDING (APPROXIMATELY 47,575 GSF) AND A NEW FOUR-TO-EIGHT-STORY RESIDENTIAL BUILDING (APPROXIMATELY 236,449 GSF) WITH 250 DWELLING UNITS (CONSISTING OF 6 STUDIOS, 146 1-BEDROOM UNITS, 90 2-BEDROOM UNITS, AND 10 3-BEDROOM UNITS), LOCATED AT 1395 22ND STREET AND 790 PENNSYLVANIA AVENUE, LOTS 011 & 013 IN ASSESSOR'S BLOCK 4167, WITHIN THE UMU (URBAN MIXED-USE) & PDR-1-G (PRODUCTION, DISTRIBUTION & REPAIR-GENERAL) ZONING DISTRICTS AND A 40-X HEIGHT AND BULK DISTRICT, AND ADOPTING FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

PREAMBLE

On January 13, 2014, Redmond Lyons of RMTEX22, LLC (hereinafter "Project Sponsor") filed Application No. 2011.0671X (hereinafter "Application") with the Planning Department (hereinafter "Department") for a Large Project Authorization to construct a new three-story PDR building at 790 Pennsylvania Avenue (Block 4167 Lot 013) and a new four-to-eight-story residential building with 250 dwelling units at 1395 22nd Street (Block 41678 Lot 011) in San Francisco, California.

The environmental effects of the Project were determined by the San Francisco Planning Department to have been fully reviewed under the Eastern Neighborhoods Area Plan Environmental Impact Report (hereinafter "EIR"). The EIR was prepared, circulated for public review and comment, and, at a public hearing on August 7, 2008, by Motion No. 17661, certified by the Commission as complying with the California Environmental Quality Act (Cal. Pub. Res. Code Section 21000 et seq., (hereinafter "CEQA"). The Commission has reviewed the Final EIR, which has been available for this Commissions review as well as public review.

The Eastern Neighborhoods EIR is a Program EIR. Pursuant to CEQA Guideline 15168(c)(2), if the lead agency finds that no new effects could occur or no new mitigation measures would be required of a proposed project, the agency may approve the project as being within the scope of the project covered by the program EIR, and no additional or new environmental review is required. In approving the Eastern Neighborhoods Plan, the Commission adopted CEQA Findings in its Motion No. 17661 and hereby incorporates such Findings by reference.

Additionally, State CEQA Guidelines Section 15183 provides a streamlined environmental review for projects that are consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project–specific effects which are peculiar to the project or its site. Section 15183 specifies that examination of environmental effects shall be limited to those effects that (a) are peculiar to the project or parcel on which the project would be located, (b) were not analyzed as significant effects in a prior EIR on the zoning action, general plan or community plan with which the project is consistent, (c) are potentially significant off–site and cumulative impacts which were not discussed in the underlying EIR, or(d) are previously identified in the EIR, but which are determined to have a more severe adverse impact than that discussed in the underlying EIR. Section 15183(c) specifies that if an impact is not peculiar to the parcel or to the proposed project, then an EIR need not be prepared for that project solely on the basis of that impact.

On July 2, 2015, the Department determined that the proposed application did not require further environmental review under Section 15183 of the CEQA Guidelines and Public Resources Code Section 21083.3. The Project is consistent with the adopted zoning controls in the Eastern Neighborhoods Area Plan and was encompassed within the analysis contained in the Eastern Neighborhoods Final EIR. Since the Eastern Neighborhoods Final EIR was finalized, there have been no substantial changes to the Eastern Neighborhoods Area Plan and no substantial changes in circumstances that would require major revisions to the Final EIR due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusions set forth in the Final EIR. The file for this project, including the Eastern Neighborhoods Final EIR and the Community Plan Exemption certificate, is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, California.

Planning Department staff prepared a Mitigation Monitoring and Reporting Program (MMRP) setting forth mitigation measures that were identified in the Eastern Neighborhoods Plan EIR that are applicable

to the project. These mitigation measures are set forth in their entirety in the MMRP attached to the draft Motion as Exhibit C.

On December 3, 2015, the Planning Commission ("Commission") conducted a duly noticed public hearing at a regularly scheduled meeting on Large Project Authorization Application No. 2011.0671X.

The Commission has heard and considered the testimony presented to it at the public hearing and has further considered written materials and oral testimony presented on behalf of the applicant, Department staff, and other interested parties.

MOVED, that the Commission hereby authorizes the Large Project Authorization requested in Application No. 2011.0671X, subject to the conditions contained in "EXHIBIT A" of this motion, based on the following findings:

FINDINGS

Having reviewed the materials identified in the preamble above, and having heard all testimony and arguments, this Commission finds, concludes, and determines as follows:

1. The above recitals are accurate and constitute findings of this Commission.

2. **Site Description and Present Use.** The proposed project is located on two irregularly shaped lots (with a collective lot area of 119,885± square feet) that are roughly bounded by Pennsylvania Avenue and 22nd, Missouri and Texas Streets. The project site currently bisects 22nd Street. A portion of 22nd Street is a paper street from the northwest edge of the subject lot west to Missouri Street. The subject lots have 79-ft of frontage along 22nd Street at Missouri Street, 79-ft of frontage along 22nd Street at Texas Street, and 83-ft of frontage along Pennsylvania Avenue. The subject lot (Assessor's Block 4167 Lot 013) tapers in width from 234-ft along 22nd Street down to 187-ft at the southern end. From Texas Street to Missouri Street, the project site has a unique slope with a slight grade along the eastern edge of the site for the first 100-ft, and steep grade moving west towards Missouri Street. Currently, the subject lot contains temporary storage containers and does not possess any permanent built structures.

3. **Surrounding Properties and Neighborhood.** The project site is located in the UMU (Urban Mixed-Use) and PDR-1-G (Production, Distribution and Repair-General) Zoning Districts within a mixed-use neighborhood in the Showplace Square/Potrero Hill Area Plan. The project site is located on the border between the industrial areas to the south, the smaller-scale residential neighborhood to the north, and the I-280 freeway to the east. The immediate neighborhood includes a larger-scale, three-to-five-story residential complex at 22nd and Texas Street, and smaller-scale, two-to-three-story, industrial buildings along Pennsylvania Avenue. Further east along Texas Street and Pennsylvania Avenue are two-to-three-story, single-family and multi-family residences. Further north at 22nd and Missouri Street, the surrounding area is characterized by two-to-three-story residential properties and an entryway into Potrero Terrace, a public housing complex. Other zoning districts in the vicinity of the project site include: MUR

(Mixed-Use Residential); RH-2 (Residential, House, Two-Family); P (Public); and RM-2 (Residential, Mixed, Moderate Density).

4. **Project Description.** The proposed project includes demolition of the temporary storage containers (measuring approximately 74,500 square feet) on the subject lots, and new construction of a three-story PDR (Production, Distribution & Repair) building with approximately 47,575 gross square feet along Pennsylvania Avenue and a four-to-eight-story, residential building with approximately 236,449 gross square feet and 250 dwelling units along 22nd Street. For the PDR building, the project includes 12 off-street parking spaces, one off-street freight loading space, 4 Class 1 bicycle parking spaces and 2 Class 2 bicycle parking spaces. For the residential building, the project includes 208 off-street parking spaces, 2 off-street freight loading spaces, 3 car-share parking spaces, 138 Class 2 bicycle parking spaces and 13 Class 2 bicycle parking spaces. The project includes a dwelling unit mix consisting of 10 three-bedroom units, 90 two-bedroom units, 146 one-bedroom units, and 4 studio units. The proposed project includes a new public stairwalk and open space measuring 6,578 square feet along the north lot line, private open space for 158 dwelling units and common open space (approximately 16,500 square feet) via a shared terrace on the rooftop of the PDR building. The entrance to the below-grade off-street parking would be located along Pennsylvania Avenue in the PDR building, while the exit would be located along 22nd Street.

5. **Public Comment.** The Department has received public correspondence in support and opposition to the proposed project.

6. **Planning Code Compliance:** The Commission finds that the Project is consistent with the relevant provisions of the Planning Code in the following manner:

   A. **Permitted Use in UMU Zoning District.** Planning Code Sections 843.45 states that residential use is principally permitted use within the UMU Zoning District.

   The Project would construct 250 new dwelling units within the UMU Zoning District; therefore, the Project complies with Planning Code Section 843.45.

   B. **Permitted Use in PDR-1-G Zoning District.** Planning Code Sections 210.3 states that PDR use is principally permitted use within the UMU Zoning District.

   The Project would construct new 47,575 gsf of new PDR use within the PDR-1-G Zoning District. The new PDR use would adhere to the uses permitted within Planning Code Section 210.3; therefore, the Project complies with Planning Code Sections 210.3.

   C. **Floor Area Ratio.** Planning Code Section 124 and 210.3 establishes a FAR (Floor Area Ratio) of 3:0 for properties within the PDR-1-G Zoning District and a 40-X Height and Bulk District.

The subject lot (Assessor's Block 4167 Lot 011) is 18,950 sq ft, thus resulting in a maximum allowable floor area of 56,850 sq ft for non-residential uses. The proposed project would construct approximately 47,575 sq ft of PDR space, and would comply with Planning Code Section 124.

D. **Rear Yard.** Within the UMU Zoning District, Planning Code Section 134 requires a minimum rear yard equal to 25 percent of the total lot depth of the lot to be provided at every residential level. Therefore, the Project would have to provide a rear yard, which measures approximately 29,971 sq ft.

Currently, the Project does not provide a code-complying rear yard at the lowest level containing a dwelling unit. Rather, the Project incorporates a 15-ft setback along the west lot line, a 10-ft setback along the east lot line, and a side setback along the north lot line for the new publically-accessible stair and open space. The Project provides additional open space through a series of private balconies, terraces and a rooftop common open space on the PDR building. The Project provides a total of 37,467 sq ft of open space (includes compliant and non-complaint open space) through the publically-accessible sideyard stair walk, private useable open space, and rooftop third floor common open space. Therefore, the amount of open space, which would have been provided through the required rear yard, is thus exceeded. However, since the proposed setbacks do not meet the requirements of the Planning Code, the Project is seeking a modification of the rear yard requirement as part of the Large Project Authorization (See Below).

The Project occupies two irregular lots with frontage on 22nd Street (at Missouri and Texas Streets) and Pennsylvania Avenue). The subject block does not possess a pattern of mid-block open space, due to the mixed-character of the surrounding neighborhood. The proposed unit layout and courtyard configuration continues the courtyard design of the adjacent development across 22nd Street, thus maximizing access to light and air for all residential units.

E. **Useable Open Space.** Planning Code Section 135 requires a minimum of 80 sq ft of open space per dwelling unit, if not publically accessible, or 54 sq ft of open space per dwelling unit, if publically accessible. Private useable open space shall have a minimum horizontal dimension of six feet and a minimum area of 36 sq ft is located on a deck, balcony, porch or roof, and shall have a minimum horizontal dimension of 10 feet and a minimum area of 100 sq ft if located on open ground, a terrace or the surface of an inner or outer court. Common useable open space shall be at least 15 feet in every horizontal dimension and shall be a minimum are of 300 sq ft. Further, inner courts may be credited as common useable open space if the enclosed space is not less than 20 feet in every horizontal dimension and 400 sq ft in area, and if the height of the walls and projections above the court on at least three sides is such that no point on any such wall or projection is higher than one foot for each foot that such point is horizontally distant from the opposite side of the clear space in the court.

For the proposed 250 dwelling units, the Project is required to provide 6,480 sq ft of publically accessible open space for 120 dwelling units, and 10,400 sq ft of common open space for the remaining 130 dwelling units.

In total, the Project exceeds the requirements for open space by constructing a total of 23,078 sq ft of code-complying useable open space. The Project would construct a publically-accessible sideyard stair and open space measuring 6,578 square feet, and a rooftop third floor common open space measuring 16,500 square feet. In addition, the Project would construct private code-complying balconies for 24 dwelling units. Therefore, the project complies with Planning Code Section 135.

F. **Streetscape and Pedestrian Improvements.** Planning Code Section 138.1 requires a streetscape plan in compliance with the Better Streets Plan for new construction on a lot that is greater than one-half acre in area..

The Project includes the new construction of a three-story PDR building on Pennsylvania Avenue and four-to-eight residential building along 22nd Street on two lots with a collective area of 119,885 square feet.

In compliance with the Better Streets Plan, the Project minimizes the number of vehicular openings to two along Pennsylvania Avenue and one along 22nd Street. The Project includes several streetscape improvements, including new street trees, sidewalk improvements, site furnishings and construction of a publically-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets. The stair includes an entry plaza at Texas Street, a winding staircase, planters, public art, lighting and an overlook at the top of the grade at Missouri Street. Therefore, the Project complies with Planning Code Section 138.1.

G. **Bird Safety.** Planning Code Section 139 outlines the standards for bird-safe buildings, including the requirements for location-related and feature-related hazards.

The subject lots are not located in close proximity to an Urban Bird Refuge. The Project meets the requirements of feature-related standards and does not include any unbroken glazed segments 24-sq ft and larger in size; therefore, the Project complies with Planning Code Section 139.

H. **Dwelling Unit Exposure.** Planning Code Section 140 requires that at least one room of all dwelling units face onto a public street, rear yard or other open area that meets minimum requirements for area and horizontal dimensions. To meet exposure requirements, a public street, public alley, side yard or rear yard must be at least 25 ft in width, or an open area (inner court) must be no less than 25 ft in every horizontal dimension for the floor at which the dwelling unit is located.

The Project organizes the dwelling units to have exposure either on the 15th setback along the west property line, the 25-ft wide courtyard at the second floor, or along the 10-ft setback along the east property line. The 25-ft wide courtyard qualifies as an outer court, since it is at least 25-ft wide and opens onto a side yard. Currently, 58 dwelling units (twenty on the first floor, nineteen on the sixth floor, and nineteen on the seventh floor) do not face onto an open area, which meets the dimensional requirements of the Planning Code. Therefore, the Project is seeking a modification of the dwelling unit exposure requirements for 58 dwelling units as part of the Large Project Authorization (See Below).

I. **Street Frontage in UMU Zoning District.** Planning Code Section 145.1 requires off-street parking at street grade on a development lot to be set back at least 25 feet on the ground floor; that no more than one-third of the width or 20 feet, whichever is less, of any given street frontage of a new structure parallel to and facing a street shall be devoted to parking and loading ingress or egress; that space for active uses be provided within the first 25 feet of building depth on the ground floor; that non-residential uses have a minimum floor-to-floor height of 17 feet; that the floors of street-fronting interior spaces housing non-residential active uses and lobbies be as close as possible to the level of the adjacent sidewalk at the principal entrance to these spaces; and that frontages with active uses that are not residential or PDR be fenestrated with transparent windows and doorways for no less than 60 percent of the street frontage at the ground level.

The Project meets the requirements of Planning Code Section 145.1. For the portion located within the UMU Zoning District, the Project has one, 14-ft wide, vehicular opening off of 22nd Street, which functions as the residential garage exit. All off-street parking is located below grade. The Project features active uses on the ground floor of 22nd Street (at Texas Street) with residential lobby that is less than 40-ft wide and an access stair to the 10-ft wide shared walkway along the east property line. Finally, the Project features appropriate street-facing ground level spaces, as well as the ground level transparency and fenestration requirements.

J. **Ground Floor Standards in Industrial Districts.** Planning Code Section 145.5 requires a minimum floor-to-floor height of 17-ft as measured from grade for all new construction in an Industrial District.

Within the PDR-1-G Zoning District, the Project meets the requirements of Planning Code Section 145.5, since the Project incorporates a 18-ft floor-to-floor ground floor height for the PDR building.

K. **Off-Street Parking.** Within the UMU Zoning District, Planning Code Section 151.1 of the Planning Code allows off-street parking at a maximum ratio of .75 per dwelling unit. However, per Planning Code Section 151.1, dwelling units in the UMU District with at least 2 bedrooms and at least 1,000 square feet of occupied floor area, may provide off-street parking at a ratio of one car per dwelling unit, as subject to the criteria of 151.1(g). Within the PDR-1-G Zoning District, Planning Code Section 151.1 allows off-street parking for manufacturing and industrial uses at a ratio of one off-street parking space for each 1,500 square feet of occupied floor area.

For the 250 dwelling units located within the UMU Zoning District, the Project is allowed a maximum of 187 off-street parking spaces. Since the Project includes 80 dwelling units, which have at least 2 bedrooms and are at least 1,000 square feet, the Project may request authorization from the Planning Commission to permit a maximum of 208 off-street parking spaces for the Project.

For the 47,575 gsf of PDR use in the PDR-1-G Zoning District, the Project is allowed a maximum of 32 off-street parking spaces.

Currently, the Project provides 208 off-street parking spaces within the UMU Zoning District and 12 off-street parking spaces within the PDR-1-G Zoning District. For the PDR building, the Project meets the requirements of Planning Code Section 151.1. For the residential building, the Project is seeking a modification of the off-street parking requirements for the dwelling units as part of the Large Project Authorization (See Below). The Commission does support a modification of the off-street parking requirements given the existing site conditions and limited street frontage.

L. **Off-Street Freight Loading**. Within the PDR-1-G Zoning District, Planning Code Section 152 requires one off-street freight loading space for manufacturing uses between 10,001 and 60,000 gsf.

Within the UMU Zoning District, Planning Code Section 152.1 requires two off-street freight loading space for apartment use between 200,001 and 500,000 gsf.

The Project includes approximately 236,449 square feet of apartment use and 47,575 gsf of PDR use, thus at least three off-street freight loading spaces are required. The Project includes three off-street freight loading spaces within the PDR building, which also serves the residential building. Therefore, the Project complies with Planning Code Sections 152 and 152.1.

M. **Bicycle Parking.** For the residential use, Planning Code Section 155.2 requires at least 100 Class 1 bicycle parking spaces plus one Class 1 bicycle parking space for every four dwelling units and one Class 2 bicycle parking spaces for every 20 dwelling units. For the PDR use, Planning Code Section 155.2 requires one Class 1 bicycle parking space for every 12,000 square feet of occupied floor area and a minimum of 2 Class 2 bicycle parking space.

The Project is required to provide 138 Class 1 bicycle parking spaces and 13 Class 2 bicycle parking spaces for the 250 dwelling units, and 4 Class 1 bicycle parking spaces and 2 Class 2 bicycle parking spaces for the 47,575 gsf of PDR use.

The Project will meet the requirements of Planning Code Section 155.2 by providing 138 Class 1 bicycle parking spaces and 13 Class 2 bicycle parking spaces for the 250 dwelling units, and 4 Class 1 bicycle parking spaces and 2 Class 2 bicycle parking spaces for the 47,575 gsf of PDR use.

N. **Car Share Requirements.** Planning Code Section 166 requires two car-share parking spaces, plus one for every 200 dwelling units over 200, for projects with 201 residential units or more.

The Project includes 250 **dwelling** units and is required to provide a minimum of two car-share parking spaces.

The Project complies with Planning Code Section 166 by providing three car-share parking spaces.

O. **Unbundled Parking.** Planning Code Section 167 requires that all off-street parking spaces accessory to residential uses in new structures of 10 dwelling units or more be leased or sold separately from the rental or purchase fees for dwelling units for the life of the dwelling units.

The Project is providing off-street parking that is accessory to the dwelling units. These spaces will be unbundled and sold and/or leased separately from the dwelling units; therefore, the Project meets this requirement.

P. **Dwelling Unit Mix.** Planning Code Section 207.6 requires that no less than 40 percent of the total number of proposed dwelling units contain at least two bedrooms, or no less than 30 percent of the total number of proposed dwelling units contain at least three bedrooms.

For the 250 dwelling units, the Project is required to provide at least 100 two-bedroom units or 75 three-bedroom units. The Project provides 4 studios, 146 one-bedroom units, 90 two-bedroom units, and 10 three-bedroom units. Therefore, the Project meets the requirements for dwelling unit mix.

Q. **Height.** Planning Code Section 260 defines the method of measurement for calculating the height of a buildings or structures subject to Zoning Maps. Where the lot has frontage on two or more streets, the Project Sponsor may choose the street or streets from which the measurement of height is to be taken, within the scope of the rules stated above.

Where the lot is level with or slopes downward from a street at the centerline of the building or building step, such point shall be taken at curb level on such a street. This point shall be used for height measurement only for a lot depth not extending beyond a line 100 feet from and parallel to such street, or beyond a line equidistant between such street and the street on the opposite side of the block, whichever depth is greater. Measurement of height for any portion of the lot extending beyond such line shall be considered in relation to the opposite (lower) end of the lot, and that portion shall be considered an upward sloping lot in accordance with Subsection (C) below, whether or not the lot also has frontage on a lower street.

Where the lot slopes upward from a street at the centerline of the building or building step, such point shall be taken at curb level for purposes of measuring the height of the closest part of the building within 10 feet of the property line of such street; at every other cross-section of the building, at right angles to the centerline of the building or building step, such point shall be taken as the average of the ground elevations at either side of the building or building step at that cross-section. The ground elevations used shall be either existing elevations or the elevations resulting from new grading operations encompassing an entire block. Elevations beneath the building shall be taken by projecting a straight line between ground elevations at the exterior walls at either side of the entire building in the same plane.

The Project is located in a 40-X Height and Bulk District. Since the project site has three street frontages and the subject lot is wider than 100-ft, the Planning Code permits a method of measurement from each street frontage. Therefore, the Project is permitted to measure height from the existing grade of 22nd Street (closest to Missouri Street) as a down-sloping lot for 100-ft, and from the existing grade of 22nd Street (at Texas Street) as an upsloping lot, due to the unique topography of the subject lot. The Project meets the height requirements of the Planning by constructing a three-story PDR building that is 40-ft tall along Pennsylvania Avenue, and a four-to-eight-story residential building along 22nd Street that ranges in height from 40-ft to 77-ft due to the steeply sloping topography of the lot.

R. **Shadow.** Planning Code Section 295 restricts net new shadow, cast by structures exceeding a height of 40 feet, upon property under the jurisdiction of the Recreation and Park Commission. Any project in excess of 40 feet in height and found to cast net new shadow must be found by the Planning Commission, with comment from the General Manager of the Recreation and Parks Department, in consultation with the Recreation and Park Commission, to have no adverse impact upon the property under the jurisdiction of the Recreation and Park Commission.

Based upon a detail shadow analysis, the Project does not cast any net new shadow upon property under the jurisdiction of the Recreation and Parks Commission.

S. **Transit Impact Development Fee.** Planning Code Section 411 is applicable to any development project with more than 3,000 gross square feet of new PDR use.

The Project includes approximately 47,575 gross square feet of new PDR use. These uses are subject to Transit Impact Development Fees, as outlined in Planning Code Section 411. These fees must be paid prior to the issuance of the building permit application.

T. **Inclusionary Affordable Housing Program.** Planning Code Section 415 sets forth the requirements and procedures for the Inclusionary Affordable Housing Program. Under Planning Code Section 415.3, the current percentage requirements apply to projects that consist of ten or more units, where the first application (EE or BPA) was applied for on or after July 18, 2006. Pursuant to Planning Code Section 415.5, the Project must pay the Affordable Housing Fee ("Fee"). This Fee is made payable to the Department of Building Inspection ("DBI") for use by the Mayor's Office of Housing for the purpose of increasing affordable housing citywide.

The Project Sponsor has submitted a 'Affidavit of Compliance with the Inclusionary Affordable Housing Program: Planning Code Section 415,' to satisfy the requirements of the Inclusionary Affordable Housing Program through payment of the Fee, in an amount to be established by the Mayor's Office of Housing and Community Development at a rate equivalent to an off-site requirement. The Project Sponsor has not selected an alternative to payment of the Fee. The Environmental Evaluation Application was submitted on March 1, 2013.

U. **Eastern Neighborhood Infrastructure Impact Fees.** Planning Code Section 423 is applicable to any development project within the UMU Zoning District that results in the addition of new construction of residential space.

The Project includes approximately 236,449 gross square feet of new residential use. These uses are subject to Eastern Neighborhood Infrastructure Impact Fees, as outlined in Planning Code Section 423. These fees must be paid prior to the issuance of the building permit application.

7. **Large Project Authorization in Eastern Neighborhoods Mixed Use District.** Planning Code Section 329(c) lists nine aspects of design review in which a project must comply; the Planning Commission finds that the project is compliant with these nine aspects as follows:

A. Overall building mass and scale.

The Project's mass and scale are appropriate for an irregular oblong site on a hillside. The Project is divided into two distinct masses: an upper mass, which is punctuated by a strong vertical element (stair core) and a bow-tie roof, and a lower mass, which is more horizontal and accentuated by a dark frame and shifts in material palette. At 22nd Street, the Project provides an accent element with a angular, four-story mass that demarcates the entry and the new public stair. The massing scheme allows the Project to reduce its overall scale and also adhere to the unique topography of the site. The Project successfully blends with the hillside and provides variety in scale and form. Thus, the Project is appropriate for the surrounding neighborhood.

B. Architectural treatments, facade design and building materials:

The Project's architectural treatments, façade design and building materials include fiber cement slat screens, standing seam metal siding, colored fiber cement panels, powder-coated steel railings, box rib metal siding, and anodized aluminum windows. The Project successfully uses the varied material palette to provide a unique expression to each "block" of buildings and to provide visual variety along the hillside. Along Pennsylvania Avenue, the Project expresses the industrial character of the new PDR building by incorporating industrial-sash windows and a simple concrete frame. At 22nd Street, the four-story angular mass features a glassy ground floor, which allows for an expansion of the adjacent public stair. This portion of the building features angled planes with metal ribs that provide a transition between the industrial and residential character of the surrounding neighborhood. Overall, the Project offers a high quality architectural treatment, which provides for unique and expressive architectural design that is compatible with the surrounding neighborhood.

C. The design of lower floors, including building setback areas, commercial space, townhouses, entries, utilities, and the design and siting of rear yards, parking and loading access;

Along the lower floor on 22nd Street, the Project provides for a gracious residential lobby, which complements the adjacent public stair and entry plaza. This lobby provides for activity along the street. On Pennsylvania Avenue, the Project provides an appropriate intervention for a PDR building with two vehicular openings and a glazed storefront.

D. The provision of required open space, both on- and off-site. In the case of off-site publicly accessible open space, the design, location, access, size, and equivalence in quality with that otherwise required on-site;

The Project provides the required open space for the 250 dwelling units through private balconies, rooftop common open space, and the publically-accessible stair and open space along 22nd Street. This new stair assists in reconnecting two portions of 22nd Street between Missouri and Texas Street by introducing a new pedestrian element. In total, the Project provides 23,078 sq ft of code-complying open space, which far exceeds the required amount for the dwelling units.

E. The provision of mid-block alleys and pathways on frontages between 200 and 300 linear feet per the criteria of Section 270, and the design of mid-block alleys and pathways as required by and pursuant to the criteria set forth in Section 270.2;

The Project is not required to provide a mid-block alley. However, the Project does voluntarily incorporate a new publically-accessible stair and open space along the north lot line, which functions akin to a mid-block alley.

F Streetscape and other public improvements, including tree planting, street furniture, and lighting.

In compliance with the Better Streets Plan, the Project minimizes the number of vehicular openings to two along Pennsylvania Avenue and one along 22nd Street. The Project includes several streetscape improvements, including new street trees, sidewalk improvements, site furnishings and construction of a publically-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets. The stair includes an entry plaza at Texas Street, a winding staircase, planters, public art, lighting and an overlook at the top of the grade at Missouri Street. The Department finds that these improvements would vastly improve the public realm in this neighborhood.

G. Circulation, including streets, alleys and mid-block pedestrian pathways;

Since the subject lot has two primary street frontages, the Project provides ample circulation in and around the project site, including through the provided publically-accessible pedestrian stair. The primary focal point for the residents would occur on 22nd Street through the residential lobby, which is adjacent to the public stair. Automobile access is limited to the one entrance through the PDR building on Pennsylvania Avenue and one exit through the residential building on 22nd Street. Along Pennsylvania Avenue, the Project also incorporates a loading bay for the PDR use, which is appropriate given the surrounding context.

H. **Bulk limits;**

The Project is within an 'X' Bulk District, which does not restrict bulk.

I. Other changes necessary to bring a project into conformance with any relevant design guidelines, Area Plan or Element of the General Plan;

The Project, on balance, meets the Objectives and Policies of the General Plan. See Below.

8. **Large Project Authorization Exceptions.** Proposed Planning Code Section 329 allows exceptions for Large Projects in the Eastern Neighborhoods Mixed Use Districts:

A. Exceeding the principally permitted accessory residential parking ratio described in Section 151.1 and pursuant to the criteria therein;

(1) In granting such Conditional Use or exception per 329 for parking in excess of that principally permitted in Table 151.1, the Planning Commission shall make the following affirmative findings according to the uses to which the proposed parking is accessory:

(A) Parking for All Uses.

(i) Vehicle movement on or around the project does not unduly impact pedestrian spaces or movement, transit service, bicycle movement, or the overall traffic movement in the district;

The Project would not unduly impact pedestrian movement or transit in the neighborhood. Entrances to off-street parking are limited to one opening off of 22nd Street, and two openings along Pennsylvania Avenue (one for the garage entrance and the other for loading for the PDR use). The locations of the garage openings are sensitive to the movement of pedestrians, bikes and public transit. Currently, Muni does not operate a transit line along this portion of 22nd Street near the exit to the off-street parking. Along Pennsylvania Avenue, the 48 Muni Bus Line runs past the project site; however, the Project does not appear to impact this transit line.

(ii) Accommodating excess accessory parking does not degrade the overall urban design quality of the project proposal;

The Project is principally permitted 188 off-street parking spaces for the 250 dwelling units. Currently, the Project provides 208 below grade, off-street parking spaces. The accommodation of the additional 20 below grade parking does not degrade or impact the overall Project and its urban design quality. Therefore, the Commission does support parking in excess of the principally-permitted amount due to the existing site condition and the limited street frontage. The Project maintains a strong ground floor level and encourages/facilitates pedestrian circulation around and through the project site.

(iii) All above-grade parking is architecturally screened and lined with active uses according to the standards of Section 145.1, and the project sponsor is not requesting any exceptions or variances requiring such treatments elsewhere in this Code; and

The Project does not include any above-grade parking.

(iv) Excess accessory parking does not diminish the quality and viability of existing or planned streetscape enhancements.

The proposed 208 off-street below-grade parking spaces do not impact any ground floor uses or any other planned streetscape improvements.

(B) Parking for Residential Uses.

(i) For projects with 50 dwelling units or more, all residential accessory parking in excess of 0.5 spaces per unit shall be stored and accessed by mechanical stackers or lifts, valet, or other space-efficient means that reduces space used for parking and maneuvering, and maximizes other uses.

The Project does not feature mechanical stackers. All off-street parking is independently-accessible. Given the site's existing condition and the limited street frontage, the Commission supports the provided amount of off-street parking.

B. Exception for rear yards, pursuant to the requirements of Section 134(f);

(f) Modification of Requirements in the Eastern Neighborhoods Mixed Use Districts. The rear yard requirement in Eastern Neighborhoods Mixed Use Districts may be modified or waived by the Planning Commission pursuant to Section 329. The rear yard requirement in Eastern Neighborhoods Mixed Use Districts may be modified by the Zoning Administrator pursuant to the procedures set forth in Section 307(h) for other projects, provided that:

(1) A comparable, but not necessarily equal amount of square footage as would be created in a code conforming rear yard is provided elsewhere within the development;

The Project provides for a comparable amount of open space, in lieu of the required rear yard. Overall, the project site is 119,885 sq ft in size, and would be required to provide a rear yard measuring 29,971 sq ft. The Project provides 37,467 sq ft of open space through private balconies, a rooftop common open space and a publically-accessible stair and open space, thus exceeding the amount of space, which would have been provided in a code-conforming rear yard.

(2) The proposed new or expanding structure will not significantly impede the access to light and air from adjacent properties or adversely affect the interior block open space formed by the rear yards of adjacent properties; and

The Project does not impede access to light and air for the adjacent residential property, since the publically-accessible stair roughly aligns to 22nd Street, thus providing for sufficient distance from the adjacent property. Further, the Project is organized in a courtyard configuration that complements the courtyard configuration of the adjacent residential properties. To the south, the neighborhood is primarily characterized by industrial properties, which do not have rear yard requirements. Currently, the surrounding block does not possess a pattern of mid-block open space.

(3) The modification request is not combined with any other residential open space modification or exposure variance for the project, except exposure modifications in designated landmark buildings under Section 307(h)(1).

The Project is not seeking a modification to the open space requirements; however, the Project is seeking a modification to the dwelling unit exposure requirements for 58 of the 250 dwelling units. However, the Commission finds that the dwelling unit exposure modification is warranted given the overall quality of the Project and the amount of open space/open areas. Overall, the majority of the Project meets the intent of exposure requirements defined in Planning Code Section 140.

C. Where not specified elsewhere in Planning Code Section 329(d), modification of other Code requirements which could otherwise be modified as a Planned Unit Development (as set forth in Section 304), irrespective of the zoning district in which the property is located;

In addition to the modification of the requirements for rear yard, the Project is seeking modifications of the requirements for exposure (Planning Code Section 140).

Under Planning Code Section 140, all dwelling units must face onto a public street, rear yard or other open area that meets minimum requirements for area and horizontal dimensions. The Project organizes the dwelling units to have exposure either on the 15th setback along the west property line, the 25-ft wide courtyard at the second floor, or along the 10-ft setback along the east property line. Currently, 58 dwelling units (twenty on the first floor, nineteen on the sixth floor, and nineteen on the seventh floor) do not face onto an open area, which meets the dimensional requirements of the Planning Code. These dwelling units still face onto an open area and are also afforded sufficient access to light and air. Given the overall design and composition of the Project, the Department is in support of this modification, due to the Project's high quality of design and amount of open space/open areas.

8. **General Plan Compliance.** The Project is, on balance, consistent with the following Objectives and Policies of the General Plan:

HOUSING

Objectives and Policies

OBJECTIVE 1

IDENTIFY AND MAKE AVAILABLE FOR DEVELOPMENT ADEQUATE SITES TO MEET THE CITY'S HOUSING NEEDS, ESPECIALLY PERMANENTLY AFFORDABLE HOUSING.

Policy 1.1
Plan for the full range of housing needs in the City and County of San Francisco, especially affordable housing.

The Project is a higher density mixed-use development in an underutilized, transitioning industrial and residential area. The Project site is an ideal infill site that is largely vacant except for temporary container structures. The project site was rezoned to PDR-1-G and UMU as part of the Eastern Neighborhood's long range planning goal to create a cohesive, higher density residential and mixed-use neighborhood. To the south, the zoning is primarily PDR. The surrounding neighborhood features a wide variety of zoning, which is consistent with the Project's residential and industrial character. The Project will pay the Affordable Housing Fee, which will provide opportunities for affordable housing across the City.

OBJECTIVE 4
FOSTER A HOUSING STOCK THAT MEETS THE NEEDS OF ALL RESIDENTS ACROSS LIFECYCLES

Policy 4.4
Encourage sufficient and suitable rental housing opportunities, emphasizing permanently affordable rental units wherever possible.

The Project meets the affordable housing requirements for the UMU Zoning District by paying the Affordable Housing Fee. The Project will provide 250 dwelling units into the City's housing stock.

OBJECTIVE 11
SUPPORT AND RESPECT THE DIVERSE AND DISTINCT CHARACTER OF SAN FRANCISCO'S NEIGHBORHOODS.

Policy 11.1
Promote the construction and rehabilitation of well-designed housing that emphasizes beauty, flexibility, and innovative design, and respects existing neighborhood character.

Policy 11.2
Ensure implementation of accepted design standards in project approvals.

Policy 11.3
Ensure growth is accommodated without substantially and adversely impacting existing residential neighborhood character.

Policy 11.4
Continue to utilize zoning districts which conform to a generalized residential land use and density plan and the General Plan.

Policy 11.6
Foster a sense of community through architectural design, using features that promote community interaction.

Policy 11.8
Consider a neighborhood's character when integrating new uses, and minimize disruption caused by expansion of institutions into residential areas.

The architecture of this Project responds to the site's location as a transition between industrial zones and the contemporary and traditional architecture of residential zones. The Project's facades provide a unique expression not commonly found within the surrounding area, while providing for a varied material palette, which successfully scales down the overall mass. The exterior is designed with modern materials including fiber cement slat screens, standing seam metal siding, colored fiber cement panels, powder-coated steel railings, box rib metal siding, and anodized aluminum windows.

RECREATION AND OPEN SPACE ELEMENT

Objectives and Policies

OBJECTIVE 4:
PROVIDE OPPORTUNITIES FOR RECREATION AND THE ENJOYMENT OF OPEN SPACE IN EVERY SAN FRANCISCO NEIGHBORHOOD.

Policy 4.5:
Require private usable outdoor open space in new residential development.

Policy 4.6:
Assure the provision of adequate public open space to serve new residential development.

The Project will create private and common open space areas in a new mixed-use development through private balconies, a rooftop common open space and a publically-accessible stair that will reconnect two portions of 22nd Street. The project will not cast shadows over any open spaces under the jurisdiction of the Recreation and Park Department.

TRANSPORTATION ELEMENT

Objectives and Policies

OBJECTIVE 24:
IMPROVE THE AMBIENCE OF THE PEDESTRIAN ENVIRONMENT.

Policy 24.2:
Maintain and expand the planting of street trees and the infrastructure to support them.

Policy 24.3:
Install pedestrian-serving street furniture where appropriate.

Policy 24.4:
Preserve pedestrian-oriented building frontages.

The Project includes several streetscape improvements, including new street trees, sidewalk improvements, site furnishings and construction of a publically-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets. The stair includes an entry plaza at Texas Street, a winding staircase, planters, public art, lighting and an overlook at the top of the grade at Missouri Street.

OBJECTIVE 28:
PROVIDE SECURE AND CONVENIENT PARKING FACILITIES FOR BICYCLES.

Policy 28.1:
Provide secure bicycle parking in new governmental, commercial, and residential developments.

Policy 28.3:
Provide parking facilities which are safe, secure, and convenient.

The Project includes 142 Class 1 bicycle parking spaces and 17 Class 2 bicycle parking spaces in secure, convenient locations.

OBJECTIVE 34:
RELATE THE AMOUNT OF PARKING IN RESIDENTIAL AREAS AND NEIGHBORHOOD COMMERCIAL DISTRICTS TO THE CAPACITY OF THE CITY'S STREET SYSTEM AND LAND USE PATTERNS.

Policy 34.1:
Regulate off-street parking in new housing so as to guarantee needed spaces without requiring excesses and to encourage low auto ownership in neighborhoods that are well served by transit and are convenient to neighborhood shopping.

Policy 34.3:
Permit minimal or reduced off-street parking supply for new buildings in residential and commercial areas adjacent to transit centers and along transit preferential streets.

Policy 34.5:
Minimize the construction of new curb cuts in areas where on-street parking is in short supply and locate them in a manner such that they retain or minimally diminish the number of existing on-street parking spaces.

The Commission does support the provided off-street parking, which exceeds the principally-permitted amount. Overall, the Project provides off-street parking at a ratio of .83 off-street parking spaces per dwelling unit. The parking spaces are accessed by one ingress point on Pennsylvania Avenue and on egress point on 22nd Street. Parking is adequate for the Project.

URBAN DESIGN ELEMENT

Objectives and Policies

OBJECTIVE 1:
EMPHASIS OF THE CHARACTERISTIC PATTERN WHICH GIVES TO THE CITY AND ITS NEIGHBORHOODS AN IMAGE, A SENSE OF PURPOSE, AND A MEANS OF ORIENTATION.

Policy 1.7:
Recognize the natural boundaries of districts, and promote connections between districts.

OBJECTIVE 2:
CONSERVATION OF RESOURCES WHICH PROVIDE A SENSE OF NATURE, CONTINUITY WITH THE PAST, AND FREEDOM FROM OVERCROWDING.

Policy 2.6:
Respect the character of older development nearby in the design of new buildings.

The Project is located within the Potrero Hill neighborhood in an area that transitions from residential to industrial uses. As such, the Project provides expressive street façades, which respond to form, scale and material palette of the existing neighborhood, while also providing a new contemporary architectural vocabulary. The Project provides a unique intervention that successfully addresses the unique topography and scale of the area.

OBJECTIVE 4:
IMPROVEMENT OF THE NEIGHBORHOOD ENVIRONMENT TO INCREASE PERSONAL SAFETY, COMFORT, PRIDE AND OPPORTUNITY.

Policy 4.5:
Design walkways and parking facilities to minimize danger to pedestrians.

Policy 4.13:
Improve pedestrian areas by providing human scale and interest.

Although the project site has two primary street frontages, it only provides three vehicular access points for the entire project, thus limiting conflicts with pedestrians and bicyclists. The vehicular access points accommodate PDR use along Pennsylvania Avenue and the off-street parking for the residential building. Numerous street trees will be planted on each street. Ample frontages, common and private open spaces,

and ground floor active uses directly accessing the street will be provided. Along the project site, the pedestrian experience will be greatly improved. Currently, the site is largely vacant except for temporary storage containers.

COMMERCE AND INDUSTRY ELEMENT

OBJECTIVE 1:
MANAGE ECONOMIC GROWTH AND CHANGE TO ENSURE ENHANCEMENT OF THE TOTAL CITY LIVING AND WORKING ENVIRONMENT.

Policy 1.1
Encourage development which provides substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences that cannot be mitigated.

Policy 1.3
Locate commercial and industrial activities according to a generalized commercial and industrial land use plan.

OBJECTIVE 3:
PROVIDE EXPANDED EMPLOYMENT OPPORTUNITIES FOR CITY RESIDENTS, PARTICULARLY THE UNEMPLOYED AND ECONOMICALLY DISADVANTAGED.

Policy 3.1
Promote the attraction, retention and expansion of commercial and industrial firms which provide employment improvement opportunities for unskilled and semi-skilled workers.

The Project will provide substantial net benefits to the City by providing new contemporary PDR space. This Project would accommodate new uses consistent with the PDR-1-G Zoning District, and will provide new opportunity for employment. The project site is located in the PDR-1-G Zoning Districts, and is located in an area that currently possesses industrial uses adjacent to residential uses. The Project is consistent with both zoning districts and will enhance the industrial capabilities of the site. The Project will provide new PDR space and will attract, retain and expand an existing PDR use, which will result in new opportunities for employment of unskilled or semi-skilled workers.

SHOWPLACE SQUARE/POTRERO AREA PLAN

Objectives and Policies

Land Use

OBJECTIVE 1.1
ENCOURAGE THE TRANISTION OF PORTIONS OF SHOWPLACE/POTRERO TO A MORE MIXED-USE AND NEIGHBORHOOD-SERVING CHARACTER, WHILE PROTECTING THE CORE OF DESIGN-RELATED PDR USES.

Policy 1.1.5
While continuing to protect traditional PDR functions that need large, inexpensive spaces to operate, also recognize that the nature of PDR businesses is evolving gradually so that their production and distribution activities are becoming more integrated physically with their research, design and administrative functions.

OBJECTIVE 1.2
IN AREAS OF SHOWPLACE/POTRERO WHERE HOUSING AND MIXED-USE IS ENCOURAGED, MAXIMIZE DEVELOPMENT POTENTIAL IN KEEPING WITH NEIGHBORHOOD CHARACTER

Policy 1.2.1
Ensure that in-fill housing development is compatible with its surroundings.

Policy 1.2.2
In general, where residential development is permitted, control residential density through building height and bulk guidelines and bedroom mix requirements.

OBJECTIVE 1.7
RETAIN THE ROLE OF SHOWPLACE SQUARE AS AN IMPORTANT LOCATION FOR PRODUCTION, DISTRIBUTION, AND REPAIR (PDR) ACTIVITIES, FOCUSING IN PARTICULAR ON DESIGN RELATED ACTIVITIES

Policy 1.7.3
Require development of flexible buildings with generous floor-to-ceiling heights, large floor plates, and other features that will allow the structure to support various businesses.

Housing

OBJECTIVE 2.3
REQUIRE THAT A SIGNIFICANT NUMBER OF UNITS IN NEW DEVELOPMENTS HAVE TWO OR MORE BEDROOMS EXCEPT SENIOR HOUSING AND SRO DEVELOPMENTS UNLESS ALL BELOW MARKET RATE UNITS ARE TWO OR MORE BEDROOM UNITS

Policy 2.3.3
Require that a significant number of units in new developments have two or more bedrooms, except Senior Housing and SRO developments.

Policy 2.3.5
Explore a range of revenue- generating tools including impact fees, public funds and grants, assessment districts, and other private funding sources, to fund community and neighborhood improvements.

Policy 2.3.6

Establish an impact fee to be allocated towards an Eastern Neighborhoods Public Benefit Fund to mitigate the impacts of new development on transit, pedestrian, bicycle, and street improvements, park and recreational facilities, and community facilities such as libraries, child care and other neighborhood services in the area.

OBJECTIVE 2.4
LOWER THE COST OF THE PRODUCTION OF HOUSING

Policy 2.4.1
Require developers to separate the cost of parking from the cost of housing in both for sale and rental developments.

Policy 2.4.2
Revise residential parking requirements so that structured or off-street parking is permitted up to specified maximum amounts in certain districts, but is not required.

Built Form

OBJECTIVE 3.1
PROMOTE AN URBAN FORM THAT REFLECTS SHOWPLACE SQUARE AND POTRERO HILL'S DISTINCTIVE PLACE IN THE CITY'S LARGER FORM AND STRENGTHENS ITS PHYSICAL FABRIC AND CHARACTER

Policy 3.1.1
Adopt heights that are appropriate for Showplace Square's location in the city, the prevailing street width and block pattern, and the anticipated land uses, while respecting the residential character of Potrero Hill.

Policy 3.1.2
Development should respect the natural topography of Potrero Hill.

Policy 3.1.6
New buildings should epitomize the best in contemporary architecture, but should do so with full awareness of, and respect for, the height, mass, articulation and materials of the best of the older buildings that surrounds them.

OBJECTIVE 3.2
PROMOTE AN URBAN FORM AND ARCHITECTURAL CHARACTER THAT SUPPORTS WALKING AND SUSTAINS A DIVERSE, ACTIVE AND SAFE PUBLIC REALM

Policy 3.2.1
Require high quality design of street-facing building exteriors.

Policy 3.2.2
Make ground floor retail and PDR uses as tall, roomy and permeable as possible.

OBJECTIVE 5.2
ENSURE THAT NEW DEVELOPMENT INCLUDES HIGH QUALITY PRIVATE OPEN SPACE

Policy 5.2.4
Encourage publicly accessible open space as part of new residential and commercial development.

The Project is a mix of residential and PDR. The Project provides the mix of uses consistent with the PDR-1-G and UMU Zoning Districts and is encouraged by the Area Plan for this location. In addition, the Project is located within the prescribed height and bulk guidelines, and includes the appropriate dwelling unit mix, since approximately 40% or 100 units are two- or three-bedroom dwellings. The Project introduces a contemporary architectural vocabulary, which is sensitive to the prevailing scale and neighborhood fabric, as well as the unique topography. The Project provides for a high quality designed exterior, which features a variety of materials, colors and textures, including fiber cement slat screens, standing seam metal siding, colored fiber cement panels, powder-coated steel railings, box rib metal siding, and anodized aluminum windows. The Project also introduces a publically-accessible stair, which provides a pedestrian connection between two portions of 22nd Street, and provides off-street parking at the maximum principally permitted ratio. The Project will also pay the appropriate development impact fees, including the Transit Impact Development Fee and Eastern Neighborhoods Impact Fees.

9. **Planning Code Section 101.1(b)** establishes eight priority-planning policies and requires review of permits for consistency with said policies. On balance, the project does comply with said policies in that:

   A. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses be enhanced.

      The project site is largely vacant with no permanent structures. The project site does not contain any existing neighborhood-serving retail uses. The Project improves the urban form of the neighborhood by removing a largely vacant lot. The Project would add new residents, visitors, and employees to the neighborhood, which would assist in strengthening nearby retail uses.

   B. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods.

      No housing exists on the project site. The project will provide up to 250 new dwelling units, thus resulting in a significant increase in the neighborhood housing stock. The Project is expressive in design, and relates to the scale and form of the surrounding neighborhood by addressing successfully addressing the unique topography and grade. For these reasons, the Project would protect and preserve the cultural and economic diversity of the neighborhood.

   C. That the City's supply of affordable housing be preserved and enhanced.

The Project will not displace any affordable housing because there is currently no housing on the site. The Project will comply with the City's Inclusionary Housing Program by contributing to the fund for new affordable housing.

D. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

The project site is served by public transportation. The Project is located within walking distance to the 22nd Street Caltrain Station and is nearby the 48 Muni Bus Line. Future residents would be afforded close proximity to bus or rail transit. The Project also provides sufficient off-street parking and sufficient bicycle parking for residents and their guests.

E. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced.

The Project is consistent with the Showplace Square/Potrero Area Plan, which provides for a balance between industrial and residential development. The Project does not include commercial office development, and provides new opportunities for housing and PDR, which are top priorities for the City.

F. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

The project will be designed and will be constructed to conform to the structural and seismic safety requirements of the Building Code. This proposal will not impact the property's ability to withstand an earthquake.

G. That landmarks and historic buildings be preserved.

There are no landmarks or historic buildings on the project site.

H. That our parks and open space and their access to sunlight and vistas be protected from development.

The Project will not affect the City's parks or open space or their access to sunlight and vistas. A shadow study was completed and concluded that the Project will not cast shadows on any property under the jurisdiction of, or designated for acquisition by, the Recreation and Park Commission. In fact, the Project will provide additional public open space via the mid-block alley.

9. **First Source Hiring.** The Project is subject to the requirements of the First Source Hiring Program as they apply to permits for residential development (Section 83.4(m) of the Administrative Code), and the Project Sponsor shall comply with the requirements of this Program as to all construction work and on-going employment required for the Project. Prior to the issuance of any building permit to construct or a First Addendum to the Site Permit, the Project Sponsor

shall have a First Source Hiring Construction and Employment Program approved by the First Source Hiring Administrator, and evidenced in writing. In the event that both the Director of Planning and the First Source Hiring Administrator agree, the approval of the Employment Program may be delayed as needed.

The Project Sponsor submitted a First Source Hiring Affidavit and prior to issuance of a building permit will execute a First Source Hiring Memorandum of Understanding and a First Source Hiring Agreement with the City's First Source Hiring Administration.

10. The Project is consistent with and would promote the general and specific purposes of the Code provided under Section 101.1(b) in that, as designed, the Project would contribute to the character and stability of the neighborhood and would constitute a beneficial development.

11. The Commission hereby finds that approval of the Large Project Authorization would promote the health, safety and welfare of the City.

DECISION

That based upon the Record, the submissions by the Applicant, the staff of the Department and other interested parties, the oral testimony presented to this Commission at the public hearings, and all other written materials submitted by all parties, the Commission hereby **APPROVES Large Project Authorization Application No. 2011.0671X** under Planning Code Section 329 to allow the new construction of a three-story PDR building with 45,575 gsf and a four-to-eight-story residential building with 250 dwelling units, and a modification to the requirements for: 1) rear yard (Planning Code Section 134) and 2) dwelling unit exposure (Planning Code Section 140), within the UMU (Urban Mixed-Use) and PDR-1-G Zoning Districts and a 40-X Height and Bulk District. The project is subject to the following conditions attached hereto as "EXHIBIT A" in general conformance with plans on file, dated September 22, 2015, and stamped "EXHIBIT B", which is incorporated herein by reference as though fully set forth.

The Planning Commission hereby adopts the MMRP attached hereto as Exhibit C and incorporated herein as part of this Motion by this reference thereto. All required mitigation measures identified in the Eastern Neighborhoods Plan EIR and contained in the MMRP are included as conditions of approval.

APPEAL AND EFFECTIVE DATE OF MOTION: **Any aggrieved person may appeal this Section 329 Large Project Authorization to the Board of Appeals within fifteen (15) days after the date of this Motion. The effective date of this Motion shall be the date of adoption of this Motion if not appealed (after the 15-day period has expired) OR the date of the decision of the Board of Appeals if appealed to the Board of Appeals. For further information, please contact the Board of Appeals at (415) 575-6880, 1660 Mission, Room 3036, San Francisco, CA 94103.**

Protest of Fee or Exaction: You may protest any fee or exaction subject to Government Code Section 66000 that is imposed as a condition of approval by following the procedures set forth in Government Code Section 66020. The protest must satisfy the requirements of Government Code Section 66020(a) and must be filed within 90 days of the date of the first approval or conditional approval of the development referencing the challenged fee or exaction. For purposes of Government Code Section 66020, the date of imposition of the fee shall be the date of the earliest discretionary approval by the City of the subject development.

If the City has not previously given Notice of an earlier discretionary approval of the project, the Planning Commission's adoption of this Motion, Resolution, Discretionary Review Action or the Zoning Administrator's Variance Decision Letter constitutes the approval or conditional approval of the development and the City hereby gives **NOTICE** that the 90-day protest period under Government Code Section 66020 has begun. If the City has already given Notice that the 90-day approval period has begun for the subject development, then this document does not re-commence the 90-day approval period.

I hereby certify that the Planning Commission ADOPTED the foregoing Motion on December 3, 2015.

Jonas P. Ionin
Commission Secretary

AYES: Antonini, Fong, Hillis, Moore, Richards and Wu

NAYS:

ABSENT: Johnson

ADOPTED: December 3, 2015

EXHIBIT A

AUTHORIZATION

This authorization is for a Large Project Authorization to allow for the new construction of a three-story PDR building and a four-to-eight-story residential building with 250 dwelling units, and a modification to the requirements for rear yard and dwelling unit exposure, located at 1395 22nd Street and 790 Pennsylvania Avenue, Lots 011 & 013 in Assessor's Block 4167, pursuant to Planning Code Section 329 within the PDR-1-G (Production, Distribution & Repair-General) and UMU (Urban Mixed-Use) Zoning Districts, and a 40-X Height and Bulk District; in general conformance with plans, dated September 23, 2015, and stamped "EXHIBIT B" included in the docket for Case No. 2011.0671X and subject to conditions of approval reviewed and approved by the Commission on December 3, 2015 under Motion No. 19523. This authorization and the conditions contained herein run with the property and not with a particular Project Sponsor, business, or operator.

RECORDATION OF CONDITIONS OF APPROVAL

Prior to the issuance of the building permit or commencement of use for the Project the Zoning Administrator shall approve and order the recordation of a Notice in the Official Records of the Recorder of the City and County of San Francisco for the subject property. This Notice shall state that the project is subject to the conditions of approval contained herein and reviewed and approved by the Planning Commission on December 3, 2015 under Motion No. 19523.

PRINTING OF CONDITIONS OF APPROVAL ON PLANS

The conditions of approval under the 'Exhibit A' of this Planning Commission Motion No. 19523 shall be reproduced on the Index Sheet of construction plans submitted with the Site or Building permit application for the Project. The Index Sheet of the construction plans shall reference to the Office Development Authorization and any subsequent amendments or modifications.

SEVERABILITY

The Project shall comply with all applicable City codes and requirements. If any clause, sentence, section or any part of these conditions of approval is for any reason held to be invalid, such invalidity shall not affect or impair other remaining clauses, sentences, or sections of these conditions. This decision conveys no right to construct, or to receive a building permit. "Project Sponsor" shall include any subsequent responsible party.

CHANGES AND MODIFICATIONS

Changes to the approved plans may be approved administratively by the Zoning Administrator. Significant changes and modifications of conditions shall **require** Planning Commission approval of a new authorization.

Conditions of Approval, Compliance, Monitoring, and Reporting

PERFORMANCE

Validity. The authorization and right vested by virtue of this action is valid for three (3) years from the effective date of the Motion. The Department of Building Inspection shall have issued a Building Permit or Site Permit to construct the project and/or commence the approved use within this three-year period.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Expiration and Renewal. Should a Building or Site Permit be sought after the three (3) year period has lapsed, the project sponsor must seek a renewal of this Authorization by filing an application for an amendment to the original Authorization or a new application for Authorization. Should the project sponsor decline to so file, and decline to withdraw the permit application, the Commission shall conduct a public hearing in order to consider the revocation of the Authorization. Should the Commission not revoke the Authorization following the closure of the public hearing, the Commission shall determine the extension of time for the continued validity of the Authorization.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Diligent Pursuit. Once a site or Building Permit has been issued, construction must commence within the timeframe required by the Department of Building Inspection and be continued diligently to completion. Failure to do so shall be grounds for the Commission to consider revoking the approval if more than three (3) years have passed since this Authorization was approved.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Extension. All time limits in the preceding three paragraphs may be extended at the discretion of the Zoning Administrator where implementation of the project is delayed by a public agency, an appeal or a legal challenge and only by the length of time for which such public agency, appeal or challenge has caused delay.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Conformity with Current Law. No application for Building Permit, Site Permit, or other entitlement shall be approved unless it complies with all applicable provisions of City Codes in effect at the time of such approval.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Mitigation Measures. Mitigation measures described in the MMRP for the Eastern Neighborhoods Plan EIR (Case No. 2011.0671E) attached as Exhibit C are necessary to avoid potential significant effects of the proposed project and have been agreed to by the project sponsor.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

DESIGN – COMPLIANCE AT PLAN STAGE

Façade Design. The Project Sponsor shall work with the Planning Department, the Commission and community members on the design of the upper building. In particular, the Project Sponsor shall revise the design of the upper building to better address the topography. The revised design shall be presented back to the Commission no later than February 2016.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

Final Materials. The Project Sponsor shall continue to work with Planning Department on the building design. Final materials, glazing, color, texture, landscaping, and detailing shall be subject to Department staff review and approval and to be reviewed against interim design controls anticipated to be brought forward to the Board of Supervisor in the near future. The architectural addenda shall be reviewed and approved by the Planning Department prior to issuance.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

Garbage, Composting and Recycling Storage. Space for the collection and storage of garbage, composting, and recycling shall be provided within enclosed areas on the property and clearly labeled and illustrated on the architectural addenda. Space for the collection and storage of recyclable and compostable materials that meets the size, location, accessibility and other standards specified by the San Francisco Recycling Program shall be provided at the ground level of the buildings.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

Rooftop Mechanical Equipment. Pursuant to Planning Code 141, the Project Sponsor shall submit a roof plan to the Planning Department prior to Planning approval of the building permit application for each building. Rooftop mechanical equipment, if any is proposed as part of the Project, is required to be screened so as not to be visible from any point at or below the roof level of the subject building.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

Streetscape Plan. Pursuant to Planning Code Section 138.1, the Project Sponsor shall continue to work with Planning Department staff, in consultation with other City agencies, to refine the design and programming of the Streetscape Plan so that the plan generally meets the standards of the Better Streets Plan and all applicable City standards. The Project Sponsor shall complete final design of all required street improvements, including procurement of relevant City permits, prior to issuance of first

architectural addenda, and shall complete construction of all required street improvements **prior to** issuance of first temporary certificate of occupancy.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

Transformer Vault. The location of individual project PG&E Transformer Vault installations has significant effects to San Francisco streetscapes when improperly located. However, they may not have any impact if they are installed in preferred locations. Therefore, the Planning Department recommends the following preference schedule in locating new transformer vaults, in order of most to least desirable:

1. On-site, in a basement area accessed via a garage or other access point without use of separate doors on a ground floor façade facing a public right-of-way;
2. On-site, in a driveway, underground;
3. On-site, above ground, screened from view, other than a ground floor façade facing a public right-of-way;
4. Public right-of-way, underground, under sidewalks with a minimum width of 12 feet, avoiding effects on streetscape elements, such as street trees; and based on Better Streets Plan guidelines;
5. Public right-of-way, underground; and based on Better Streets Plan guidelines;
6. Public right-of-way, above ground, screened from view; and based on Better Streets Plan guidelines;
7. On-site, in a ground floor façade (the least desirable location).

Unless otherwise specified by the Planning Department, Department of Public Work's Bureau of Street Use and Mapping (DPW BSM) should use this preference schedule for all new transformer vault installation requests.
For information about compliance, contact Bureau of Street Use and Mapping, Department of Public Works at 415-554-5810, http://sfdpw.org

PARKING AND TRAFFIC

Unbundled Parking. All off-street parking spaces shall be made available to Project residents only as a separate "add-on" option for purchase or rent and shall not be bundled with any Project dwelling unit for the life of the dwelling units. The required parking spaces may be made available to residents within a quarter mile of the project. All affordable dwelling units pursuant to Planning Code Section 415 shall have equal access to use of the parking as the market rate units, with parking spaces priced commensurate with the affordability of the dwelling unit. Each unit within the Project shall have the first right of refusal to rent or purchase a parking space until the number of residential parking spaces are no longer available. No conditions may be placed on the purchase or rental of dwelling units, nor may homeowner's rules be established, which prevent or preclude the separation of parking spaces from dwelling units.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Parking Maximum. Pursuant to Planning Code Section 151.1, the Project shall provide no more than 208 off-street parking spaces for the 250 dwelling units (or .83 off-street parking spaces for each dwelling unit) contained therein.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Car Share. Pursuant to Planning Code Section 166, no fewer than two (2) car share space shall be made available, at no cost, to a certified car share organization for the purposes of providing car share services for its service subscribers.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Bicycle Parking. Pursuant to Planning Code Sections 155.1, 155.4, and 155.5, the Project shall provide no fewer than 151 Class 1 bicycle parking spaces and 17 Class 2 bicycle parking spaces.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Managing Traffic During Construction. The Project Sponsor and construction contractor(s) shall coordinate with the Traffic Engineering and Transit Divisions of the San Francisco Municipal Transportation Agency (SFMTA), the Police Department, the Fire Department, the Planning Department, and other construction contractor(s) for any concurrent nearby Projects to manage traffic congestion and pedestrian circulation effects during construction of the Project.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

PROVISIONS

First Source Hiring. The Project shall adhere to the requirements of the First Source Hiring Construction and End-Use Employment Program approved by the First Source Hiring Administrator, pursuant to Section 83.4(m) of the Administrative Code. The Project Sponsor shall comply with the requirements of this Program regarding construction work and on-going employment required for the Project.
For information about compliance, contact the First Source Hiring Manager at 415-581-2335, www.onestopSF.org

Eastern Neighborhoods Infrastructure Impact Fee. Pursuant to Planning Code Section 423 (formerly 327), the Project Sponsor shall comply with the Eastern Neighborhoods Public Benefit Fund provisions through payment of an Impact Fee pursuant to Article 4.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

Transit Impact Development Fee. Pursuant to Planning Code Section 411, the Project Sponsor shall pay the Transit Impact Development Fee (TIDF) as required by and based on drawings submitted with the Building Permit Application. Prior to the issuance of a temporary certificate of occupancy, the Project Sponsor shall provide the Planning Director with certification that the fee has been paid.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

MONITORING

Enforcement. Violation of any of the Planning Department conditions of approval contained in this Motion or of any other provisions of Planning Code applicable to this Project shall be subject to the enforcement procedures and administrative penalties set forth under Planning Code Section 176 or Section 176.1. The Planning Department may also refer the violation complaints to other city departments and agencies for appropriate enforcement action under their jurisdiction.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Revocation Due to Violation of Conditions. Should implementation of this Project result in complaints from interested property owners, residents, or commercial lessees which are not resolved by the Project Sponsor and found to be in violation of the Planning Code and/or the specific conditions of approval for the Project as set forth in Exhibit A of this Motion, the Zoning Administrator shall refer such complaints to the Commission, after which it may hold a public hearing on the matter to consider revocation of this authorization.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

OPERATION

Garbage, Recycling, and Composting Receptacles. Garbage, recycling, and compost containers shall be kept within the premises and hidden from public view, and placed outside only when being serviced by the disposal company. Trash shall be contained and disposed of pursuant to garbage and recycling receptacles guidelines set forth by the Department of Public Works.
For information about compliance, contact Bureau of Street Use and Mapping, Department of Public Works at 415-554-.5810, http://sfdpw.org

Sidewalk Maintenance. The Project Sponsor shall maintain the main entrance to the building and all sidewalks abutting the subject property in a clean and sanitary condition in compliance with the Department of Public Works Streets and Sidewalk Maintenance Standards.
For information about compliance, contact Bureau of Street Use and Mapping, Department of Public Works, 415-695-2017, http://sfdpw.org

Noise Control. The premises shall be adequately soundproofed or insulated for noise and operated so that incidental noise shall not be audible beyond the premises or in other sections of the building and fixed-source equipment noise shall not exceed the decibel levels specified in the San Francisco Noise Control Ordinance.
For information about compliance with the fixed mechanical objects such as rooftop air conditioning, restaurant ventilation systems, and motors and compressors with acceptable noise levels, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.
For information about compliance with the construction noise, contact the Department of Building Inspection, 415-558-6570, www.sfdbi.org.
For information about compliance with the amplified sound including music and television contact the Police Department at 415-553-0123, www.sf-police.org

Community Liaison. Prior to issuance of a building permit to construct the project and implement the approved use, the Project Sponsor shall appoint a community liaison officer to deal with the issues of concern to owners and occupants of nearby properties. The Project Sponsor shall provide the Zoning Administrator with written notice of the name, business address, and telephone number of the community liaison. Should the contact information change, the Zoning Administrator shall be made aware of such change. The community liaison shall report to the Zoning Administrator what issues, if any, are of concern to the community and what issues have not been resolved by the Project Sponsor.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Lighting. All Project lighting shall be directed onto the Project site and immediately surrounding sidewalk area only, and designed and managed so as not to be a nuisance to adjacent residents. Nighttime lighting shall be the minimum necessary to ensure safety, but shall in no case be directed so as to constitute a nuisance to any surrounding property.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

Public Open Space. The Project Sponsor has agreed to construct a publically-accessible stair and open space in alignment with 22nd Street between Texas and Missouri Streets. The Project Sponsor shall also maintain the stair and open space in perpetuity.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

INCLUSIONARY HOUSING

Eastern Neighborhoods Affordable Housing Requirements for UMU. Pursuant to Planning Code Section 419.3, Project Sponsor shall meet the requirements set forth in Planning Code Section 419.3 in addition to the requirements set forth in the Affordable Housing Program, per Planning Code Section 415. Prior to issuance of first construction document, the Project Sponsor shall select one of the options described in Section 419.3 or the alternatives described in Planning Code Section 419.5 to fulfill the affordable housing requirements and notify the Department of their choice. Any fee required by Section 419.1 et seq. shall be paid to the Development Fee Collection Unit at DBI prior to issuance of the first construction document an option for the project sponsor to defer payment to prior to issuance of the first certificate of occupancy upon agreeing to pay a deferral surcharge in accordance with Section 107A.13.3 of the San Francisco Building Code.
For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org

1. **Requirement.** Pursuant to Planning Code 415.5 and 419.3, the Project Sponsor must pay an Affordable Housing Fee at a rate equivalent to the applicable percentage of the number of units in an off-site project needed to satisfy the Inclusionary Affordable Housing Program Requirement for the principal project. The applicable percentage for this project is twenty-three percent (23%).

For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org or the Mayor's Office of Housing and Community Development at 415-701-5500, www.sf-moh.org.

2. **Other Conditions.** The Project is subject to the requirements of the Inclusionary Affordable Housing Program under Section 415 et seq. of the Planning Code and the terms of the City and County of San Francisco Inclusionary Affordable Housing Program Monitoring and Procedures Manual ("Procedures Manual"). The Procedures Manual, as amended from time to time, is incorporated herein by reference, as published and adopted by the Planning Commission, and as required by Planning Code Section 415. Terms used in these conditions of approval and not otherwise defined shall have the meanings set forth in the Procedures Manual. A copy of the Procedures Manual can be obtained at the Mayor's Office of Housing and Community Development ("MOHCD") at 1 South Van Ness Avenue or on the Planning Department or Mayor's Office of Housing and Community Development's websites, including on the internet at:

   http://sf-planning.org/Modules/ShowDocument.aspx?documentid=4451.

   As provided in the Inclusionary Affordable Housing Program, the applicable Procedures Manual is the manual in effect at the time the subject units are made available for sale or rent.

   For information about compliance, contact the Case Planner, Planning Department at 415-558-6378, www.sf-planning.org or the Mayor's Office of Housing and Community Development at 415-701-5500, www.sf-moh.org.

   a. The Project Sponsor must pay the Fee in full sum to the Development Fee Collection Unit at the DBI for use by MOHCD prior to the issuance of the first construction document, with an option for the Project Sponsor to defer a portion of the payment prior to issuance of the first certificate of occupancy upon agreeing to pay a deferral surcharge that would be deposited into the Citywide Inclusionary Affordable Housing Fund in accordance with Section 107A.13.3 of the San Francisco Building Code.

   b. Prior to the issuance of the first construction permit by the DBI for the Project, the Project Sponsor shall record a Notice of Special Restriction on the property that records a copy of this approval. The Project Sponsor shall promptly provide a copy of the recorded Notice of Special Restriction to the Department and to MOHCD or its successor.

   c. If project applicant fails to comply with the Inclusionary Affordable Housing Program requirement, the Director of DBI shall deny any and all site or building permits or certificates of occupancy for the development project until the Planning Department notifies the Director of compliance. A Project Sponsor's failure to comply with the requirements of Planning Code Sections 415 et seq. shall constitute cause for the City to record a lien against the development project and to pursue any and all other remedies at law.

MITIGATION MONITORING AND REPORTING PROGRAM
1395 22nd Street/790 Pennsylvania Avenue (Case No. 2011.0671E)
(Also includes text for Improvement Measures)

Adopted Mitigation Measures	MONITORING AND REPORTING PROGRAM Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule
MITIGATION MEASURES AGREED TO BY PROJECT SPONSOR					
NOISE					
Project Mitigation Measure 1 – Construction Noise (Mitigation Measure F-2 of the Eastern Neighborhoods PEIR). Where environmental review of a development project undertaken subsequent to the adoption of the proposed zoning controls determines that construction noise controls are necessary due to the nature of planned construction practices and the sensitivity of proximate uses, the Planning Director shall require that the sponsors of the subsequent development project develop a set of site-specific noise attenuation measures under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted to the Department of Building Inspection to ensure that maximum feasible noise attenuation will be achieved. These attenuation measures shall include as many of the following control strategies as feasible: • Erect temporary plywood noise barriers around a construction site, particularly where a site adjoins noise-sensitive uses; • Utilize noise control blankets on a building structure as the building is erected to reduce noise emission from the site; • Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings housing sensitive uses; • Monitor the effectiveness of noise attenuation measures by taking noise measurements; and • Post signs on-site pertaining to permitted construction days and hours and complaint procedures and who to notify in the event of a problem, with telephone numbers listed.	Project sponsor and construction contractor(s).	Submit noise attenuation plan prior construction; implement it during construction period.	Prepare and implement construction-phase noise-attenuation plan.	Project sponsor to provide monthly noise reports during construction.	Considered complete upon final monthly report.
Project Mitigation Measure 2 – Siting of Noise-Sensitive Uses (Mitigation Measure F-4 of the Eastern Neighborhoods PEIR). To reduce potential conflicts between existing noise-generating uses and new sensitive	Project sponsor; project contractor(s).	During environmental review process.	Design measure to be incorporated into project	Planning Department; Department of Building	Considered complete upon approval of

MONITORING AND REPORTING PROGRAM

Adopted Mitigation Measures	Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule
receptors, for new development including noise-sensitive uses, the Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise-generating uses within 900 feet of, and that have a direct line-of-sight to, the project site, and including at least one 24-hour noise measurement (with maximum noise level readings taken at least every 15 minutes), prior to the first project approval action. The analysis shall be prepared by persons qualified in acoustical analysis and/or engineering and shall demonstrate with reasonable certainty that Title 24 standards, where applicable, can be met, and that there are no particular circumstances about the proposed project site that appear to warrant heightened concern about noise levels in the vicinity. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action, in order to demonstrate that acceptable interior noise levels consistent with those in the Title 24 standards can be attained.			design; prior to issuance of a building permit.	Inspection.	final construction drawing set.
Project Mitigation Measure 3 – Siting of Noise-Generating Uses (Mitigation Measure F-5 of the Eastern Neighborhoods PEIR). To reduce potential conflicts between existing sensitive receptors and new noise-generating uses, for new development including commercial, industrial or other uses that would be expected to generate noise levels in excess of ambient noise, either short-term, at nighttime, or as a 24-hour average, in the proposed project site vicinity, the Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise-sensitive uses within 900 feet of, and that have a direct line-of-sight to, the project site, and including at least one 24-hour noise measurement (with maximum noise level readings taken at least every 15 minutes), prior to the first project approval action. The analysis shall be prepared by persons qualified in acoustical analysis and/or engineering and shall demonstrate with reasonable certainty that the proposed use would comply with the use compatibility requirements in the General Plan and in Police Code Section 2909I, would not adversely affect nearby noise-sensitive uses, and that there are no particular circumstances about the proposed project site that appear to warrant heightened concern about noise levels that would be generated by the proposed use. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action.	Project sponsor; project contractor(s).	During environmental review process.	Design measure to be incorporated into project design; prior to issuance of a building permit.	Planning Department; Department of Building Inspection.	Considered complete upon approval of final construction drawing set.

Adopted Mitigation Measures	MONITORING AND REPORTING PROGRAM				
	Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule
Project Mitigation Measure 4 – Open Space in Noisy Environments (Mitigation Measure F-6 of the Eastern Neighborhoods PEIR). To minimize effects on development in noisy areas, for new development including noise-sensitive uses, the Planning Department shall, through its building permit review process, in conjunction with noise analysis required pursuant to Mitigation Measure F-4, require that open space required under the Planning Code for such uses be protected, to the maximum feasible extent, from existing ambient noise levels that could prove annoying or disruptive to users of the open space. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.	Project sponsor; project contractor(s).	During environmental review process.	Design measure to be incorporated into project design; prior to issuance of a building permit.	Planning Department; Department of Building Inspection.	Considered complete upon approval of final construction drawing set.
AIR QUALITY					
Project Mitigation Measure 5 – Construction Emissions Minimization (Portion of Mitigation Measure G-1 of the Eastern Neighborhoods PEIR). The project sponsor or the project sponsor's Contractor shall comply with the following: The project sponsor or the project sponsor's Contractor shall comply with the following A. *Engine Requirements.* 1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (ARB) Tier 3 off-road emission standards, and have been retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy. Equipment with engines meeting Tier 4 Interim or Tier 4 Final off-road emission standards automatically meet this requirement. 2. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. 3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes, at any location, except as	Project sponsor; project contractor(s).	Prior to construction activities requiring the use of off-road equipment.	Submit certification statement.	Project sponsor/ contractor(s) and the ERO.	Considered complete on submittal of certification statement.

Adopted Mitigation Measures	Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule

provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The Contractor shall post legible and visible signs in English, Spanish, and Chinese, in designated queuing areas and at the construction site to remind operators of the two minute idling limit.

4. The Contractor shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment, and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.

B. *Waivers.*

1. The Planning Department's Environmental Review Officer or designee (ERO) may waive the alternative source of power requirement of Subsection (A)(2) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the Contractor must submit documentation that the equipment used for onsite power generation meets the requirements of Subsection (A)(1).

2. The ERO may waive the equipment requirements of Subsection (A)(1) if: a particular piece of off-road equipment with an ARB Level 3 VDECS is technically not feasible; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or, there is a compelling emergency need to use off-road equipment that is not retrofitted with an ARB Level 3 VDECS. If the ERO grants the waiver, the Contractor must use the next cleanest piece of off-road equipment, according to Table below. If seeking an exception to (A)(1), the project sponsor shall be required to demonstrate that resulting construction emissions would not exceed significance thresholds for construction.

Adopted Mitigation Measures	MONITORING AND REPORTING PROGRAM				
	Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule
Table – Off-Road Equipment Compliance Step-down Schedule Compliance Alternative: 1 — Engine Emission Standard: Tier 3 — Emissions Control: ARB Level 2 VDECS 2 — Tier 3 — ARB Level 1 VDECS 3 — Tier 3 — Alternative Fuel* How to use the table: If the ERO determines that the equipment requirements cannot be met, then the project sponsor would need to meet Compliance Alternative 1. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 1, then the Contractor must meet Compliance Alternative 2. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 2, then the Contractor must meet Compliance Alternative 3. ** Alternative fuels are not a VDECS.					
C. *Construction Emissions Minimization Plan.* Before starting on-site construction activities, the Contractor shall submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval. The Plan shall state, in reasonable detail, how the Contractor will meet the requirements of Section A. 1. The Plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed, the description may include: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used.	Project sponsor/ contractor(s).	Prior to issuance of a permit specified in Section 106A.3.2.6 of the Francisco Building Code.	Prepare and submit a Plan.	Project sponsor/ contractor(s) and the ERO.	Considered complete on findings by ERO that Plan is complete.

Adopted Mitigation Measures	MONITORING AND REPORTING PROGRAM Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule
2. The ERO shall ensure that all applicable requirements of the Plan have been incorporated into the contract specifications. The Plan shall include a certification statement that the Contractor agrees to comply fully with the Plan. 3. The Contractor shall make the Plan available to the public for review on-site during working hours. The Contractor shall post at the construction site a legible and visible sign summarizing the Plan. The sign shall also state that the public may ask to inspect the Plan for the project at any time during working hours and shall explain how to request to inspect the Plan. The Contractor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way.					
D. *Monitoring.* After start of Construction Activities, the Contractor shall submit quarterly reports to the ERO documenting compliance with the Plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report summarizing construction activities, including the start and end dates and duration of each construction phase, and the specific information required in the Plan.	Project sponsor/ contractor(s).	Quarterly.	Submit quarterly reports.	Project sponsor/ contractor(s) and the ERO.	Considered complete on findings by ERO that Plan is being/was implemented.
Project Mitigation Measure 6 – Air Quality for Sensitive Land Uses (Mitigation Measure G-2 of the Eastern Neighborhoods PEIR). Prior to receipt of any building permit, the project sponsor shall submit an enhanced ventilation plan for the proposed building(s). The enhanced ventilation plan shall be prepared and signed by, or under the supervision of, a licensed mechanical engineer or other individual authorized by the California Business And Professions Code Sections 6700-6799. The enhanced ventilation plan shall show that the building ventilation system will be capable of achieving protection from particulate matter (PM2.5) equivalent to that associated with a Minimum Efficiency Reporting Value (MERV) 13 filtration, as defined by American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) standard 52.2. The enhanced ventilation plan shall explain in detail how the project will meets the MERV-13 performance standard identified in this measure. *Maintenance Plan.* Prior to receipt of any building permit, the project sponsor shall present a plan that ensures ongoing maintenance for the ventilation and filtration systems.	Project sponsor/project engineer.	Prior to receipt of building permits.	Submit enhanced ventilation plan prior to receipt of building permit.	Project sponsor.	Ongoing maintenance of the enhanced ventilation system required.
Disclosure to Buyers and Renters. The project sponsor shall also ensure the disclosure to buyers (and renters) that the building is located in an area with existing sources of air	Project sponsor/ leasing agent.	During unit buying/leasing	Disclose presence of	Project sponsor.	Ongoing during

Adopted Mitigation Measures	MONITORING AND REPORTING PROGRAM				
	Responsibility for Implementation	Mitigation Schedule	Mitigation Action	Mitigation Reporting Responsibility	Monitoring Schedule
pollution and as such, the building includes an air filtration and ventilation system designed to remove 80 percent of outdoor particulate matter and shall inform occupants of the proper use of the installed air filtration system.		process.	enhanced ventilation system to buyers and renters that building is located in.		occupancy of residential building.
Project Mitigation Measure 7 – Siting of Uses that Emit DPM (Mitigation Measure G-3 of the Eastern Neighborhoods PEIR). The following uses shall be precluded from the site: warehousing and distribution centers, commercial, industrial, or other uses that would be expected to be served by at least 100 trucks per day or 40 refrigerated trucks per day, based on the Air Resources Board (ARB) Air Quality and Land Use Handbook.	Project sponsor/leasing agent.	During leasing of the PDR building.	Preclude uses specified in the measure from building occupancy.	Project sponsor.	Ongoing during occupancy of PDR building.
Project Mitigation Measure 8 – Siting of Uses that Emit Other TACs (Mitigation Measure G-4 of the Eastern Neighborhoods PEIR). At the time that a proposed use for the production, distribution, and repair (PDR) portion of the proposed project is identified, this mitigation measure would apply if that use is expected to generate substantial amounts of toxic air contaminants (TACs) as part of its operations, or if any of the following uses are proposed: dry cleaners; drive-through restaurants; gas dispensing facilities; auto body shops; metal plating shops; photographic processing shops; textiles; apparel and furniture upholstery; leather and leather products; appliance repair shops; mechanical assembly cleaning; printing shops; hospitals and medical clinics; biotechnology research facilities; warehousing and distribution centers. Furthermore, this mitigation measure would apply only if the TACs related to the proposed use are not already regulated through the Bay Area Air Quality Management District (BAAQMD) permitting process. If this mitigation measure is determined to be applicable based on the above conditions, the project sponsor shall: • Prepare an analysis that includes a site survey to identify residential or other sensitive uses within 1,000 feet of the project site; • Prepare a Health Risk Assessment (HRA) that analyzes the potential impacts of the proposed use on the nearby sensitive receptors; • Incorporate any TAC reduction measures specified in the HRA into the proposed project and/or install Best Available Control Technology for any TAC-emitting equipment proposed as part of the future PDR use.	Project sponsor.	When proposed use for the PDR building is identified.	Prepare analysis and HRA and incorporate any required TAC reduction measures.	Project sponsor.	Considered complete upon incorporation of TAC reduction measures, as needed.

IMPROVEMENT MEASURES AGREED TO BY PROJECT SPONSOR

	Responsibility for Implementation	Implementation Schedule	Implementation Action	Implementation Reporting Responsibility	Monitoring Schedule
TRANSPORTATION AND CIRCULATION					
Project Improvement Measure 1 – Implement Additional and Project - Specific Travel Demand Strategies to Reduce Vehicle Trips. The project sponsor or property owner, should implement a Transportation Demand Management (TDM) Program that seeks to annually reduce the number of single occupancy vehicle (SOV) trips to and from the project site because persons would be arriving/departing via alternative modes of transportation (e.g., walking, bicycling, transit, other). The project sponsor should make available biannually (every two years) monitoring reports, starting one year after 85 percent occupancy of the units for the new building (baseline year), for review by the Planning Department Environmental Review Officer (ERO). The biannual monitoring reports should include travel demand surveys (i.e., travel demand analysis information requested in the SF Guidelines[1]), including trip counts of persons arriving and leaving the building for no less than one full day of the reporting period and a survey to be distributed to residents and employees of the building. Each survey should be completed within ninety days following the end of the applicable two year period. Each survey should be prepared by a qualified transportation consultant and the surveying methodology should be approved by the Planning Department ERO. The project sponsor should consider the following TDM measures: • Provide TDM training to property managers/coordinators. • Provide ongoing local and regional transportation information (e.g., transit maps and schedules, maps of bicycle routes, internet links) for new and existing tenants, including providing a transportation insert for the move-in packet that would provide information on transit service (Muni and BART lines, schedules and fares), information on where transit passes could be purchased, and information on the 511 Regional Rideshare Program. • Provide information on transportation options, including updates and a "ride board" through which residents can offer/request rides, on the Homeowners Association website and/or lobby bulletin board. • Ensure that the points of access to bicycle parking through elevators on the ground floor and the garage ramp include signage indicating the location of these facilities and encourage PDR tenants to allow bicycles in the workplace.	Project sponsor, building management, Planning Department staff.	Prior to and during occupancy	Implement TDM measures.	Project sponsor.	Ongoing during occupancy

[1] City and County of San Francisco, *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002, Chapter 3, Section 3.

• Ensure that bicycle safety strategies are developed along the sides of the property, avoiding conflicts with private cars, transit vehicles and loading vehicles. In addition, the project sponsor could consider the following TDM measures and any others that would reduce SOV trips to and from the project site: • Provide and maintain a fleet of bicycles (and related amenities such as locks, baskets, lights, etc.) for use by the building tenants. • Provide fewer vehicle parking spaces than permitted per the San Francisco Planning Code and manage vehicle parking pricing. • Increase the number of on-site bicycle racks and car-share spaces, making them convenient and easy to use (e.g., signage). • Coordinate with San Francisco Municipal Transportation Agency and/or Bay Area Bike Share to potentially provide bicycle racks and/or a bike share station on adjacent sidewalks. • Include a Muni FastPass (loaded onto a Clipper card) and/or car-share membership subsidized as part of the monthly rent, or homeowner association fee.				
Project Improvement Measure 2 – Loading Monitoring and Queue Abatement. As a standard condition of approval, the project sponsor or property owner, should monitor and ensure recurring vehicle queues do not occur on Texas Street and Pennsylvania Avenue for the proposed off-street parking facility. A vehicle queue is defined as one or more vehicles (destined to the parking facility) blocking any portion of any public street, alley or sidewalk for a consecutive period of three minutes or longer on a daily or weekly basis. If recurring queuing occurs, the owner/operator of the parking facility shall employ abatement methods as needed to abate the queue. Appropriate abatement methods will vary depending on the characteristics and causes of the recurring queue, as well as the characteristics of the parking facility, the street(s) to which the facility connects, and the associated land uses (if applicable). Suggested abatement methods include but are not limited to the following: redesign of facility to improve vehicle circulation and/or on-site queue capacity; employment of parking attendants; installation of LOT FULL signs with active management by parking attendants; use of valet parking or other space-efficient parking techniques; use of off-site parking facilities or shared parking with nearby uses; use of parking occupancy sensors and signage directing drivers to available spaces; travel demand management strategies such as those listed in Improvement Measure 1, including additional bicycle parking, delivery services; and/or parking demand management strategies such as parking time limits, paid parking, time-of-day parking surcharge, or validated parking.	Owner/operator of off-street parking facility.	Upon operation of the off-street parking facility.	Ensure a vehicle queue does not block any portion of public street, alley, or sidewalk for a consecutive period of three minutes or longer on a daily or weekly basis. Hire transportation consultant to evaluate conditions. Employ abatement	Owner/operator; Planning Department.	Ongoing during operation.

If the Planning Director, or his or her designee, suspects that a recurring queue is present, the Department shall notify the property owner in writing. Upon request, the owner/operator shall hire a qualified transportation consultant to evaluate the conditions at the site for no less than seven days. The consultant shall prepare a monitoring report to be submitted to the Department for review. If the Department determines that a recurring queue does exist, the facility owner/operator shall have 90 days from the date of the written determination to abate the queue.			methods.		
Project Improvement Measure 3 – Construction Management Plan. The project sponsor or property owner, should develop and implement a Construction Management Plan (CMP), addressing transportation-related circulation, access, staging, and hours for deliveries. The CMP would disseminate appropriate information to contractors and affected agencies with respect to coordinating construction activities to minimize overall disruptions and ensure that overall circulation in the project area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle connectivity. The CMP would supplement and expand, rather than modify or supersede, any manual, regulations, or provisions set forth by the San Francisco Municipal Transportation Agency, the Department of Public Works, or other City departments and agencies, and the California Department of Transportation. The CMP should include, but not limited to, the following: • Identify construction traffic management best practices in San Francisco, as well as others that, although not being implemented in the City, could provide valuable information for the project. Management practices include, but are not limited to the following: – Identifying ways to reduce construction worker vehicle-trips through transportation demand management programs and methods to manage construction worker parking demands – Identifying best practices for accommodating pedestrians, such as temporary pedestrian way finding signage or temporary walkways. – Identifying best practices for accommodating bicyclists and bicycle facilities such as bicycle way finding signage or temporary detours. – Identifying ways to consolidate truck delivery trips, including a plan to consolidate deliveries from a centralized construction material and equipment storage facility. – Identify a route for construction-related trucks to utilize during construction. – Restricting deliveries and trucks trips to the project site during off-peak hours (generally 7:00 A.M. to 9:00 A.M. and 4:00 P.M. to 6:00 P.M., but may	Project sponsor, contractor(s).	Prior to and during construction.	Implement Construction Management Plan.	Project sponsor.	Upon completion of project construction.

include other times during Giants game days), where feasible.

- Require consultation with surrounding community, including business and property owners near the project site to assist coordination of construction traffic management strategies as they relate to the needs of other users adjacent to the project site.
- Develop a public information plan to provide adjacent residents and businesses with regularly-updated information regarding project construction activities, peak construction vehicle activities, (e.g., concrete pours), travel lane closures, and other lane closures.

SAN FRANCISCO
PLANNING DEPARTMENT

General Plan Referral

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

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415.558.6378

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415.558.6409

Planning
Information:
415.558.6377

Date:	November 9, 2017
Case No.	**Case No. 2017-012613GPR** **1395 22nd Street Public Staircase**
Block/Lot No.:	4167/013
Project Sponsor:	Eric Norden RP Pennsylvania, LLC 1 California Street, 4th Floor San Francisco, CA 94111
Applicant:	Same as Above
Staff Contact:	Amnon Ben-Pazi – (415) 575-9077 *amnon.ben-pazi@sfgov.org*
Recommendation:	Finding the project, on balance, is **in conformity** with the General Plan
Recommended By:	John Rahaim, Director of Planning

PROJECT DESCRIPTION

The Project involves construction of a public staircase connecting two currently disconnected parts of 22nd Street between Texas and Missouri Streets. The eastern, lower portion of the Project is located on a privately owned lot at 1395 22nd Street, while the western, upper portion of the Project is located on City-owned right-of-way. The submittal is for a General Plan Referral to recommend whether the Project is in conformity with the General Plan, pursuant to Section 4.105 of the Charter, and Section 2A.52 and 2A.53 of the Administrative Code.

ENVIRONMENTAL REVIEW

A Community Plan Exemption for the project was issued on July 2, 2015 (2011.0671E), concluding that the project is exempt from environmental review pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15183.

GENERAL PLAN COMPLIANCE AND BASIS FOR RECOMMENDATION

The Project provides pedestrian access through currently unimproved city-owned right-of-way, along a route prioritized for such improvement. The Project is consistent with the Eight Priority Policies of Planning Code Section 101.1 as described in the body of this letter and is, on balance, **in-conformity** with the following Objectives and Policies of the General Plan:

RECREATION AND OPEN SPACE ELEMENT

POLICY 3.1
Establish and Implement a network of Green Connections that increases access to parks, open spaces, and the waterfront.

Green Connections will not create a new City program, rather, it calls for coordinating existing initiatives such as traffic calming and stormwater management, with the goal of creating a cohesive network of improved neighborhood walking and bicycling routes over the next twenty years. The scale of the network creates opportunities to coordinate with city projects and private development.

Green Connection Route 8, the American Bushtit Route, connects numerous parks and open areas lying between Douglas Playground in Noe Valley and Warm Water Cove Park in the Central Waterfront. In the Potrero Hill and Dogpatch neighborhoods, the American Bushtit Route largely follows 22nd Street, connecting to Woods Yard Park (on 22nd Street, 4 blocks east of the Project site) and to the Potrero Hill Recreation Center (on 22nd Street, one block west of the Project site). The Project, which provides pedestrian access along a missing block of 22nd Street, implements a crucial link in this Green Connection.

SHOWPLACE SQUARE/POTRERO AREA PLAN

OBJECTIVE 4.6
SUPPORT WALKING AS A KEY TRANSPORTATION MODE BY IMPROVING PEDESTRIAN CIRCULATION WITHIN SHOWPLACE SQUARE/POTRERO HILL AND TO OTHER PARTS OF THE CITY

At least three categories of pedestrian improvements are critical for this area: 1) Connections between Potrero Hill and Showplace Square directly to the north, including intersections of north-south streets with 16th Street; 2) connections with Mission Bay and Caltrain to make the two neighborhoods more accessible on foot; and 3) improved pedestrian connections within Showplace Square, as activity and mixed-use development increases in that area.

The Project would improve pedestrian circulation within Potrero Hill. In particular, it would provide an improved pedestrian connection with the 22nd Street Caltrain station, 3 blocks east of the Project site.

OBJECTIVE 5.3
CREATE A NETWORK OF GREEN STREETS THAT CONNECTS OPEN SPACES AND IMPROVES THE WALKABILITY, AESTHETICS, AND ECOLOGICAL SUSTAINABILITY OF THE NEIGHBORHOOD

See Map 5 - Eastern Neighborhoods Streets and Open Space Concept Map pedestrian. This map identifies portions of 22nd Street and its general alignment as a "Green Connector Street". The City's network of Green Connections, discussed above under Policy 3.1 of the Recreation and Open Space Element, further develops concepts introduced in the Eastern Neighborhoods Streets and Open Space Concept Map, including this Green Connector Street.

The Project, which provides pedestrian access along a missing block of 22nd Street, implements a crucial link in this Green Connector Street.

PROPOSITION M FINDINGS – PLANNING CODE SECTION 101.1

Planning Code Section 101.1 establishes Eight Priority Policies and requires review of discretionary approvals and permits for consistency with said policies. The Project is found to be consistent with the Eight Priority Policies as set forth in Planning Code Section 101.1 for the following reasons:

Eight Priority Policies Findings

The subject project is found to be consistent with the Eight Priority Policies of Planning Code Section 101.1 in that:

The proposed project is found to be consistent with the eight priority policies of Planning Code Section 101.1 in that:

1. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses enhanced.

   The Project would have no adverse effect on neighborhood serving retail uses or opportunities for employment in or ownership of such businesses.

2. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhood.

   The Project would have no adverse effect on the City's housing stock or on neighborhood character.

3. That the City's supply of affordable housing be preserved and enhanced.

The Project would enhance access to existing and planned affordable housing on Potrero Hill and in the Dogpatch neighborhood.

4. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

   The Project would not result in commuter traffic impeding MUNI's transit service, overburdening the streets or altering current neighborhood parking.

5. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for residential employment and ownership in these sectors be enhanced.

   The Project would enhance pedestrian access to industrial and service sector jobs in the Dogpatch neighborhood.

6. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

   The Project would enhance pedestrian connections between Potrero Hill and the Dogpatch neighborhood, thus it would positively affect achieving the greatest possible preparedness against injury and loss of life in an earthquake.

7. That landmarks and historic buildings be preserved.

   There are no historic buildings or landmarks at the Project site.

8. That our parks and open space and their access to sunlight and vistas be protected from development.

   The Project would enhance pedestrian access to parks and open spaces on Potrero Hill and in the Dogpatch neighborhood. The Project would have no adverse effect on access to sunlight and vistas.

RECOMMENDATION:	**Finding the Project, on balance, in-conformity with the General Plan**

cc: Rich Sucre, Planning Department

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City and County of San Francisco

San Francisco Public Works
Office of the Deputy Director & City Engineer, John Thomas
Bureau of Street-Use & Mapping
1155 Market Street, 3rd Floor
San Francisco Ca 94103
(415) 554-5810 ■ www.SFPublicWorks.org

Mark Farrell, Mayor
Mohammed Nuru, Director

Jerry Sanguinetti, Bureau Manager

Public Works Order No: 187438

PUBLIC HEARING TO CONSIDER A REQUEST FROM REUBEN, JUNIUS & ROSE, LLP, FOR A MAJOR (STREET) ENCROACHMENT PERMIT FOR THE CONSTRUCTION OF A PORTION OF PUBLIC STAIR CONNECTING 22ND STREET AND MISSOURI STREET, AND PROVIDING ACCESS TO A SCENIC OVERLOOK ON BEHALF OF THE PROPERTY OWNER, **RP PENNSYLVANIA, LLC**., FOR THE SUBJECT PROPERTY AT 1390 22nd STREET (BLOCK 4167, LOT 013).

The San Francisco Public Works will consider the request for the above mentioned Major Encroachment Permit. Any interested person may attend the San Francisco Public Works hearing on this matter at City Hall, 1 Dr. Carlton B. Goodlett Place, Room 400 at 9:00 AM, Wednesday, **April 25, 2018**.

Persons unable to attend the public hearing may submit written comments regarding the subject matter to the Bureau of Street-Use & Mapping, 1155 Market Street, 3rd Floor , San Francisco, CA 94103, Attention: Berhane Gaime. These comments will be brought to the attention of the hearing officer and made a part of the official public record.

Information on this matter may be obtained prior to the hearing at 1155 Market Street, 3rd Floor, or by phoning Mr. Gaime at (415) 554-5810 or by email at Berhane.Gaime@sfdpw.org.

City and County of San Francisco

San Francisco Public Works
Office of the Deputy Director & City Engineer, Fuad Sweiss
Bureau of Street-Use and Mapping
1155 Market St., 3rd Fl
San Francisco, CA 94103
(415) 554-5810 ■ www.sfdpw.org

Mark Farrell, Mayor
Mohammed Nuru, Director

Jerry Sanguinett ıger

Accessible Meeting Information

Hearings will be held at City Hall, #1 Dr. Carlton B. Goodlett Place, 4th floor. Accessible seating for persons with disabilities, including those using wheelchairs will be available.

The closest accessible BART Station is Civic Center, located at the intersection of Market and 8th Streets, three blocks from City Hall. Accessible MUNI bus lines serving the City Hall area are: 5 Fulton, 6 Parnassus, 9 San Bruno, 19 Polk, 21 Hayes, 47 Van Ness, 49 Van Ness-Mission, and 71 Haight/Noriega. Accessible MUNI Metro lines are: F, J, K, L, M, N, T (exit at Civic Center or Van Ness Stations). Further information about MUNI accessible services can be obtained at www.sfmta.com or by telephoning MUNI Routes and Schedules at 3-1-1 or at (415) 701-4485.

Accessible curbside parking is available on Dr. Carlton B. Goodlett Place, Grove Street, McAllister Street, and Van Ness Avenue. There is also accessible parking in the vicinity of City Hall at Civic Center Plaza and adjacent to Davies Hall and the War Memorial Complex.

Minutes of the meeting are available in alternative formats. If you require the use of a reader during the meeting, American Sign Language interpreters, and/or a sound enhancement system, please call DPW's Accessibility Access Coordinator at 557-4685 at least 72 hours prior to the hearing.

Individuals with severe allergies, environmental illness, multiple chemical sensitivity or related disabilities should call our accessibility hotline at 557-4685 to discuss meeting accessibility. In order to assist the City's efforts to accommodate such people, attendees at public meetings are reminded that other attendees may be sensitive to various chemical based products. Please help the City to accommodate these individuals.

Know Your Rights Under the Sunshine Ordinance

Government's duty is to serve the public, reaching its decisions in full view of the public. Commissions, Boards, Councils, and other agencies of the City and County exist to conduct the people's business. This ordinance assures that deliberations are conducted before the people and that City operations are open to the peoples review.

For more information on your rights under the Sunshine Ordinance (Chapter 67 of the San Francisco Administrative Code) or to report a violation of the ordinance, contact the Sunshine Ordinance Task Force: City Hall Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102; phone (415) 554-7724, fax (415) 554-7854 or E-mail spotf@sfgov.org.

Lobbyist Registration and Reporting Requirements

Individuals and entities that influence or attempt to influence local legislative or administrative action may be required by the San Francisco Lobbyist Ordinance [SF Campaign & Governmental Conduct Code 2.100, et. seq.] to register and report lobbying activity. For more information about the Lobbyist Ordinance, please contact the Ethics Commission: 25 Van Ness Avenue, Suite 220, San Francisco, CA 94102; phone (415) 252-3100; fax (415) 252-3112; or web site: www.sfethics.org.

Language Interpreters

Requests must be received at least 48 hours in advance of the hearing to ensure availability.

ESPAÑOL: La solicitud de un intérprete debe recibirse 48 horas antes de la reunión.

中文: 如需即時傳譯，請於會議前最少四十八小時通知

PUBLIC WORKS HEARING
April 25, 2018
Hearing Officer Recommendations
(Fiona Cundy PW-BDC-LA)

Order No. 187438

To consider a request from Rueben, Junius & Rose, LLP, for a major (street) encroachment permit for the construction of a portion of public stair connecting 22nd Street and Missouri Street, and providing access to a scenic overlook on behalf of the property owner, RP Pennsylvania, LLC., for the subject property at 1390 22nd Street (block 4167, lot 013).

Recommendations:

To approve this application in full for a major sidewalk encroachment permit.

Findings:

- BSM's presentation by plan checker Berhane Gaime discussed the larger project goals of this development and how this major encroachment fits into the connectivity of the neighborhood.
- The applicant has an approved site permit and has coordinated with all relevant city agencies, including SF PUC, SF MTA, Public Works, City Planning, and Structural Review (DBI).
- The site provides connectivity to the neighborhood and is a vital link supported by the Green Connections Plan.
- The applicant demonstrated community outreach and coordination with neighborhood groups such as the Dogpatch Neighborhood Association and the Potrero Hill Neighborhood Association.
- Nick Elsner spoke on behalf of the Developer that a notification went out for the encroachment permit (a 300' radius).

City and County of San Francisco

San Francisco Public Works
Office of the Deputy Director & City Engineer, John Thomas
Bureau of Street-Use & Mapping
1155 Market Street, 3rd Floor
San Francisco Ca 94103
(415) 554-5810 ■ www.SFPublicWorks.org

Mark Farrell, Mayor
Mohammed Nuru, Director

Jerry Sanguinetti, Bureau Manager

Public Works Order No: 187659

RECOMMENDATION OF APPROVAL OF MAJOR (STREET) ENCROACHMENT PERMIT FOR THE IMPROVEMENTS AND CONSTRUCTION OF A PORTION OF PUBLIC STAIR CONNECTING 22ND STREET AND MISSOURI STREET, AND PROVIDING ACCESS TO A SCENIC OVERLOOK FRONTING THE SUBJECT PROPERTY AT 1390 22nd STREET (BLOCK 4167, LOT 013).

APPLICANT: RP Pennsylvania, LLC
One California Street
San Francisco, CA 94111

PROPERTY IDENTIFICATION: Lot 013 in Assessor's Block 4167
1395 22nd Street
San Francisco, CA 94107

DESCRIPTION OF REQUEST: Major (Street) Encroachment Permit No. 17ME-0003

BACKGROUND:
On June 20, 2017, A.R. Sanchez-Corea & Associates, Inc. filed a letter of request prepared by Reuben, Junius & Rose, LLP on behalf of the owner RP Pennsylvania, LLC with Public Works (PW) to consider the approval of a Major (Street) Encroachment Permit consisting of improvements and the construction of a portion of a public stair connecting 22nd Street and Missouri Street, and providing access to a scenic overlook. This public stair, the scenic overlook, and associated planters, public art, and lighting are required by the Planning Commission's approval of the Project. The proposed improvement will include several streetscape improvements including new landscaping, sidewalk improvements, construction of a publically-accessible stair and overlook, which will provide a pedestrian connection on 22nd Street between Missouri and Texas Streets. The existing conditions at this project site include a very steep hill and unimproved public right-of-way. The proposed construction will be privately maintained by the subject property owner.

The Transportation Advisory Staff Committee (TASC), at its meeting of August 22, 2018, had no objections and recommended the proposed encroachment for approval.

The Planning Department, by letter dated November 9, 2017, found the project, on balance, to be in conformity with the General Plan.

Structural Engineering by an email dated on January 10, 2018, recommended approval that the proposed stairway conforms to code and project requirements. Structural issued recommendation that issue of future maintenance should be addressed as part of the major encroachment permit approval.

SFPW mailed public hearing notices to property owners within 300-foot of the subject location, notifying them of a public hearing on April 25, 2018, to consider the proposed Major (Street) Encroachment Permit at the subject location.

Hearing Officer, Fiona Cundy conducted the hearing and heard testimony presented by SFPW Staff.

Nick Elsner Eric Norden and Bert Ayers, on behalf of the property owner attended the public hearing. Eric Norden clarified the project and improvements and Nick Elsner briefed on the public notification.

The Hearing Officer considered and reviewed all of SFPW's files on this encroachment. Based on the information the Hearing Officer made her decision to recommend the proposed Major (Street) Encroachment to the Board of Supervisors for approval.

HEARING OFFICER RECOMMENDATION: APPROVAL of the request for a Major (Street) Encroachment Permit based on the following findings:

FINDING 1. Recommendation for approval by TASC.
FINDING 2. Finding by Planning Department's and its Commission that the proposed improvements are consistent with objectives and policies of the General Plan.
FINDING 3. Said encroachments does not impede commuter traffic or MUNI transit service.
FINDING 4. Said encroachments will be fully maintained in perpetuity by the Permittee, subject to the terms of the Street Encroachment Agreement and Maintenance Agreement.
FINDING 5. BSM's presentation by plan checker discussed the large project goals of the development and how this major encroachment fits into the connectivity of the neighborhood.
FINDING 6. The applicant has an approved site permit and has coordinated with all relevant city agencies, including SFPUC, SFMTA, Public Works, City Planning and Structural Review (DBI).
FINDING 7. The site provides connectivity to the neighborhood and is a vital link supported by the Green connections Plan.
FINDING 8. The applicant demonstrated community outreach and coordination with neighborhood groups such as the Dogpatch Neighborhood Association and the Potrero Hill Neighborhood Association.
FINDING 9. Nick Elsner spoke on behalf of the Developer that a notification went out for the encroachment permit (a 300' radius).

5/9/2018

X 

Sanguinetti, Jerry
Bureau Manager
Signed by: Sanguinetti, Jerry

5/10/2018

X 

Thomas, John
Deputy Director and City Engineer
Signed by: Thomas, John

5/11/2018

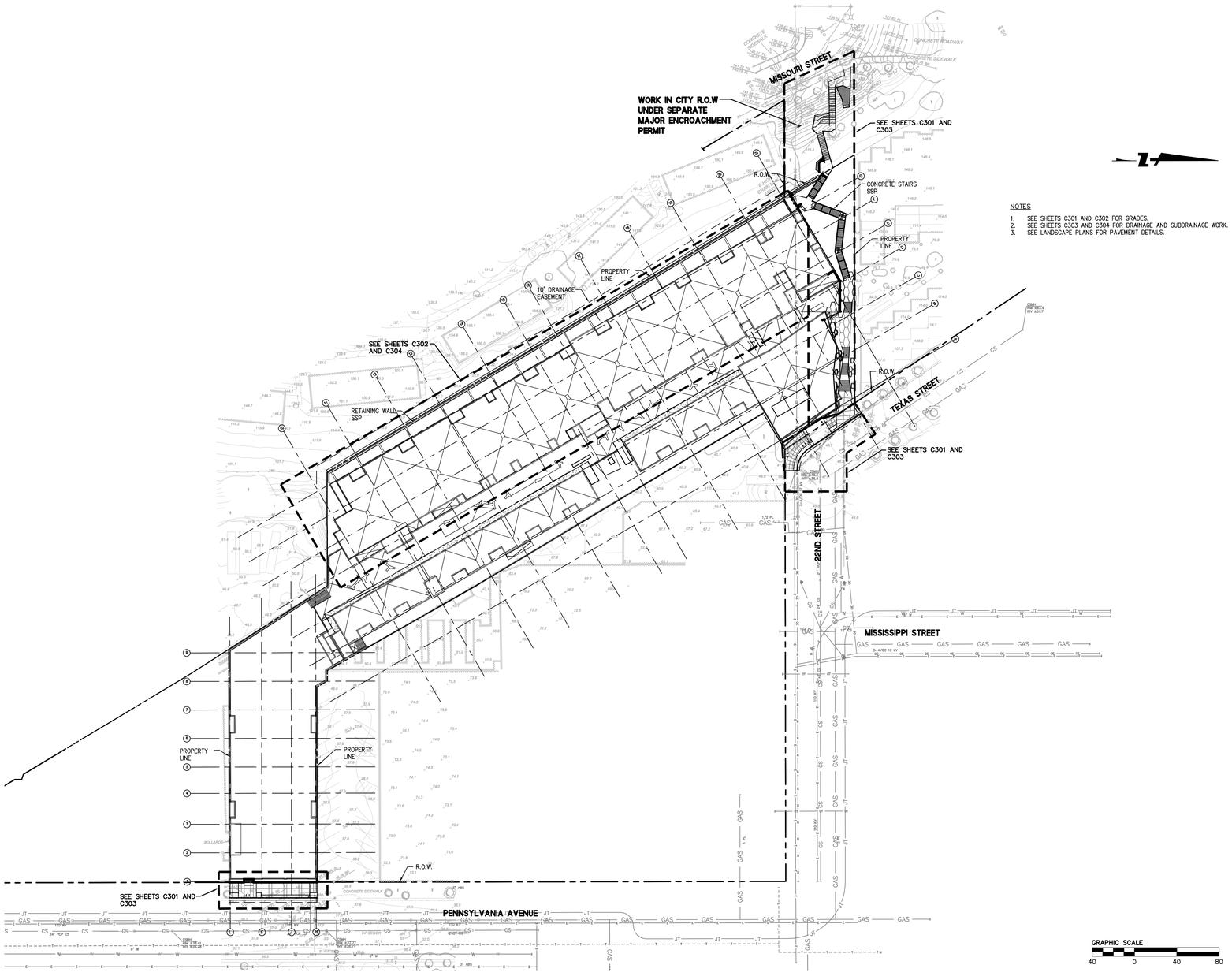
X Mohammed Nuru

Nuru, Mohammed
Director, DPW
Signed by: Nuru, Mohammed

No objections.

2. 22nd Street and Missouri Street (1395 22nd St) – Major Encroachment Permit
A major encroachment permit is requested for the construction of a portion of a public stair connecting 22nd Street and Missouri Street and providing access to a scenic overlook. The proposed scope of improvements includes the construction of a public stairway, scenic overlook, planters, public art and lighting along currently unimproved portion of 22nd Street and Missouri Street right-of-way
Norman Wong 701-4600

No objections.



NOTES

1. SEE SHEETS C301 AND C302 FOR GRADES.
2. SEE SHEETS C303 AND C304 FOR DRAINAGE AND SUBDRAINAGE WORK.
3. SEE LANDSCAPE PLANS FOR PAVEMENT DETAILS.

FOR
MAJOR ENCROACHMENT PERMIT
REVIEW ONLY

Perry Architects, Inc
Pier 28 / The Embarcadero
San Francisco, CA 94105
Phone : 415.495.8200
www.perryarchitectsinc.com

BKF
ENGINEERS / SURVEYORS / PLANNERS
255 Shoreline Drive, Suite 200
Redwood City, CA 94065

1395 22ND STREET

1395 22nd Street & 790 Pennsylvania Avenue

ALIGN
REAL ESTATE

ISSUE HISTORY		
	100% DESIGN DEVELOPMENT	08/17/16
	50% CONSTRUCTION DOCUMENTS	11/21/16
6	75% CONSTRUCTION DRAWINGS	01/06/17
	MAJOR ENCROACHMENT PERMIT	03/15/17

PROJECT NUMBER 14009

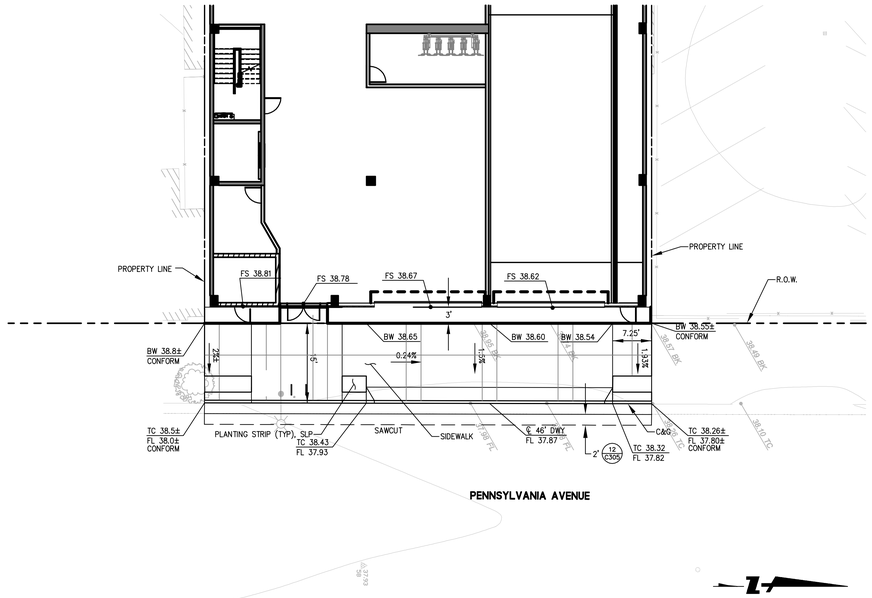
SCALE 1"=40'

SHEET TITLE
GRADING AND DRAINAGE PLAN

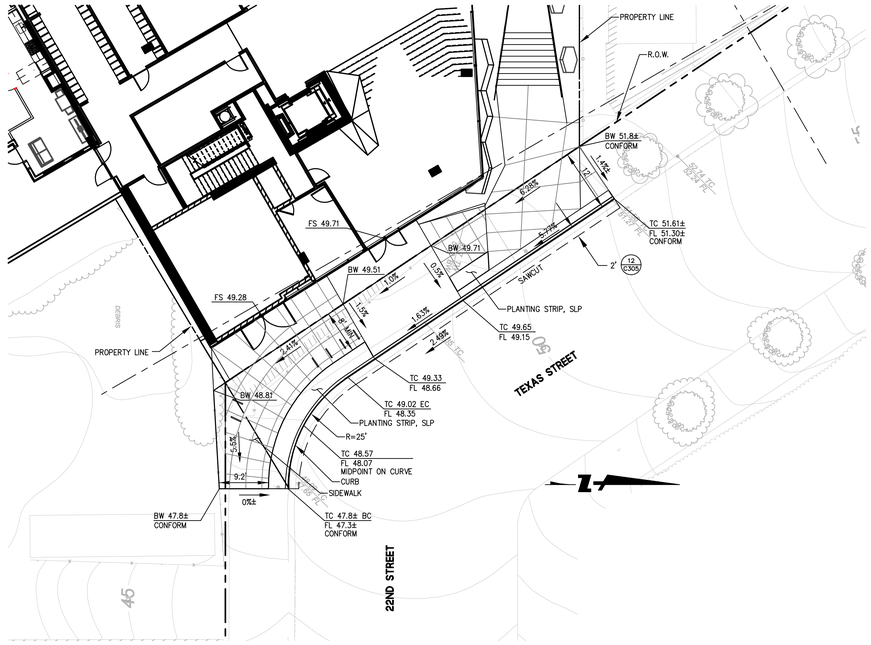
SHEET NUMBER
C300

PROFESSIONAL SEAL

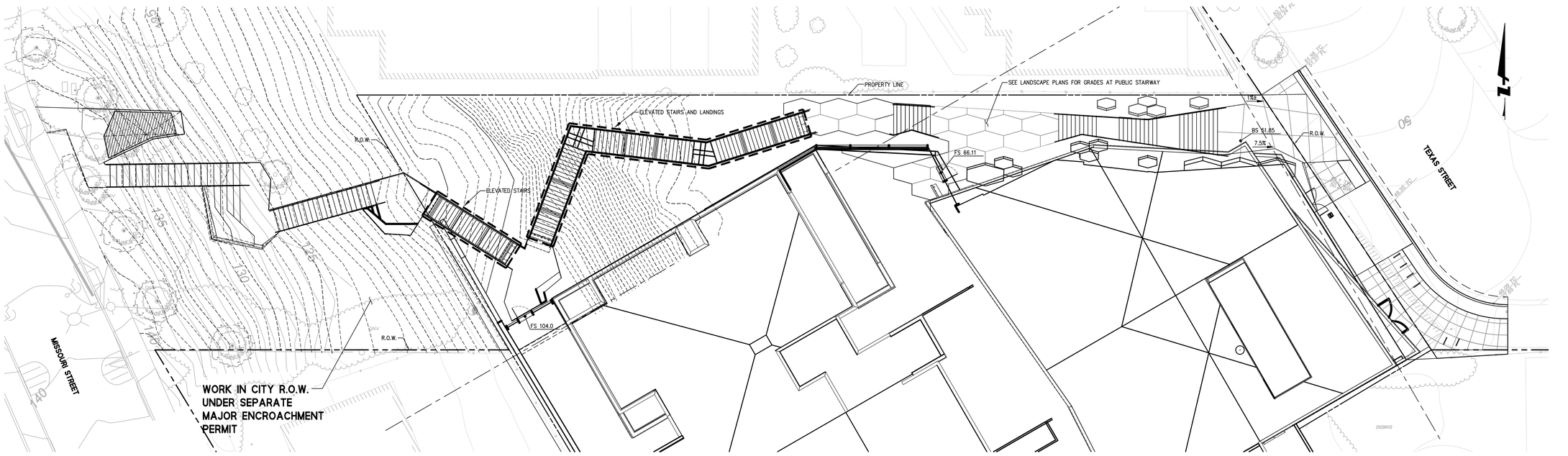
REGISTERED PROFESSIONAL ENGINEER TIMOTHY P. HEFFERNAN No. 67089 Exp. 9/30/18 CIVIL STATE OF CALIFORNIA



PENNSYLVANIA AVENUE



TEXAS STREET



PUBLIC STAIRWAY

GRAPHIC SCALE
10 0 10 20

FOR
MAJOR ENCROACHMENT PERMIT
REVIEW ONLY

Perry Architects, Inc
Pier 28 / The Embarcadero
San Francisco, CA 94105
Phone : 415.495.8200
www.perryarchitectsinc.com

BkF
ENGINEERS / SURVEYORS / PLANNERS
255 Shoreline Drive, Suite 200
Redwood City, CA 94065

1395 22ND STREET
1395 22nd Street & 700 Pennsylvania Avenue

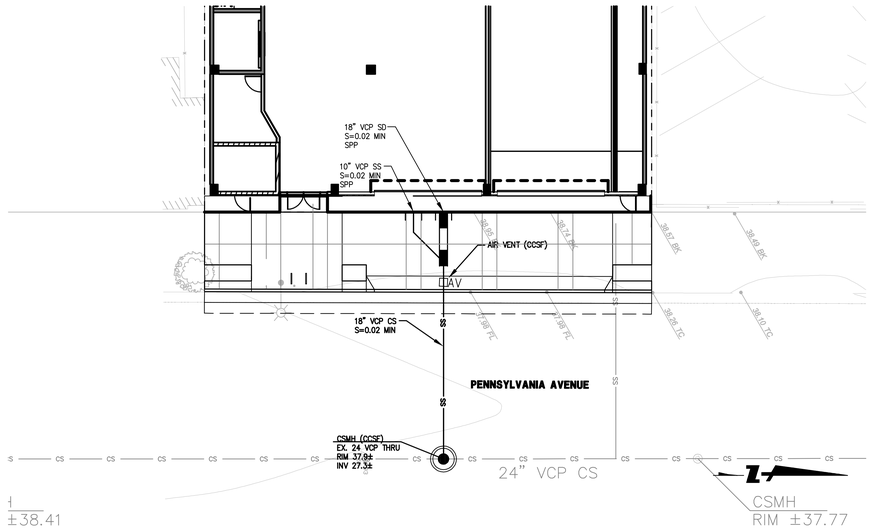
ALIGN
REAL ESTATE

ISSUE HISTORY

	100% DESIGN DEVELOPMENT	08/17/16
	50% CONSTRUCTION DOCUMENTS	11/21/16
6	75% CONSTRUCTION DRAWINGS	01/06/17
	MAJOR ENCROACHMENT PERMIT	03/15/17

PROJECT NUMBER 14009
SCALE 1"=10'
SHEET TITLE GRADING AND DRAINAGE PLAN
SHEET NUMBER **C301**
PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER TIMOTHY V. HETTERICH No. 67085 Exp. 9/30/18 CIVIL STATE OF CALIFORNIA



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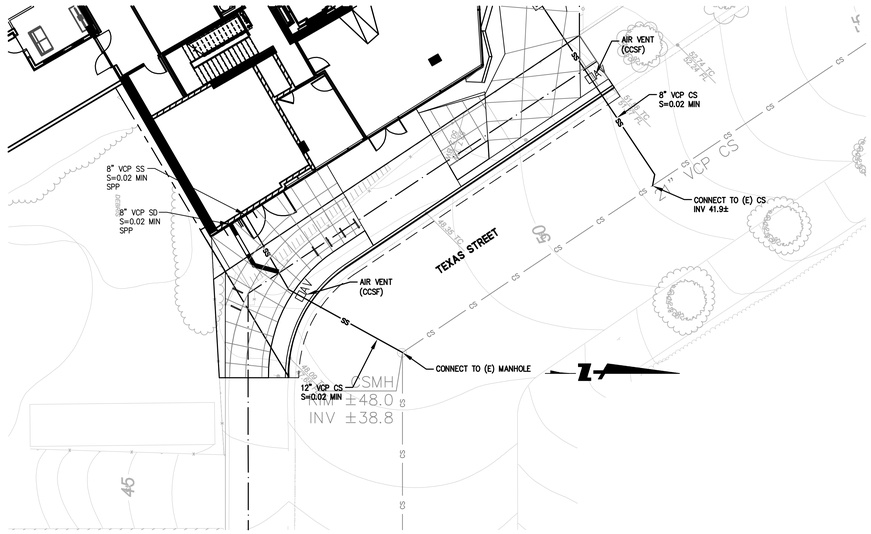

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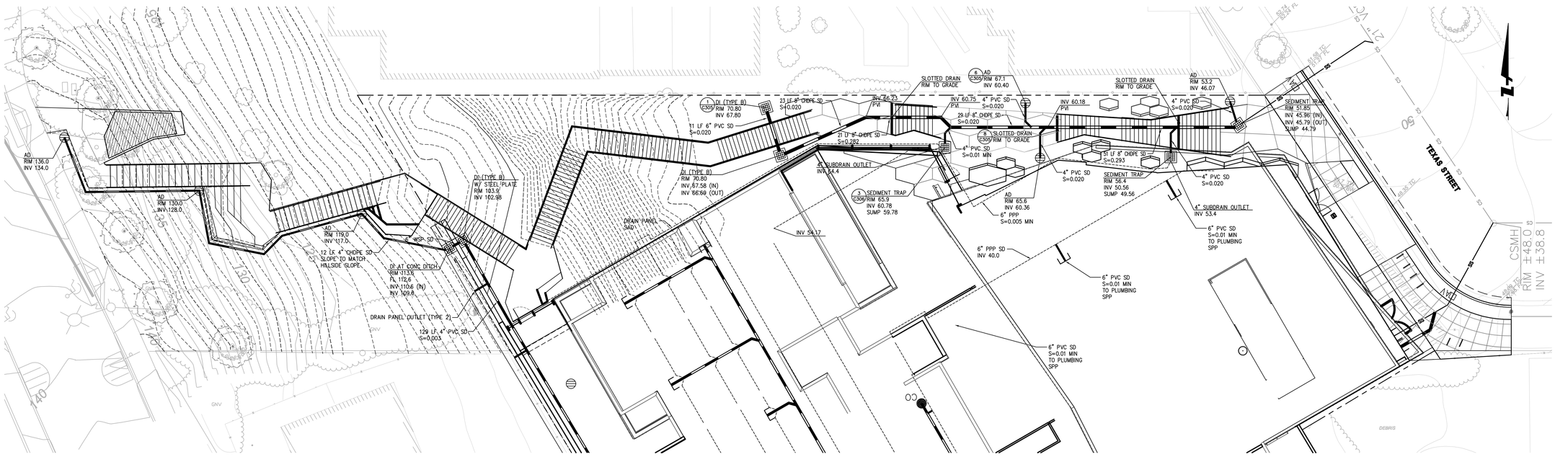


PUBLIC STAIRWAY

GRAPHIC SCALE
10 0 10 20

FOR
MAJOR ENCROACHMENT PERMIT
REVIEW ONLY

Perry Architects, Inc
Pier 28 / The Embarcadero
San Francisco, CA 9410
Phone : 415.495.820
www.perryarchitectsinc.com

BkF
ENGINEERS / SURVEYORS / PLANNERS
255 Shoreline Drive, Suite 200
Redwood City, CA 94065

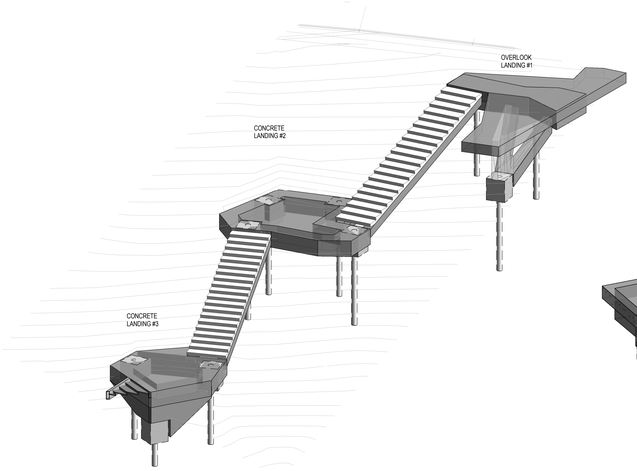
1395 22ND STREET
1395 22nd Street & 700 Pennsylvania Avenue

ALIGN
REAL ESTATE

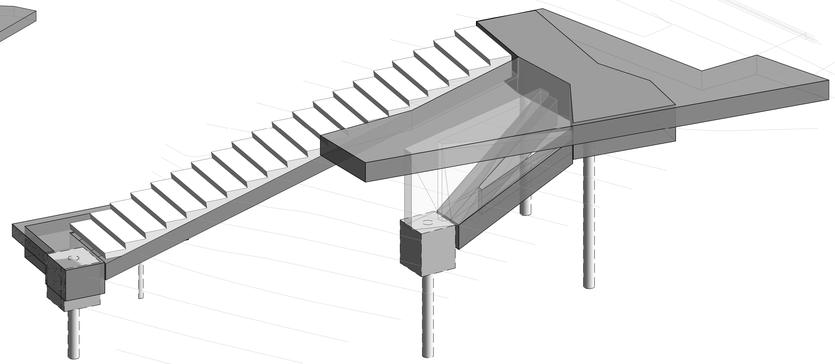
ISSUE HISTORY		
	100% DESIGN DEVELOPMENT	08/17/16
	50% CONSTRUCTION DOCUMENTS	11/21/16
6	75% CONSTRUCTION DRAWINGS	01/06/17
	MAJOR ENCROACHMENT PERMIT	03/15/17

PROJECT NUMBER 14009
SCALE 1"=10'
SHEET TITLE
GRADING AND DRAINAGE PLAN
SHEET NUMBER
C303
PROFESSIONAL SEAL

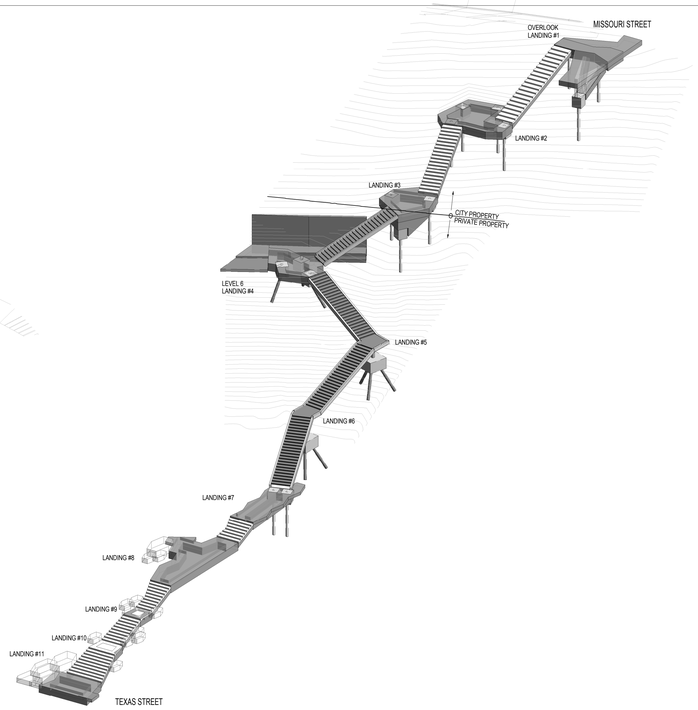
REGISTERED PROFESSIONAL ENGINEER
TIMOTHY V. HETTERICH
No. 67089
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA



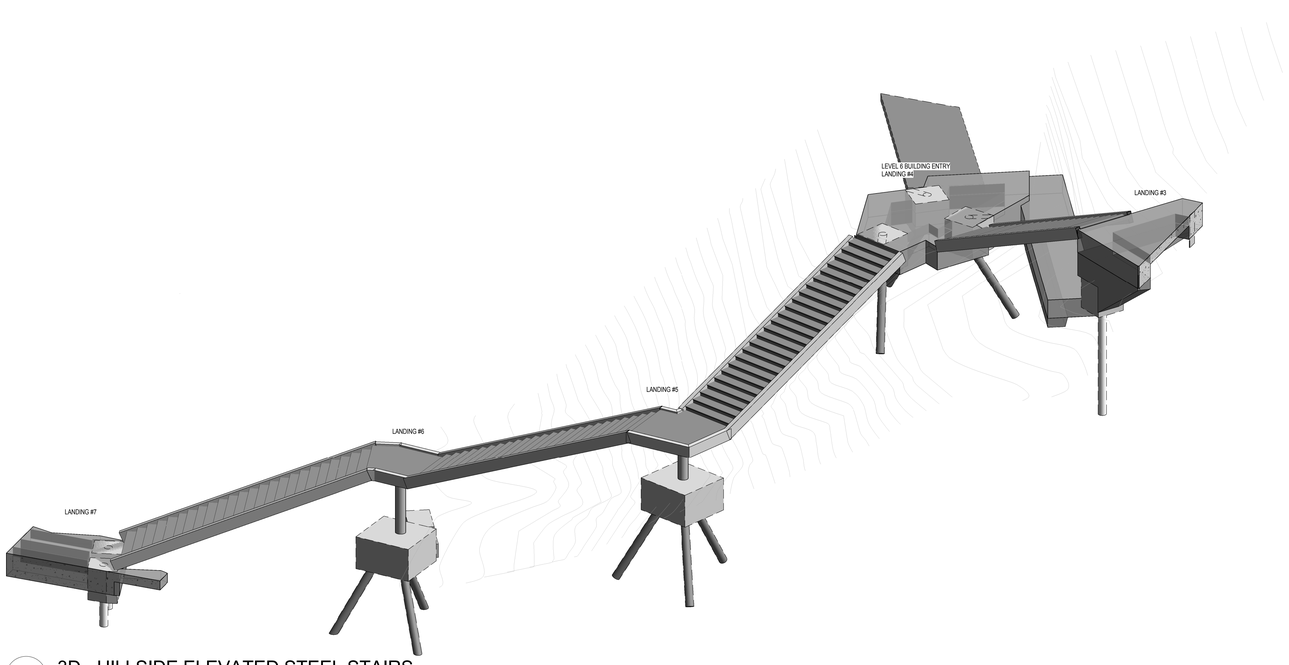
24 3D - UPPER STAIRS



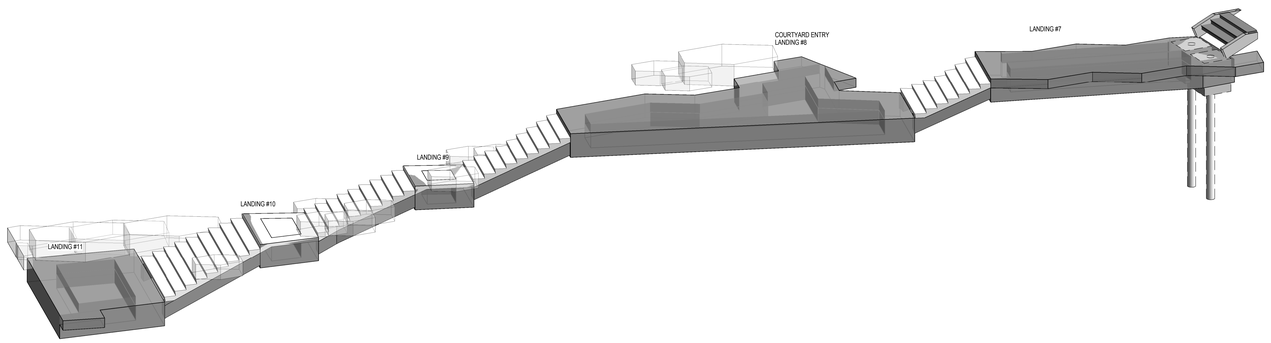
19 3D OVERLOOK



9 3D - HILLSIDE STAIRS



22 3D - HILLSIDE ELEVATED STEEL STAIRS



21 3D - LOWER STAIRS

SEE PLAN FOR DESIGN LOAD

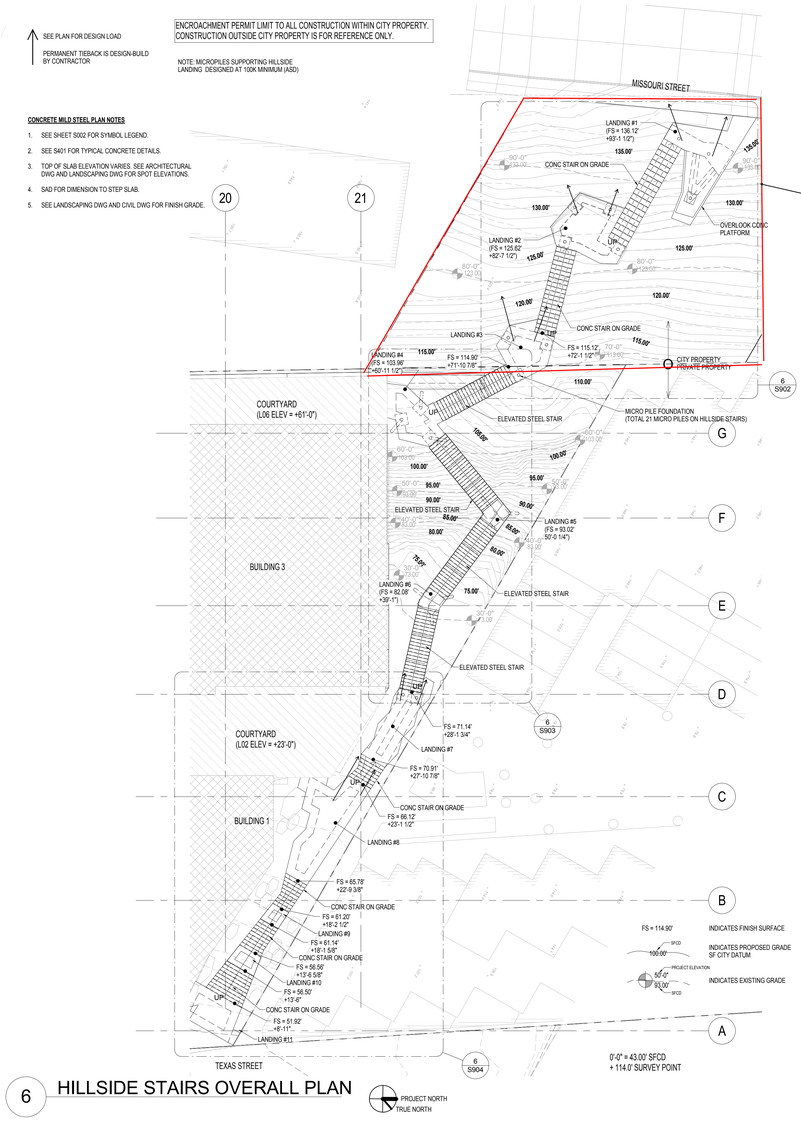
PERMANENT TIEBACK IS DESIGN-BUILD BY CONTRACTOR

ENCROACHMENT PERMIT LIMIT TO ALL CONSTRUCTION WITHIN CITY PROPERTY. CONSTRUCTION OUTSIDE CITY PROPERTY IS FOR REFERENCE ONLY.

NOTE: MICROPILES SUPPORTING HILLSIDE LANDING DESIGNED AT 100K MINIMUM (ASD)

CONCRETE MILD STEEL PLAN NOTES

1. SEE SHEET S002 FOR SYMBOL LEGEND.
2. SEE S401 FOR TYPICAL CONCRETE DETAILS.
3. TOP OF SLAB ELEVATION VARIES. SEE ARCHITECTURAL DWG AND LANDSCAPING DWG FOR SPOT ELEVATIONS.
4. SAD FOR DIMENSION TO STEP SLAB.
5. SEE LANDSCAPING DWG AND CIVIL DWG FOR FINISH GRADE.



20 21

6 HILLSIDE STAIRS OVERALL PLAN

Sturcture within the ROW

PROJECT KEY PLAN

Perry Architects, Inc.
Pier 28 / The Embarcadero
San Francisco, CA 94105
Phone : 415.495.8200
www.perryarchitectsinc.com

NISHKIAN MENNINGER
CONSULTING AND STRUCTURAL ENGINEERS SINCE 1919
600 Harrison Street, Suite 110
San Francisco, CA 94107
Tel: (415) 541-9477 Fax: (415) 543-5071

1395 22ND STREET
SAN FRANCISCO, CALIFORNIA

ALIGN
REAL ESTATE

ISSUE HISTORY	
75% SCHEMATIC DESIGN	10/23/15
100% SCHEMATIC DESIGN	12/18/15
100% DESIGN DEVELOPMENT	08/19/16
50% CONSTRUCTION DRAWINGS	11/18/16
75% CONSTRUCTION DRAWINGS	01/06/17
MAJOR ENCROACHMENT PERMIT	03/15/17
ADDENDUM #1 - FOUNDATION	05/24/17

PROJECT NUMBER 7502

SCALE As indicated

SHEET TITLE
HILLSIDE STAIRS OVERALL PLAN

SHEET NUMBER
S901

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
No. 28640
Exp. 3/31/18
CIVIL
STATE OF CALIFORNIA

7/28/2017 9:38:18 AM

OPERATION & MAINTENANCE MANUAL

1395 22ND STREET

SAN FRANCISCO, CA

SUBMITTED BY

11535 N. DAVIS RD.
LODI, CA 95242
PHONE: (925)298-0288
FAX: (925)298-0988
www.marinaco.com

Table of Contents

IRRIGATION GUARANTEE

MARINA
Still Growing

landscape construction
landscape maintenance
landscape architecture
erosion control
design build

GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM

We hereby guarantee that the irrigation system we have furnished and installed is free from defects in materials and workmanship including settling of backfill areas below grade, and the work has been completed in accordance with the drawings and specifications, with ordinary wear and tear and unusual abuse or neglect excepted. We agree to repair or replace any defects in material or workmanship which may develop during the period of one year from the date of acceptance and also to repair or replace any damage from the repairing or replacing of such defects at no additional costs to Build Group. We shall make such repairs or replacements within a reasonable time, as determined by Build Group, after receipt of written notice. In the event of our failure to make such repairs or replacements within a reasonable time after receipt of written notice from Build Group, we authorize Build Group to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges thereof upon demand.

PROJECT: 1395 22nd Street

CONTRACTOR: Marina Landscape, Inc

ADDRESS: 11535 N. Davis Rd., Lodi, Ca 95242

PHONE NO: (925)298-0288

DATE OF ACCEPTANCE: _____

BY: _____
Gerardo Almanza, Project Manager

PLANTING GUARANTEE

MARINA
Still Growing
landscape construction
landscape maintenance
landscape architecture
erosion control
design build

GUARANTEE FOR PLANT MATERIAL

We hereby guarantee that the plant material we have furnished and installed is free from defects in materials and workmanship. With the exception of damages, theft by others or inadequate maintenance by others, we hereby warranty the trees for a period of one year from date of acceptance for the project listed below.

We agree to provide replacement plant material during the warranty period at no additional costs to Build Group. We shall provide such replacement within a reasonable time, as determined by Build Group, after receipt of written notice.

PROJECT: 1395 22nd Street

CONTRACTOR: Marina Landscape, Inc.

ADDRESS: 11535 N. Davis Rd., Lodi, CA 95242

PHONE NO: (925) 298-0288

DATE OF ACCEPTANCE: _____

BY: _____
Gerardo Almanza, Project Manager

LIST OF MATERIALS AND EQUIPMENT

MARINA

MARINA LANDSCAPE, INC.
11535 N. DAVIS RD.
LODI, CA 95242
PHONE: (925)298-0288
FAX: (925)298-0988

PROJECT NAME: 1395 22ND STREET
LOCATION: San Francisco, CA
PROJECT NO: 361719

SECTION	ITEM	MANUFACTURER	MODEL NO.
		PIPE & FITTINGS	
	SUPPLY LINE	PACIFIC PLASTIC OR EQUAL	SCH 40 PVC PURPLE
	LATERAL LINE	PACIFIC PLASTIC OR EQUAL	SCH 40 PVC PURPLE
	CONDUIT	PACIFIC PLASTIC OR EQUAL	SCH 40 GREY PVC
	SUPPLY LINE FITTINGS	LASCO OR EQUAL	SCH 40 FITTINGS
	LATERAL LINE FITTINGS	LASCO OR EQUAL	SCH 40 FITTINGS
	NIPPLES	LASCO OR EQUAL	SCH 80 NIPPLES W/MOLDED THREADS
		VALVES	
	MASTER CONTROL VALVE	SUPERIOR	3100 - 2"
	REMOTE CONTROL VALVE	RAINBIRD	PESB SERIES
	GATE VALVE	NIBCO	T113
	DRIP ZONE KIT VALVE	RAINBIRD	XCZ-100-PRB-COM
	FLOW SENSOR	IRRITROL	FS-B150
		VALVE BOXES	
	6" ROUND VALVE BOX	NDS	107 PBCR
	RECTANGULAR VALVE BOX	NDS	113 PBCR
	JUMBO VALVE BOX	NDS	217 PBCR
	10" ROUND VALVE BOX	NDS	111 PBCR
		SOLVENT CEMENT &PRIMER	
	SOLVENT CEMENT	IPS	711
	PRIMER	IPS	P-70
	SOLVENT CEMENT & FLEX PIPE	IPS	795
		DRIPLINE	
	SUBSURFACE DRIPLINE	HUNTER	ECO-WRAP-0.6-GPH

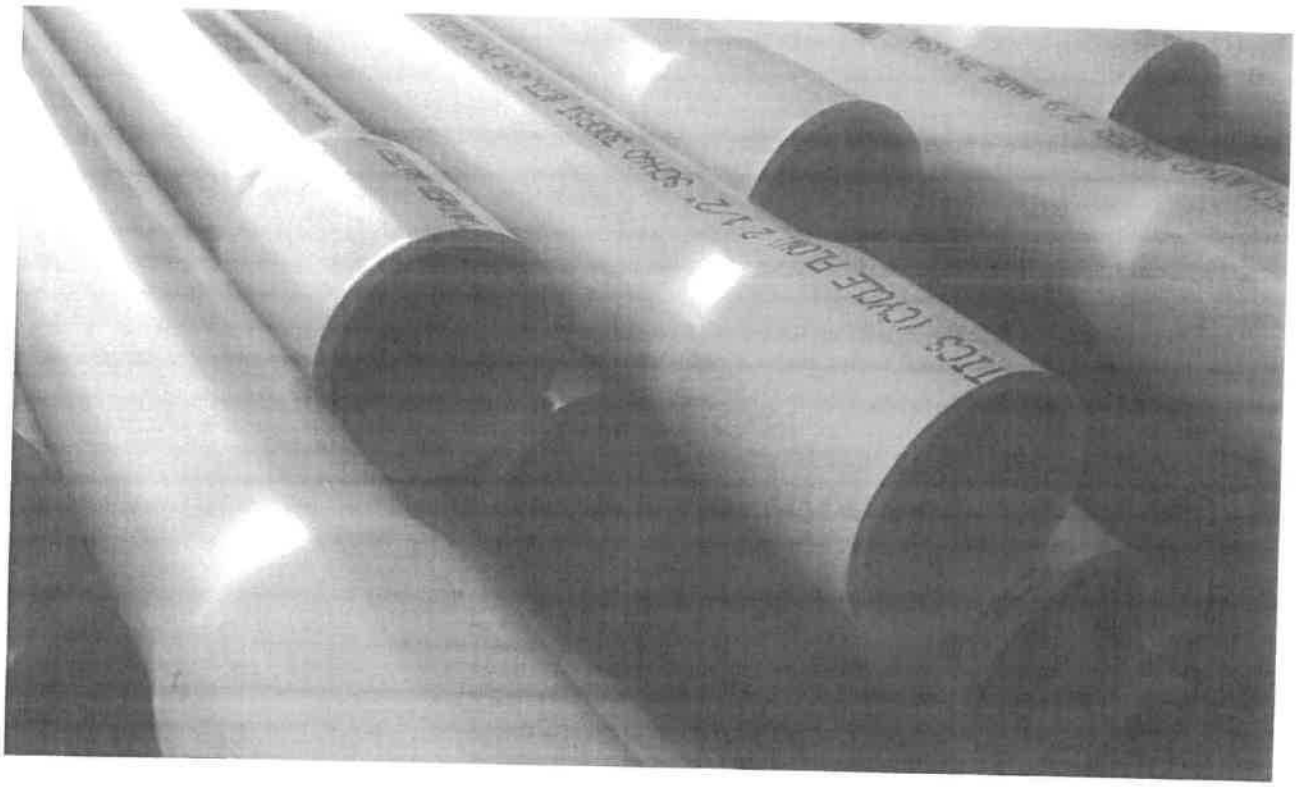
SUBSURFACE DRIP SYSTEM	HUNTER	ECO-MAT
FLUSH VALVE	KBI OR EQUAL	SCH. 40 1/2" BALL VALVE
AIR RELIEF VALVE	HUNTER	PLD-AVR
	SPRAY HEADS & BUBBLERS	
BUBBLER	RAINBIRD	1402
SPRINKLER HEADS	HUNTER	PROS-12-CV-PRS40-MP2000-F,H,T,Q
SPRINKLER HEADS	HUNTER	PROS-12-CV-PRS40-MP1000-F,H,T,Q
	IRRIGATION CONTROLLER	
IRRIGATION CONTROLLER	RAINMASTER	EGP-TW
RAIN SENSOR	IRRITROL	RS 500
DECODERS	RAINMASTER	TW-D-1, TW-D-2, TW-D-4
LIGHTNING	RAINMASTER	TW-LA-1
CONNECTORS	RAINMASTER	TW-SPLICE
2-WIRE	RAINMASTER	TW-CAB-14
GROUND ROD KIT	PAIGE	GROUND ROD KIT
	MISCELLANOUS	
SAND BACKFILL	WCS&G	SE 30
SWING JOINT @ SPRAYHEAD	LASCO OR EQUAL	SCH. NIPPLES 80 W/MARLEXSTREET ELL
FLEX PIPE	SALCO OR EQUAL	1/2" IPS FLEX PIPE
DRAIN ROCK	WCS&G	3/4" CRUSH
ID TAGS	CHRISTY'S	ID-STD-YI
RECLAIMED ID TAGS	CHRISTY'S	ID-MAX-P2-RC006

CATALOG CUT SHEET

Supply Line

Pacific Plastics

Reclaimed Water Sch40 Purple Solvent Weld



Specification

Pacific Plastics IPS Schedule series of PVC pipe is produced for use in reclaimed water applications in which the maximum operating temperature is 140° F. The compound is PVC 1120 Type 1 Grade 1, with a cell class of 12454B, per ASTM D1784.

The Schedule series listed below is produced in strict compliance to ASTM D1785. It is listed with NSF and complies with NSF/ANSI Standard 14 and Standard 61.

Sch40 pipe is installed per ASTM D2855. The joints should conform to ASTM D2672, the solvent cement to ASTM D2564 and the primer to ASTM F656.

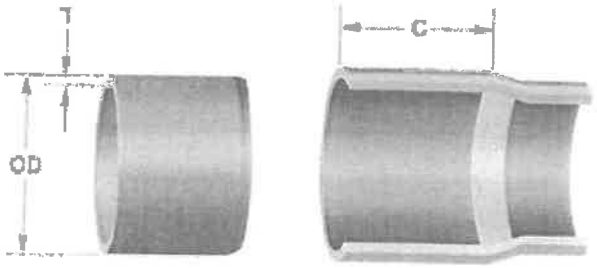
Cycle Flow Sch40 for use in Reclaimed Water applications:

- Sizes 1/2" – 8" are produced in Purple color, 20 foot lengths and Belled End.

The outside diameter and wall thickness of Sch40 pipe are measured in accordance to ASTM D2122 and are shown in the following tables:

Dimensions

Size	OD	T	C	PSI
1/2	0.840	0.109	1.00	600
3/4	1.050	0.113	1.25	480
1	1.315	0.133	1.50	450
1 14	1.660	0.140	1.75	370
1 12	1.900	0.145	2.00	330
2	2.375	0.154	2.25	280
2 ½	2.875	0.203	2.50	300
3	3.500	0.216	3.25	260
4	4.500	0.237	4.00	220
6	6.625	0.280	6.00	180
8	8.625	0.322	6.00	160



Size – Inch
OD – Outside Diameter
T – Wall Thickness
C – Approximate Bell Depth
PSI – Pressure Rating

Certification

This is to certify that, in this category of PVC pipe, all the products manufactured by Pacific Plastics have been inspected, sampled and tested in accordance with the following specifi cations and have been found to meet or exceed the requirements of those specifications.

Raw Materials

- PVC1120 Type1 Grade1
- Cell Class 12454
- ASTM D1784 Specification for Rigid PVC Compounds
- NSF Listed

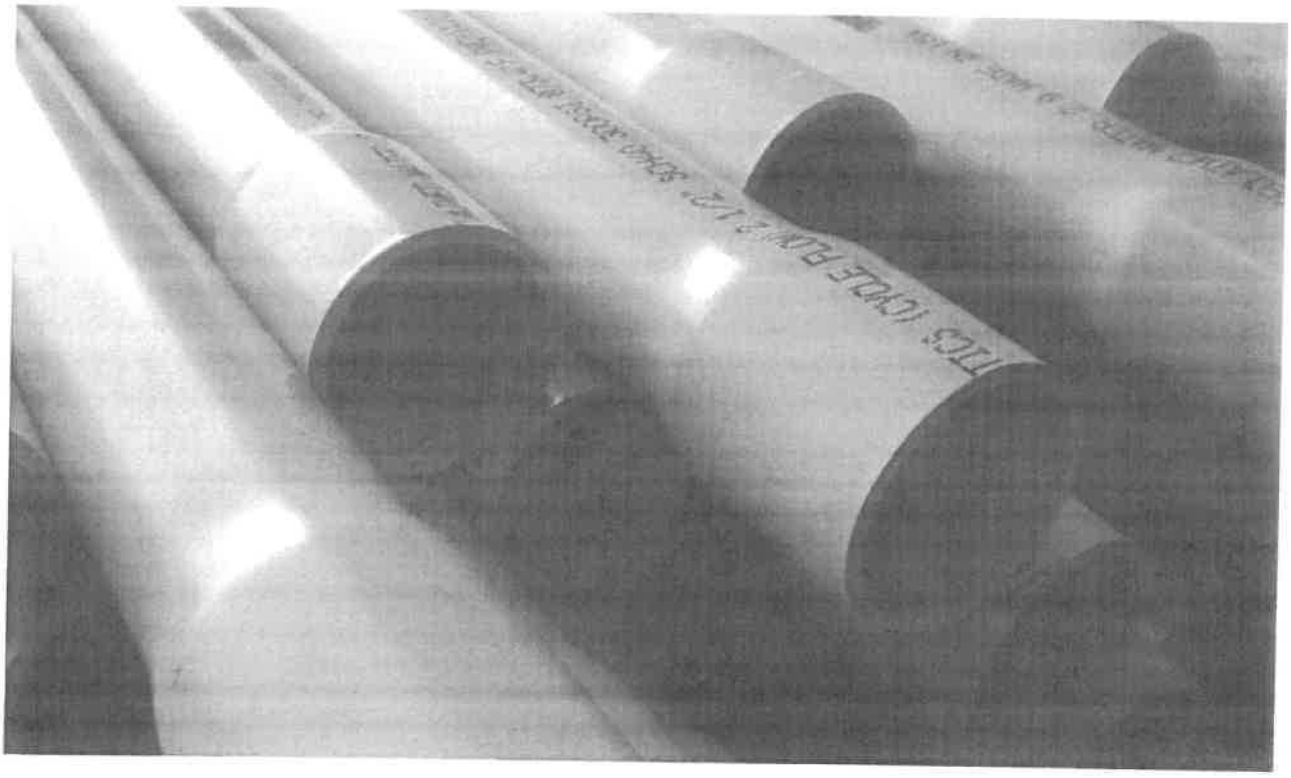
PVC Pipe

- Sch40 Purple
- Solvent Weld Belled End
- ½" – 8" IPS
- ASTM D1785 Specifi cation for PVC Pipe
- ASTM D2672 Specifi cation for IPS PVC Pipe Joints using solvent cement
- Complies with NSF / ANSI Standard 14
- Complies with NSF / ANSI Standard 61

LATERAL LINE

Pacific Plastics

Reclaimed Water Sch40 Purple Solvent Weld



Specification

Pacific Plastics IPS Schedule series of PVC pipe is produced for use in reclaimed water applications in which the maximum operating temperature is 140° F. The compound is PVC 1120 Type 1 Grade 1, with a cell class of 12454B, per ASTM D1784.

The Schedule series listed below is produced in strict compliance to ASTM D1785. It is listed with NSF and complies with NSF/ANSI Standard 14 and Standard 61.

Sch40 pipe is installed per ASTM D2855. The joints should conform to ASTM D2672, the solvent cement to ASTM D2564 and the primer to ASTM F656.

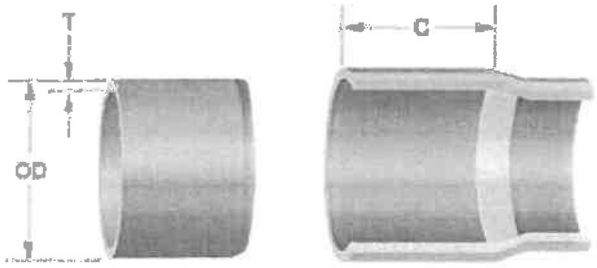
Cycle Flow Sch40 for use in Reclaimed Water applications:

- Sizes 1/2" – 8" are produced in Purple color, 20 foot lengths and Belled End.

The outside diameter and wall thickness of Sch40 pipe are measured in accordance to ASTM D2122 and are shown in the following tables:

Dimensions

Size	OD	T	C	PSI
1/2	0.840	0.109	1.00	600
3/4	1.050	0.113	1.25	480
1	1.315	0.133	1.50	450
1 14	1.660	0.140	1.75	370
1 12	1.900	0.145	2.00	330
2	2.375	0.154	2.25	280
2 ½	2.875	0.203	2.50	300
3	3.500	0.216	3.25	260
4	4.500	0.237	4.00	220
6	6.625	0.280	6.00	180
8	8.625	0.322	6.00	160



Size – Inch
OD – Outside Diameter
T – Wall Thickness
C – Approximate Bell Depth
PSI – Pressure Rating

Certification

This is to certify that, in this category of PVC pipe, all the products manufactured by Pacific Plastics have been inspected, sampled and tested in accordance with the following specifi cations and have been found to meet or exceed the requirements of those specifications.

Raw Materials

- PVC1120 Type1 Grade1
- Cell Class 12454
- ASTM D1784 Specification for Rigid PVC Compounds
- NSF Listed

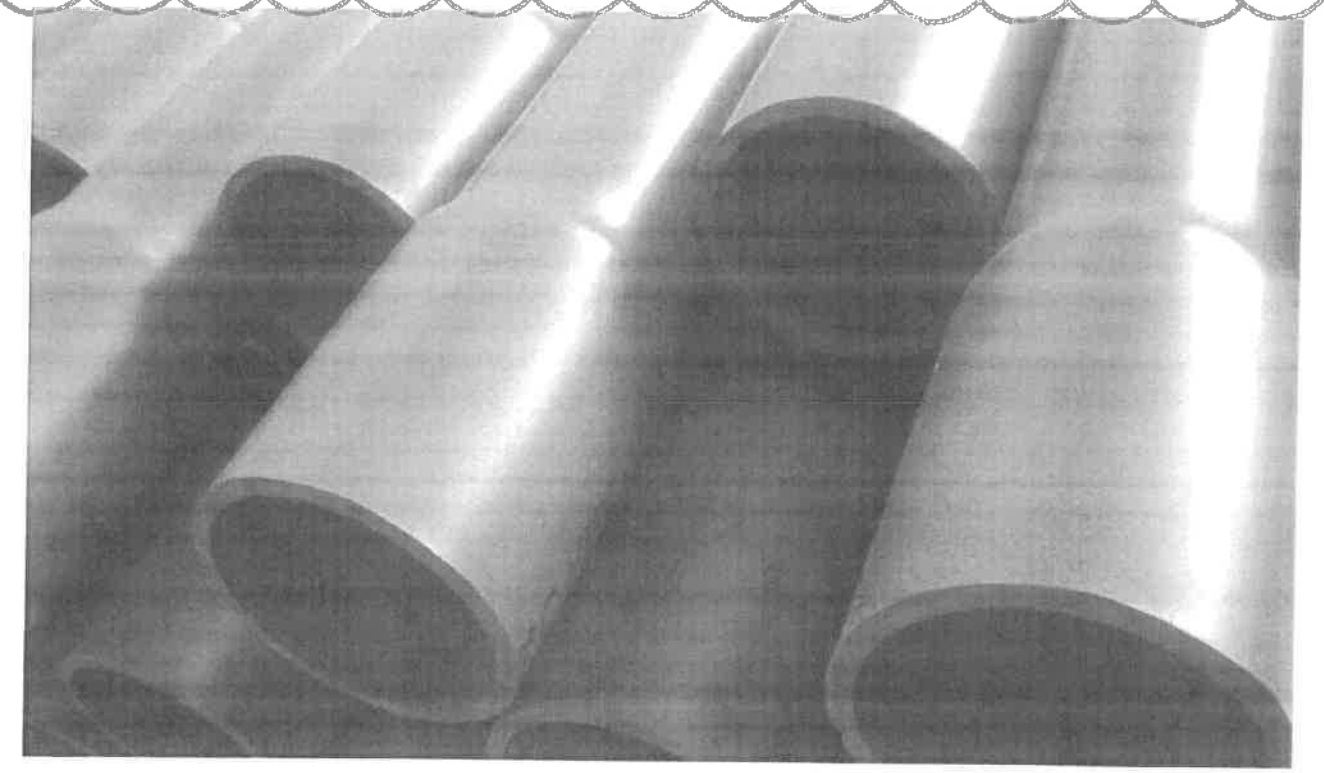
PVC Pipe

- Sch40 Purple
- Solvent Weld Belled End
- ½" – 8" IPS
- ASTM D1785 Specifi cation for PVC Pipe
- ASTM D2672 Specifi cation for IPS PVC Pipe Joints using solvent cement
- Complies with NSF / ANSI Standard 14
- Complies with NSF / ANSI Standard 61

Conduit

Pacific Plastics

Electrical Conduit Sch40 Grey Solvent Weld



Specification

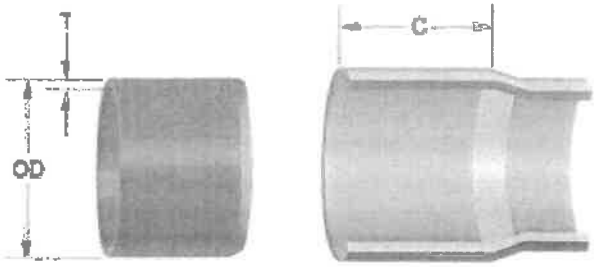
Pacific Plastics Electrical Conduit is produced for the conveyance of electrical wires, above or below ground. The compound is PVC 1120 Type 1 Grade 1, with a cell class of 12454B per ASTM D1784.

Our Sch40 Electrical Conduit is produced in strict compliance to UL 651 and NEMA's TC-2. It is rated for 90° C wiring and can be installed both in the underground and above ground applications.

Sizes of 1/2" – 6" are produced in Grey color, 20 foot and 10 foot lengths Belled End.

The dimensions of the Sch40 conduit per UL 651 are shown in the following table:

	Dimensions		
1/2	0.840	0.109	1.00
3/4	1.050	0.113	1.25
1	1.316	0.133	1.50
1 ¼	1.660	0.140	1.75
1 ½	1.900	0.145	2.00
2	2.375	0.154	2.25
2 ½	2.875	0.203	2.50
3	3.500	0.216	3.25
4	4.500	0.237	4.00
5	5.625	0.258	4.00
6	6.625	0.280	6.00



OD – Outside Diameter
T – Wall Thickness
C – Approximate Bell Depth

Certification

This is to certify that, in this category of PVC pipe, all the products manufactured by Pacific Plastics have been inspected, sampled and tested in accordance with the following specifi cations and have been found to meet or exceed the requirements of those specifi cations.

Raw Materials

- PVC1120 Type1 Grade1

- Cell Class 12454
- ASTM D1784 Specifi cation for Rigid PVC Compounds

PVC Pipe

- Sch40 Grey
- Solvent Weld Belled End
- ½" – 6" IPS
- Sunlight resistant per UL651
- Rated for use with 90°C wiring
- UL651 & NEMA TC 2
- NFS Listed

Supply Line Fittings

LASCO
Fittings, Inc.

SUBMITTAL SHEET

SCHEDULE 40 PVC

LASCO Fittings, Inc., an Aalberts Industries company, specializes in the production and sale of injection molded fittings for Irrigation, Plumbing, Industrial, Pool/Spa and Retail markets. LASCO Fittings, Inc. operates a 26-acre manufacturing facility in Brownsville, TN. With eight Regional Distribution Facilities strategically located within the United States, LASCO provides worldwide distribution and overnight service.

Injection Molded PVC Pipe Fittings in sizes 3/8" through 12"

LASCO Fittings, Inc.'s comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 3/8" through 12" conforming to ASTM D 2466.

STANDARDS AND SPECIFICATIONS – Schedule 40

ASTM D-1784 – Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly Vinyl Chloride) (CPVC) Compounds.
ASTM D-2466 – Socket Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
ASTM F-1970 – Standard Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems.
MATERIAL – LASCO Schedule 40 Fittings are produced from PVC Type 1, Cell Classification 12454-B.
– O-rings are produced from a Buna-N (Nitrile) material.
LISTINGS – NSF/ANSI Standard 61, Annex G: Drinking Water System Components Weighted average lead content of ≤0.25% and is in compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) NSF/ANSI Standard 14: Plastics Piping system Components and Related Materials. Includes /ANSI Standard 61, Annex G

DO NOT USE LASCO FITTINGS FOR COMPRESSED AIR OR GASES.
DO NOT TEST PVC PIPING SYSTEMS WITH COMPRESSED AIR OR GASES.
DO NOT USE FITTINGS WITH LIQUIDS NOT RECOMMENDED BY LASCO.
MODIFICATIONS OF FITTINGS VOIDS THE WARRANTY.

MADE IN USA

Limited Warranty
LASCO Fittings, Inc. products are warranted to be free from manufacturing defects in materials and workmanship. They are warranted against rot, rust, and electrolytic corrosion for a period of three years from date of installation. If LASCO products prove defective due to manufacturing defects in material or workmanship during that period, the manufacturer will provide new replacement units of the same type and size. No remedy will be granted under this warranty if LASCO products are not used strictly in accordance with LASCO's directions with respect to use and storage or if the products have been modified in any way. THE MANUFACTURER'S LIABILITY UNDER EXPRESSED OR IMPLIED WARRANTY OR FOR ANY REASON IS LIMITED TO FURNISHING REPLACEMENT UNITS OR GRANTING A CREDIT FOR DEFECTIVE UNITS. NO LABOR EXPENSE OR CONSEQUENTIAL DAMAGES WILL BE PAID BY LASCO. THIS WARRANTY IS IN LIEU OF ALL OTHER GUARANTEES AND WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE, EXCEPT FOR ANY WARRANTIES IMPLIED BY LAW FOR NONCOMMERCIAL CONSUMERS. ANY SUCH WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

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Lateral Line Fittings

LASCO Fittings, Inc.

SUBMITTAL SHEET

SCHEDULE 40 PVC

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Injection Molded PVC Pipe Fittings In sizes 3/8" through 12"

LASCO Fittings, Inc.'s comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 3/8" through 12" conforming to ASTM D 2466.

STANDARDS AND SPECIFICATIONS – Schedule 40

ASTM D-1784 – Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly Vinyl Chloride) (CPVC) Compounds.
ASTM D-2466 – Socket Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
ASTM F-1970 – Standard Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems.
MATERIAL – LASCO Schedule 40 Fittings are produced from PVC Type 1, Cell Classification 12454-B.
– O-rings are produced from a Buna-N (Nitrile) material.
LISTINGS – NSF/ANSI Standard 61, Annex G: Drinking Water System Components Weighted average lead content of ≤0.25% and Is in compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) NSF/ANSI Standard 14: Plastics Piping system Components and Related Materials. Includes /ANSI Standard 61, Annex G

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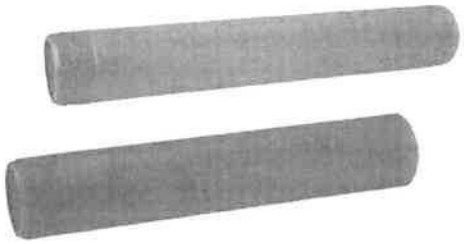
Nipples

LASCO
Fittings, Inc.

SUBMITTAL SHEET

NIPPLES SCHEDULE 80 PVC & CPVC



LASCO Fittings, Inc., an Aalberts Industries company, specializes in the production and sale of injection molded fittings for Irrigation, Plumbing, Industrial, Pool/Spa and Retail markets. LASCO Fittings, Inc. operates a 26-acre manufacturing facility in Brownsville, TN. With eight Regional Distribution Facilities strategically located within the United States, LASCO provides worldwide distribution and overnight service.

Injection Molded PVC Nipples in sizes 1/2" through 4"

LASCO Fittings, Inc.'s line of PVC injection molded and machine threaded PVC Nipples offers a variety of configurations in sizes 1/4" through 4" in diameter and lengths ranging from 1⅜" thorugh 36".

STANDARDS AND SPECIFICATIONS – PVC & CPVC Nipples
ASTM D-2464 – Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
ASTM F-437 – Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings.
ASTM D-1784 – Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
ASTM D-1785 – Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
MATERIAL – LASCO Schedule 80 Fittings are produced from PVC Type 1, Grade 1, Cell Classification 12454-B. LASCO CPVC Fittings are produced from Type IV, Grade 1, Cell Classification 23447-B.

DO NOT USE LASCO FITTINGS FOR COMPRESSED AIR OR GASES.
DO NOT TEST PVC PIPING SYSTEMS WITH COMPRESSED AIR OR GASES.
DO NOT USE FITTINGS WITH LIQUIDS NOT RECOMMENDED BY LASCO.
MODIFICATIONS OF FITTINGS VOIDS THE WARRANTY.

MADE IN USA

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MASTER CONTROL VALVE

Buckner SUPERIOR

brands of Storm Manufacturing Group, Inc.

Master Valves

Master Valve Solutions for Every Application

Superior is a recognized leader in the manufacture of normally open and normally closed master valves. Performance options include "No Minimum Flow" feature to handle full-flow, low-flow, and extreme low-flow conditions.

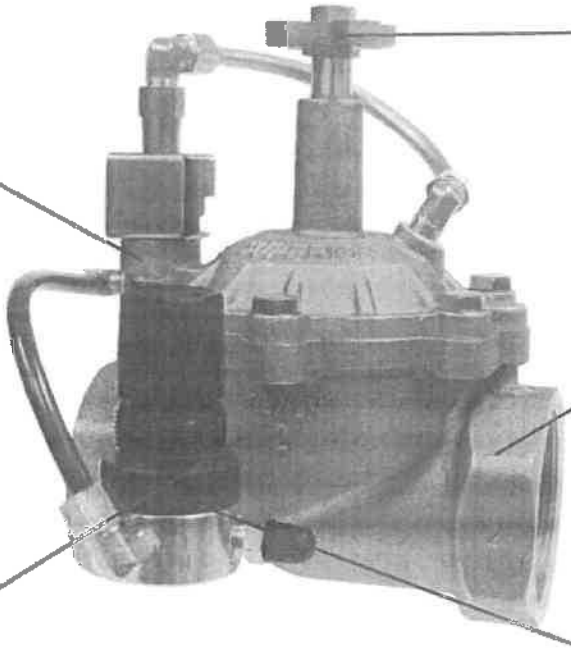
- **Industry's Most Complete Line of Master Valves!**
  Master valves are available in normally open and normally closed design options.
- **"No Minimum Flow" Capability**
  Selected models include "No Minimum Flow" feature, which ensures reliable opening and closing of the valve in extreme high or low-flow scenarios.
- **Industry's Widest Range of Sizes**
  Selected Superior master valves are available in 3/4" through 3" sizes.

Normally-Closed

Provides protection against unauthorized system use and minimizes water waste in the event of zone valve malfunction

Normally-Open

Allows for constant system pressurization and on-demand access to manual irrigation and quick coupler use



Purple Cross Handle

Purple Handle "RW" option available to indicate recycled water system

"No Minimum Flow" Feature

3200 and 3300 models include "No Minimum Flow" capability, which ensures reliable opening and closing of the valve in extreme high or low-flow scenarios

Dirty Water Protection

Protection is afforded by the removable filter and self-cleaning metering rod assembly

Pressure Regulation

Pressure Regulating System (PRS) option available on 3100 model

www.BucknerSuperior.com

Normally Closed Master Valves

3000

Normally Closed

Size	Models	Dimensions (Inches) Height	Length
1"	3000100	4-1/2	4-3/8
1-1/4"	3000125	5-1/2	5
1-1/2"	3000150	8	6
2"	3000200	9	7
2-1/2"	3000250	10	11-5/8
3"	3000300	10	11-5/8

Operating Ranges

Flow: 5 - 320 gpm
Pressure: 20 - 200 psi

3200

Normally Closed, "No Minimum Flow" Feature

Size	Models	Dimensions (Inches) Height	Length
3/4"	3200075	3.75	6
1"	3200100	4.5	6
1-1/2"	3200150	8	6
2"	3200200	9	7
2-1/2"	3200250	10	11-5/8
3"	3200300	10	11-5/8

Operating Ranges

Flow: 0 - 360 gpm
Pressure: 20 - 150 psi

Normally Open Master Valves

3100

Normally Open

Size	Models	Dimensions (Inches) Height	Length
1"	3100100	4-1/2	4-3/8
1-1/4"	3100125	5-1/2	5
1-1/2"	3100150	8	6
2"	3100200	9	7
2-1/2"	3100250	10	11-5/8
3"	3100300	10	11-5/8

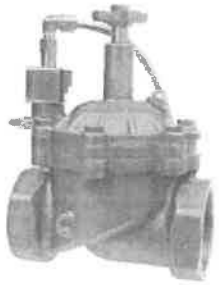
PRS = Pressure Regulation System

Operating Ranges

Flow: 5 - 320 gpm
Pressure: 20 - 200 psi

3300

Normally Open, "No Minimum Flow" Feature



Size	Models	Dimensions (Inches) Height	Length
1-1/2"	3300150	8	7
2"	3300200	9	7
2-1/2"	3300250	10	11-5/8
3"	3300300	10	11-5/8

Operating Ranges

Flow: 0 - 360 gpm
Pressure: 20 - 150 psi

Pressure Loss in PSI

GPM	0	2.5	5	10	15	20	30	40	50	60	70	80	90	100	120	140	160	200	240	250	320	360
3/4"	0	0.01	0.45	1.75	4	7																
1"	0	0.04	0.16	0.75	1.6	2.6	5.7	10														
1-1/4"					0.48	0.85	1.9	3.6	5.3	7.6	10.1											
1-1/2"						0.45	1	1.7	2.65	3.8	5.1	6.6	8.3	10.9								
2"								0.53	0.82	1.2	1.6	2.05	2.6	3.2	4.6	6.3	8	13.9				
2-1/2"														2.38	2.45	2.5	2.9	4	6	6.2	10.7	13.2
3"														2.38	2.45	2.5	2.9	4	6	6.2	10.7	13.2

RW Option Available
Reclaimed Water Cross Handle available by adding "RW" to the valve model number (ex. 3000100RW)

Solenoid Specifications

Standard 24 VAC
In-rush current: .45 A (10.8 VA)
Holding current: .30 A (7.2 VA)

Optional 110 VAC
In-rush current: 95 mA (10.5 VA)
Holding current: .65 mA (7.2 VA)

Remote Control Valve

RAIN BIRD

Tech Spec

PEB and PESB Series Valves

Designed to Outperform. Engineered to Outlast.

Pressure surges? Effluent water? Clogging debris? No problem. PEB and PESB Series valves offer long life and efficient, trouble-free performance—even under harsh conditions. Constructed of heavy-duty, glass-filled nylon, these valves resist clogging. And the PESB model features a patented scrubber to actively fight dirt, debris and particles.

Features

- Body constructed of durable glass-filled nylon for long life and heavy-duty performance at 200 psi (13.80 bar) pressure
- Stainless steel studs molded into the body. Bonnet can be attached and removed more easily without damaging threads
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- External bleed protects the solenoid ports from debris when system is flushed
- Internal bleed operates the valve without allowing water into the valve box; allows pressure regulator to be adjusted without turning on the valve at the controller first
- Low flow operating capability (0.25 gpm; 0.06 m³/h; 1.2 l/m) for a wide range of applications. For flows below 5 gpm (1.14 m³/h; 19.2 l/m) or any Xerigation® application, install Rain Bird Y filter upstream
- Slow closing to prevent water hammer and subsequent system damage
- PESB only: Scrubber scrapes its stainless steel screen clean to break down grit and plant material. Prevents debris build-up and clogging

Options (order separately)

- Accommodates optional, field installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Optional purple flow control handles for non-potable water applications
  - PEB-NP-HAN1 (1")
  - PEB-NP-HAN2 (1½" and 2")
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 150 psi (10.35 bar)

Operating Range

- Pressure: 20 to 200 psi (1.38 to 13.80 bar)
- Flow: 0.25 to 200 gpm (0.06 to 45.40 m³/h; 1.2 to 757 l/m)
- Flow with PRS-D: 5 to 200 gpm
- (1.14 to 45.40 m3/h; 19.2 to 757 l/m)
- Temperature: up to 150° F (66° C)

Electrical Specifications

- Power: 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.41 A (9.84 VA) at 60 Hz
- Holding current: 0.28 A (6.72 VA) at 60 Hz
- Coil resistance: 30-39 Ohms
- Compatible with ESP-LXD decoders

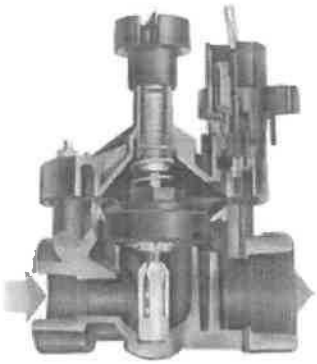
PEB and PESB Series Valve Pressure Loss (psi)

Flow GPM	100-PEB 1"	150-PEB 1½"	200-PEB 2"
0.25	0.8	-	-
0.5	1.0	-	-
1	1.3	-	-
5	1.7	-	-
10	1.8	-	-
20	2.9	3.9	-
30	5.6	3.6	-
40	10.0	3.5	-
50	15.6	3.6	4.8
75	-	5.4	4.5
100	-	9.6	5.2
125	-	14.6	8.2
150	-	21.2	11.8
175	-	-	15.5
200	-	-	19.5

PEB and PESB Series Valve Pressure Loss (bar)

Flow m³/h	Flow l/m	100-PEB 2.5 cm	150-PEB 3.8 cm	200-PEB 5.1 cm
0.06	1	0.06	-	-
0.3	5	0.09	-	-
0.6	10	0.10	-	-
1.2	20	0.12	-	-
3	50	0.15	-	-
6	100	0.32	0.26	-
9	150	0.68	0.24	-
12	200	-	0.26	0.33
15	250	-	0.33	0.32
18	300	-	0.42	0.32
21	350	-	0.57	0.34
24	400	-	0.74	0.41
27	450	-	0.92	0.51
30	500	-	1.14	0.64
33	550	-	1.38	0.77
36	600	-	-	0.90
39	650	-	-	1.04
42	700	-	-	1.18
45	757	-	-	1.34

Notes
1) Loss values are with flow control fully open.
2) PRS-D module recommended for all flow ranges.
Recommendations
1) Rain Bird recommends flow rates in the supply line not to exceed 7.5 ft./sec. (2.29 m/s) in order to reduce the effects of water hammer.
2) For flows below 5 gpm (1.14 m³/h; 19.21 l/m), Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm.
3) For flows below 10 gpm (2.27 m³/h; 37.8 l/m) Rain Bird recommends the flow control stem be turned down two full turns from the fully open position.



PESB Cutaway

Dimensions

Size	Height	Length	Width
100	6½" (16.5 cm)	4" (10.2 cm)	4" (10.2 cm)
150	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)
200	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)

Note: The PRS-D option adds 2" (5.1 cm) to valve height.

Models

• 100PEB and 100PESB	1"	(26/34)
• 150PEB and 150PESB	1½"	(40/49)
• 200PEB and 200PESB	2"	(50/60)

BSP threads available, specify when ordering.

How To Specify

100 - PEB - PRS-D

- **Size**: 100: 1" (26/34); 150: 1½" (40/49); 200: 2" (50/60)
- **Model**: PEB; PESB: scrubber model
- **Optional Feature**: PRS-Dial: pressure regulating module (must be ordered separately)

Note: Valve and PRS-Dial module must be ordered separately. For non-U.S. applications, it is necessary to specify NPT or BSP thread type.

Specifications

The electric remote control valve shall be a normally closed 24 VAC 50/60 Hz (cycles/sec) solenoid actuated globe pattern design. The valve pressure rating shall not be less than 200 psi (13.80 bar). The valve shall have the following characteristics (circle one):

Flow rate: _____ gpm m^3/h l/m

Pressure loss not to exceed: _____ psi bar

The valve body shall be constructed of heavy-duty glass-filled UV-resistant nylon and have stainless steel studs and flange nuts; diaphragm shall be of nylon reinforced nitrile rubber.

The valve shall have both internal and external manual open/close control (internal and external bleed) to manually open and close the valve without electrically energizing the solenoid. The valve's internal bleed shall prevent flooding of the valve box.

The valve shall house a fully-encapsulated, one-piece solenoid. The solenoid shall have a captured plunger with a removable retainer for easy servicing and a leverage handle for easy turning. This 24 VAC 50/60 Hz solenoid shall open with 19.6 VAC minimum at 200 psi (13.80 bar). At 24 VAC, average inrush current shall not exceed 0.41 amps. Average holding current shall not exceed 0.28 amps.

The valve shall have a brass flow control stem for accurate manual regulation and/or shut-off of outlet flow. The valve must open or close in less than 1 minute at 200 psi (13.80 bar), and less than 30 seconds at 20 psi (1.38 bar).

The PESB valve shall have a self-cleaning stainless steel screen designed for use in dirty water applications.

The valve construction shall be such as to provide for all internal parts to be removable from the top of the valve without disturbing the valve installation.

Optional Feature Specification

PRS-D Pressure Regulating Module:

100PEB-PRS-D 100PESB-PRS-D
150PEB-PRS-D 150PESB-PRS-D
200PEB-PRS-D 200PESB-PRS-D

When so indicated on the design, the 1", 1½" and 2" electric remote control plastic valves shall have a pressure regulating module (PRS-D) capable of regulating outlet pressure between 15 and 100 psi (±3 psi) (1.04 and 6.90 bar (±0.21 bar)).

The PRS-D module shall have an adjusting knob for setting pressure and Schrader valve connection for monitoring pressure. The pressure shall be adjustable from the PRS-D when the valve is internally manually bled or electrically activated.

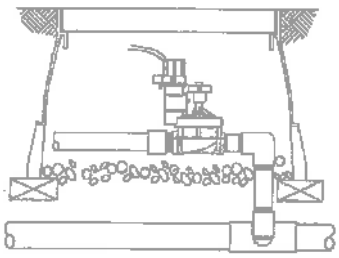
Non-Potable Flow Control Handle *

PEB-NP-HAN1 - Fits 1"
PEB-NP-HAN2 - Fits 1½" and 2"

When so indicated on the design, the valve shall have a purple flow control handle to indicate to the user that non-potable water is being used. There shall be no difference between the black and purple handles except for the color.

**Rain Bird offers the PESB-R reclaimed water valve and conversion kits for reclaimed water application. Please see Tech Spec D373368, the Rain Bird catalog, or visit www.rainbird.com for more information.*

Plastic Electric Remote Control PEB or PESB Valve (with PRS-D)



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Rain Bird Technical Services
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(U.S. and Canada)

Specification Hotline
800-458-3005 (U.S. and Canada)

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www.rainbird.com

Gate Valve

Class 125 Bronze Gate Valves

Screw-In Bonnet • Non-Rising Stem • Solid Wedge

125 PSI/8.6 Bar Saturated Steam to 353° F/178° C
200 PSI/13.8 Bar Non-Shock Cold Working Pressure

Dezincification Resistant

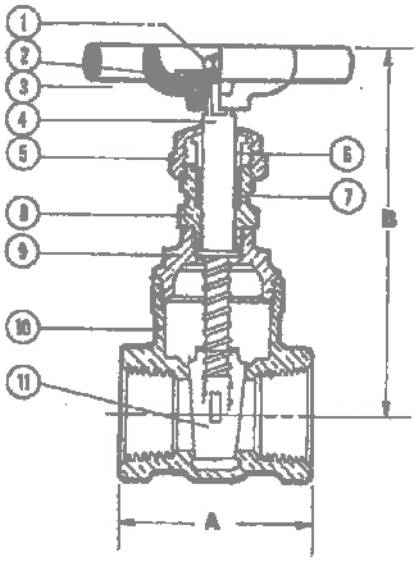
T-113
Threaded

T-113-K
Threaded
With Cross Handle

CONFORMS TO MSS SP-80

MATERIAL LIST

	PART	SPECIFICATION
1.	Handwheel Nut	300 Series Stainless Steel
2.	Identification Plate	Aluminum
3.	Handwheel	a. Malleable Iron ASTM A 47 (T-113) b. Bronze (T-113-BHW) c. Bronze Cross (T-113-K)
4.	Stem	Silicon Bronze ASTM B 371 Alloy C69400 or ASTM B 99 Alloy C65100
5.	Packing Nut	Bronze ASTM B 62 or ASTM B 584 Alloy C84400 or Brass ASTM B 16
6.	Packing Gland	Bronze ASTM B 62 or ASTM B 584 Alloy C84400 or Brass ASTM B 16
7.	Packing	Aramid Fibres with Graphite
8.	Stuffing Box	Bronze ASTM B 62
9.	Bonnet	Bronze ASTM B 62
10.	Body	Bronze ASTM B 62
11.	Wedge	Bronze ASTM B 62



T-113
NPT x NPT

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions A		Dimensions B		T-113		Master
In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.	Ctn. Qty.
¼ †	8	1.69	43	3.38	86	0.74	0.33	50
⅜ †	10	1.69	43	3.38	86	0.71	0.32	50
½ †	15	1.94	49	3.63	92	0.82	0.37	50
¾	20	2.06	54	3.91	99	1.10	0.50	50
1	25	2.44	62	4.69	119	1.82	0.82	30
1¼	32	2.63	67	5.22	133	2.40	1.09	20
1½	40	2.88	72	6.25	159	3.51	1.59	10
2	50	3.06	78	7.06	179	4.93	2.24	10
2½	65	4.13	105	8.41	224	9.96	4.52	5
3	80	4.50	114	10.00	254	14.40	6.53	4

†No packing gland, packing only in these sizes.

Freezing Weather Precaution – Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

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TECH SERVICES PH: 1.888.446.4226 • FAX: 1.888.336.4226 • INTERNATIONAL OFFICE PH: +1.574.295.3223 • FAX: +1.574.295.3455
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Drip Zone Kit Valve

RAIN BIRD

TECH SPECS

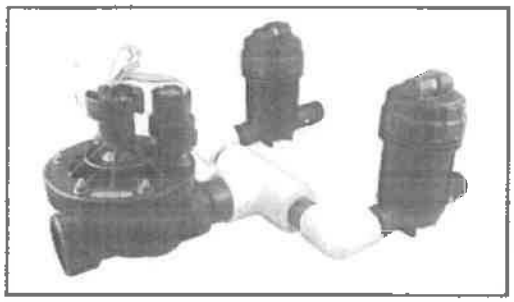
High Flow Commercial Control Zone Kits

with Pressure-Regulating, Quick-Check Basket Filters

XCZ-100-PRB-COM

1" Kit – Now 24% Shorter

XCZ-150-PRB-COM



1 1/2" Kit – Now 22% Shorter

Rain Bird simplifies drip with the highest flow control zone kits on the market. Both kits contain time-tested Rain Bird valves and now also feature the new and innovative Pressure Regulating, Quick-Check Basket Filter.

The simplest and most reliable Control Zone Kits for a wide range of commercial drip irrigation applications.

Benefits

- **Reduces Installation Labor Costs** – Fewer joints to complete which reduces assembly time.
- **Reduces Ongoing Maintenance Cost** – The high capacity filter with indicator bubble ensures the filter will be cleaned only when needed.
- **Improves reliability** – The kits are made up of high quality components including the PESB (scrubber) valve and the 40 psi (2,8 bars) Pressure-Regulating, Quick-Check Basket Filter. The indicator bubble shows when the filter needs to be cleaned.
- **Saves Time for Specifiers** – One part number to specify, one part number to order. Overall pressure loss, and pressure rating of the entire assembly is provided.

Features

Scrubber Valve

- **Debris Tolerant** – Plastic scrubber scrapes the stainless steel screen to clean and break down grit and organic materials.
- **Easy Servicing** – One-piece solenoid with captured plunger and spring prevents loss of parts during field service.
- **Protects Down Stream Components** – Slow closing prevents water hammer and subsequent system damage.
- **Rugged Construction** – The body is made from impact resistant glass-filled polypropylene and the cap is constructed of glass-filled nylon.
- **Long Life** – The diaphragm is reinforced with fabric which adds strength and durability.

Pressure-Regulating, Quick-Check Basket Filter

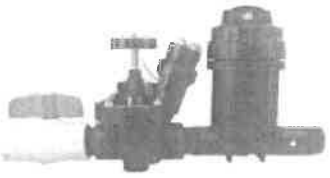
- **Efficient Design** – Combines filtration and pressure regulation in one compact unit.
- **Increases Reliability** – Fewer connection points means less chance of leaking.
- **Reduces Costs** – Combined parts mean less assembly time, and compact size means smaller valve boxes.
- **Reduces Maintenance** – Save labor time with the simple-to-check indicator bubble and easy-to-clean stainless steel filter.
- **Protects Drip Irrigation Components** – Comes standard with a 200 mesh (75 micron) stainless-steel filter element.
- **Rugged Construction** – The body is made of durable, glass-filled nylon. Stainless steel studs, molded into the body, resist thread damage.
- **Easy to Access** – The filter design allows the element to be accessed vertically while preventing debris from falling into the line.

Additional Elements

- **1" Control Zone comes with PVC Tee** – This kit includes a pre-glued "Tee" and is partially assembled with all threads pre-taped.
- **1 1/2" Control Zone comes with PVC Tee** – This kit includes a pre-glued "Tee" and is partially assembled with all threads pre-taped.

Quick-Check Filter

1" Commercial Control Zone Kit
with PR Basket Filler



Model: XCZ-100-PRB-COM

Specifications

Control zone kit shall be Rain Bird's 1" Commercial Control Zone Kit with PR Basket Filter. It shall contain a 1" ball-type shut-off valve, a 1" automatic irrigation control valve with self-scrubbing feature, and Pressure-Regulating, Quick-Check Basket Filter. The system shall be pressure rated to 150 psi (10,3 bar) and be capable of flow rates of 3.0 to 20.0 gpm (11,4 to 75,7 l/m).

The PR Basket Filter shall contain a 200 mesh, stainless-steel filter and a built-in 40 psi (2,8 bar) pressure regulator. The body of the unit shall be constructed of impact resistant glass-filled polypropylene and the cap of glass-filled nylon with a UV resistant polyurethane indicator window. The unit shall incorporate an indicator window that shows when the filter needs to be cleaned.

The automatic irrigation control valve shall be normally closed, solenoid activated at 24 VAC 50/60 Hz, and balance pressure type. The valve body and bonnet shall be constructed of high impact, weather resistant plastic, stainless steel, and other chemical / UV resistant materials. The valve shall have a diaphragm constructed of durable Buna-N rubber with a clog-resistant metering orifice. The valve shall have one 90 mesh (200 micron) filter attached to the solenoid base. The kit shall be manufactured by Rain Bird Corporation of Azusa, California.

Model: XCZ-100-PRB-COM High Flow Kit with 1" PESB Valve, a Pressure Regulating, Quick-Check Basket Filter (a 40 psi Pressure Regulator built-in) with 200 mesh (75 micron) screen, a shut-off ball valve and a schedule 80 PVC nipple.

Operating Range

- Flow: 3.0 to 20.0 gpm (11,4 to 75,7 l/m)
- Pressure: 15 to 150 psi (1,0 to 10,3 bar)
- Regulating Pressure: 40 psi (2,7 bar)
- Temperature: up to 150° F (66° C)
- Filtration: 200 mesh (75 micron)*

**Can be replaced with 100 mesh Rain Bird filter, available separately*

XCZ-100-PRB-COM	
Flow (gpm)	**Minimum Inlet for Regulated Outlet Pressure (psi)†**
3.0	42.0
5.0	44.0
10.0	47.3
15.0	53.0
20.0	62.5

XCZ-100-PRB-COM Metric	
Flow (L/m)	**Minimum Inlet for Regulated Outlet Pressure (bar)†**
11,4	2,9
18,9	3,0
37,9	3,3
56,8	3,6
75,7	4,3

† Note: Regulated outlet pressure is ±10% of nominal

Electrical Specifications

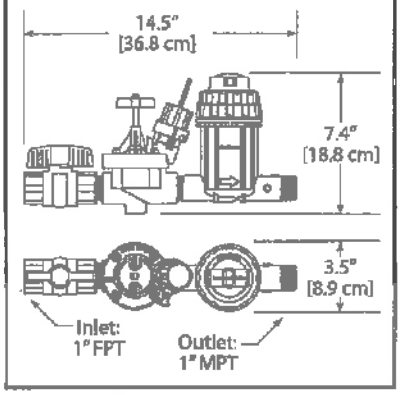
- 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.41 A (9.48 VA) at 60 Hz
- Holding current: 0.28 A (6.72 VA) at 60 Hz
- Coil resistance: 30-39 ohms

How to Specify/Order

XCZ-100-PRB-COM

Model	Size	Filter	Grade
Xerigation Control Zone Kit	1"	Pressure-Regulating Basket Filter	Commercial

The High Flow 1" Commercial Zone Kit Dimensions



Dimensions

Length: 14.5 in [36.8 cm]
Width: 3.5 in [8.9 cm]
Height: 7.4 in [18.8 cm]

1 1/2" Commercial Control Zone Kit
with PR Basket Filler

Model: XCZ-150-PRB-COM

Specifications

High Flow Commercial Control Zone Kit for zones with flows from 15.0 to 40.0 GPM (56,8 to 151,4 l/m).

Control zone kit shall be Rain Bird's 1 1/2" Commercial Control Zone Kit with Rain Bird's 1 1/2" PESB valve, two Pressure-Regulating, Quick-Check Basket Filters with built-in 40 psi pressure regulators and 200 mesh (75 micron) stainless steel screens.

The filter shall be two 1" Pressure-Regulating, Quick-Check Basket Filter bodies constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi (10, bars). The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filter element needs cleaning. The filter elements shall be constructed of a durable stainless steel mesh attached to a glass-filled polypropylene frame and shall be a standard 200-mesh (75 micron). The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filter element.

The control zone kit shall have two in-line pressure regulators built into the Basket Filter. The pressure regulators shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi (10,3 bars). The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the downstream pressure. The inline pressure regulator shall have a preset outlet pressure of approximately 40 psi (2,8 bars).

The control zone kit shall have a 1 1/2" PESB series automatic irrigation control valve. The pressure rating not to be less than 150 psi (10,3 bars). The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon. The kit shall be manufactured by Rain Bird Corporation of Azusa, California.

Model: XCZ-150-PRB-COM High Flow Kit with 1 1/2" PESB Valve, two Pressure Regulating, Quick-Check Basket Filters (with 40 psi Pressure Regulator built into each one) with 200 mesh (75 micron) screens and a schedule 40 PVC tee.

XCZ-150-PRB-COM	
Flow (gpm)	**Minimum Inlet for Regulated Outlet Pressure (psi)†**
15.0	40.0
20.0	49.0
25.0	50.2
30.0	53.5
35.0	56.1
40.0	60.7

XCZ-150-PRB-COM Metric	
Flow (L/m)	**Minimum Inlet for Regulated Outlet Pressure (bar)†**
56,8	2,8
75,7	3,4
94,7	3,5
113,6	3,7
132,5	3,9
151,4	4,2

† Note: Regulated outlet pressure is ±10% of nominal

Operating Range

- Flow: 15.0 to 40.0 gpm (56,8 to 151,4 l/m)
- Inlet Pressure: 20 to 150 psi (1,4 to 10,3 bar)
- Regulating Pressure: 40 psi (2,8 bars)
- Temperature: up to 150° F (66° C)
- Filtration: 200 mesh (75 micron)*

**Can be replaced with 100 mesh Rain Bird filter, available separately*

Electrical Specifications

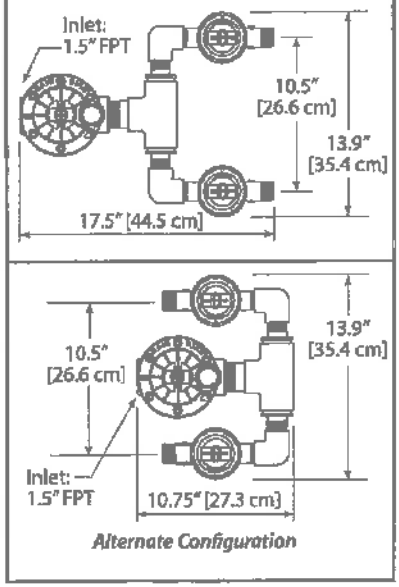
- 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.41 A (9.48 VA) at 60 Hz
- Holding current: 0.28 A (6.72 VA) at 60 Hz
- Coil resistance: 30-39 ohms

How to Specify/Order

XCZ-150-PRB-COM

Model	Size	Filter	Grade
Xerigation Control Zone Kit	1 1/2"	Pressure-Regulating Basket Filter	Commercial

The High Flow 1 1/2" Commercial Zone Kit Dimensions



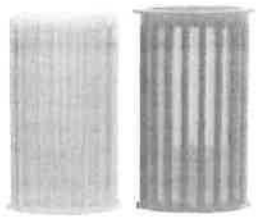
Alternate Configuration

Dimensions

- Length: 17.5 in (44.5 cm)
- Width: 13.9 in (35.4 cm)
- Height: 7.4 in (18.8 cm)
  (Top configuration)

- Length: 10.75 in (27.3 cm)
- Width: 13.9 in (35.4 cm)
- Height: 7.4 in (18.8 cm)
  (Alternate configuration)

Replacement Stainless Steel Screen Elements



QCKCHK-200M QCKCHK-100M

Stainless Steel Screen Elements

The _____ mesh stainless steel screen element shall be used inside the Pressure-Regulating, Quick-Check Basket Filter and shall be constructed of stainless steel welded to a color-coded, glass-filled polypropylene frame. The screen element shall be used in the 1" model and match the filtration requirements of the emission device or sprinkler. Screen mesh sizes shall be designated by the following color code: red – 100 and natural – 200 mesh. The stainless steel screen element shall be supplied by Rain Bird Sprinkler Mfg Corporation, Azusa, California.

Filter Elements

- QKCHK-100M
  (100 mesh / 150 micron, red housing)
- QKCHK-200M
  (200 mesh / 75 micron, white housing)

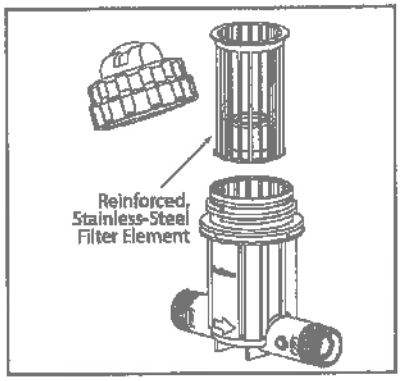
How to Specify/Order

Basket Filter Elements

QKCHK-100M

Model
Quick-Check Filter

Size
100M: 100 Mesh
200M: 200 Mesh



Stainless Steel Screen Element Dimensions (Inches)

Filter Size	Diameter	Height	Area of Filtration (in²)
1"	2.5"	4"	16.26"

Stainless Steel Screen Element Dimensions (Metric)

Filter Size	Diameter	Height	Area of Filtration (in²)
2,54 cm	3,35 cm	10,16 cm	41,30 cm

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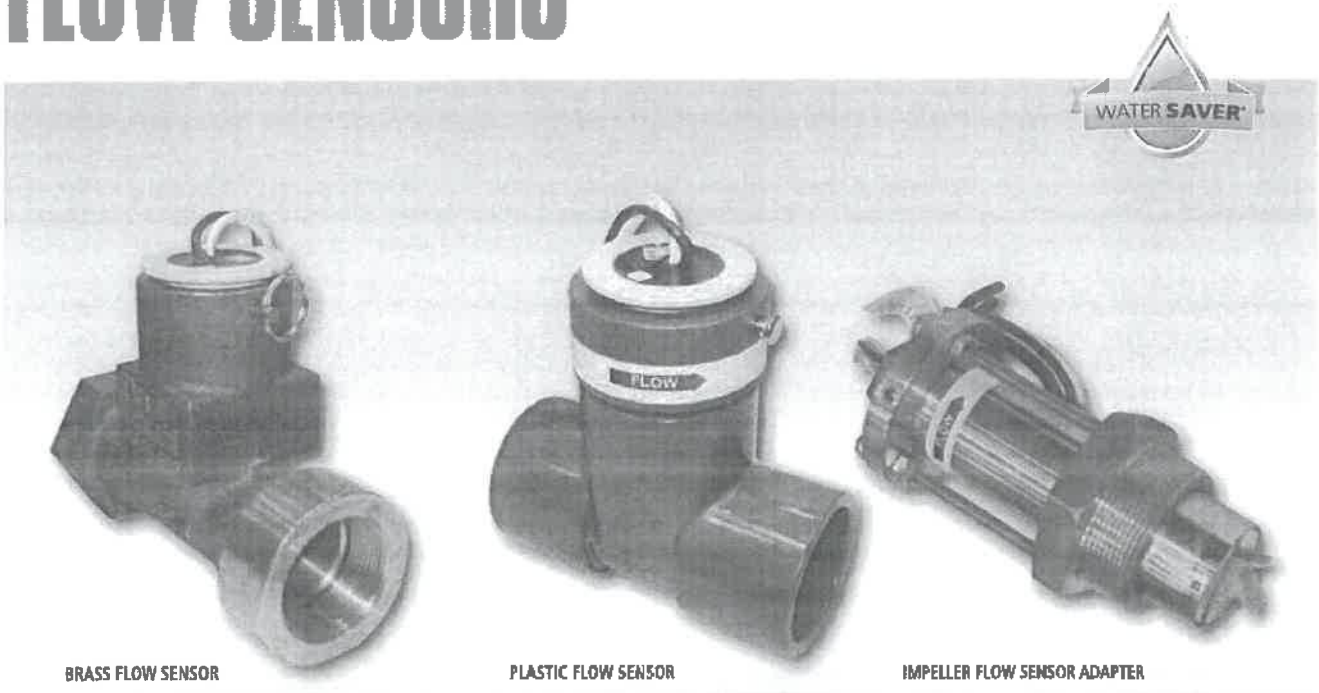
Flow Sensor

FLOW SENSORS



BRASS FLOW SENSOR

PLASTIC FLOW SENSOR

IMPELLER FLOW SENSOR ADAPTER

Flow sensors can be used in conjunction with any Sentar II™, Rain Master™ DX2 Evolution, or Rain Master Eagle™ controllers (including Eagle *Plus*™) to automatically detect line breaks and flow limits at point of connection (POC) and for individual stations. Should a break or leak occur, the flow sensor will alert the controller to shut down the master valve to prevent significant landscape damage. The controller then notifies the operator of a problem with an audible alert and text message in the display.

KEY FEATURES & BENEFITS

BRASS FLOW SENSOR ADAPTER
Sizes 1" thru 2.5". Flow ranges from 2 GPM to 160 GPM, NFPT connections, rated up to 400 psi

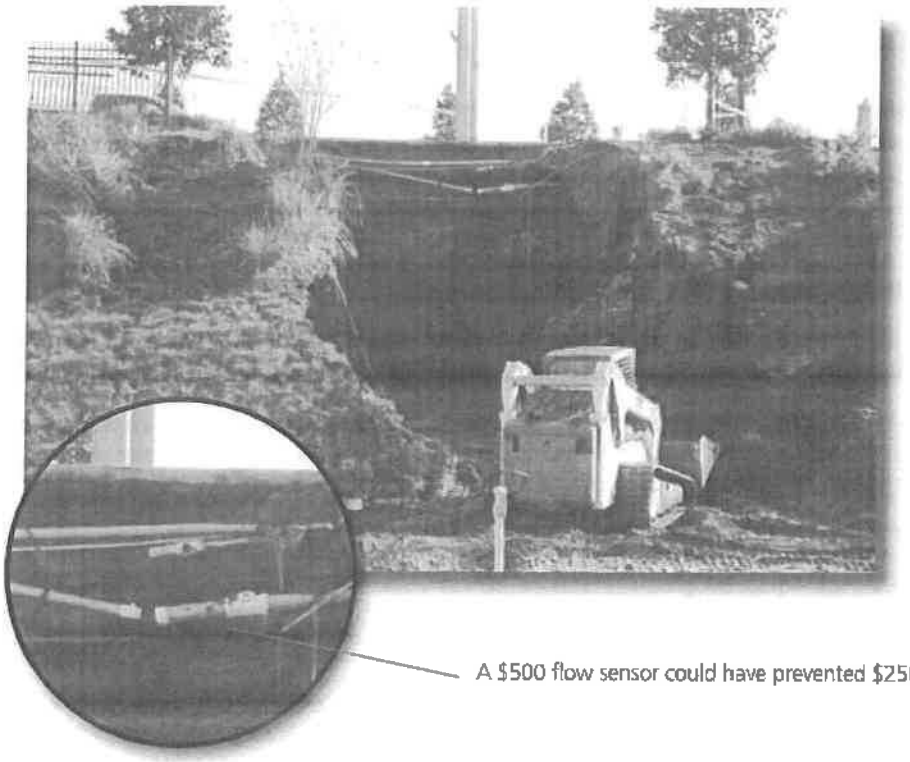
PLASTIC FLOW SENSOR ADAPTER
Sizes 1.5" thru 4". Flow ranges from 5 GPM to 500 GPM, Schedule 80 PVC "slip" glue connections, rated up to 100 psi

IMPELLER FLOW SENSOR ADAPTER
For all pipe materials and sizes up to 40" in diameter. Mounts in a 2" NPT threaded outlet (NFPT) or pipe saddle (not included). Must be field-calibrated onsite. Flow may be set from 2 GPM to 500 GPM – call factory for specific settings. 400psi maximum operating pressure

FLOW SENSORS SELECTION CHART

FLOW SENSOR MODEL	PIPE CONNECTION SIZE	SUGGESTED OPERATING RANGE	MAXIMUM WATER PRESSURE	K VALUE	OFFSET VALUE	BODY MATERIAL	CONNECTION TYPE
FS-B100	1"	2-40 GPM	400 psi	109	27	Bronze	NPT female
FS-B125	1 ¼"	3-60 GPM	400 psi	209	32	Bronze	NPT female
FS-B150	1 ½"	4-80 GPM	400 psi	291	24	Bronze	NPT female
FS-B200	2"	10-100 GPM	200 psi	750	0	Bronze	NTP female with copper male adapter
FS-B250	2 ½"	16-160 GPM	200 psi	1021	370	Bronze	NTP female
FS-150	1 ½"	5-100 GPM	100 psi @ 68F	457	0	PVC	Slip
FS-200	2"	10-200 GPM	100 psi @ 68F	776	104	PVC	Slip
FS-300	3"	20-300 GPM	100 psi @ 68F	2268	483	PVC	Slip
FS-400	4"	40-500 GPM	100 psi @ 68F	3752	834	PVC	Slip
FS-INSERT-B	3 to 40 inches	Varies, call factory	400 psi	Varies, call factory		Requires pipe saddle with 2" female NPT	

WHY USE A FLOW SENSOR?



A $500 flow sensor could have prevented $250,000 damage

6" Round Valve Box

NDS STANDARD SERIES VALVE BOXES – RESIDENTIAL/COMMERCIAL GRADE

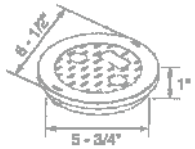
Standard Series Valve Boxes by NDS

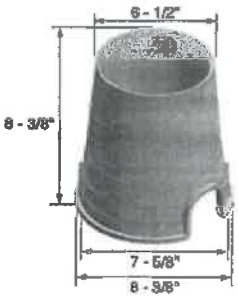
NDS valve, meter and access boxes are offered in a wide range of sizes from the 6-inch round valve box to the 17" x 30" rectangular box. They are available with black, green, purple, gray and sand covers with designations including irrigation control valve, water, sewer, electric, reclaimed water, cable TV, telephone and others.

- Covers are identified with ICV (Irrigation Control Valve) designation, unless otherwise specified
- Overlapping covers prevent dirt and grass from settling between body and cover
- The bayonet twist-on cover ensures easy removal on 7-inch and 10-inch round covers
- 6" Snap cover and body available
- The 10-inch round and all rectangular boxes include a brass insert, so bolts may be easily added for lockdown
- UV inhibitors prevent discoloration and deterioration, such as cracking or blistering
- Standard cover color and designations: ICV – Green, Water – Black, Sewer – Green, CATV – Black, Reclaimed – Purple, Telephone – Black, Electric – Gray
- Brass nut on boxes for bolt-down capability
- Injection-molded of structural foam polyolefin with a melt index between 10-12

NDS Standard Series 6" Round Valve Boxes

Specifications: The NDS STANDARD SERIES 6" round body is tapered and has a minimum wall thickness of 0.200". The body has a double wall at the top cover seat area with a minimum thickness of 0.130". The bottom of the body has a 0.250" flange. The 6" round cover has an average thickness of 0.187".





2-3/4" x 2-3/8" Pipe Slot

Part No.	Description - Marking	Color (Box/Cover)	Pallet Qty.	Wt. Ea. lbs.	Product Class
Box & Cover					
107BC SLV	6" Round Box, Round Overlapping Cover - ICV	Black/Green	400	30.0	20ND
107BC SAND	6" Round Box, Round Overlapping Cover - ICV	Sand/Sand	250	1.50	20ND
107BC BRN	6" Round Box, Round Overlapping Cover - ICV	Black/Brown	250	1.50	20ND
107BC	6" Round Box, Round Overlapping Cover - ICV	Black/Green	250	1.50	20ND
107BCH	6" Round Snap-in Valve Box, Round Snap-in Overlapping Cover - ICV	Black/Green	250	1.50	20ND
107BCGR	6" Round ICV Box and Cover	Black/Green	250	1.50	20ND
107BC CTN	6" Round ICV Box and Cover	Black/Green	108	1.05	20ND
107BCW	6" Round Box, Overlapping Box, Solid Plastic Cover - Water	Black/Green	250	1.50	20NM
107BC SAND	6" Round Box, Round Overlapping Cover - ICV	Sand/Sand	250	1.50	20ND
107EBC	6" Round Emitter Box, Round Overlapping Cover - Emitter Box	Black/Green	250	1.50	20ND
107BCR	6" Round Box, Round Overlapping Cover - Reclaimed Water	Black/Purple	250	1.50	20ND
107PBCR	6" Round Box, Overlapping Cover - Reclaimed Water	Purple/Purple	250	1.50	20ND
107EBCR	6" Round Emitter Box, Round Overlapping Cover - Emitter Box	Black/Purple	250	1.50	20ND
107BCS	6" Round Box, Overlapping Cover - Sewer	Black/Green	250	1.50	20NM
Cover Only					
107C BRN	6" Round Overlapping Cover - ICV	Brown	800	0.40	20ND
107C	6" Round Overlapping Cover - ICV	Green	800	0.40	20ND
107C SAND	6" Round Overlapping Cover - ICV	Sand	800	0.40	20ND
107CH	6" Round Snap-in Overlapping Cover - ICV	Green	1200	0.40	20ND
107CS	6" Round Overlapping Cover - Sewer	Green	800	0.40	20NM
107CR	6" Round Overlapping Cover - Reclaimed Water	Purple	800	0.40	20ND
107CW	6" Round Overlapping Cover - Water	Green	800	0.40	20NM
Box Only					
107B	6" Round Box	Black	250	1.10	20ND
107PB	6" Round Box	Purple	250	1.10	20ND
107B SAND	6" Round Box	Sand	250	1.10	20ND
106B	6" Round Snap-in Valve Box	Black	250	1.10	20ND
107EB	6" Round Emitter Box	Black	250	1.10	20ND

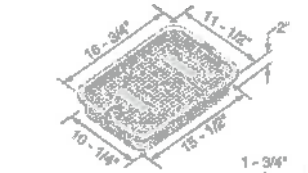
Rectangular Valve Box

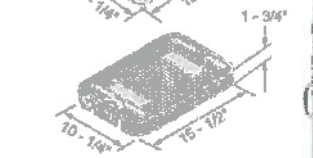
NDS

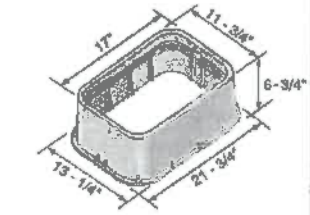
NDS STANDARD SERIES VALVE BOXES – RESIDENTIAL/COMMERCIAL GRADE

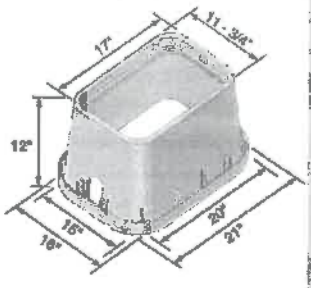
NDS Standard Series 14" x 19" Rectangular Valve Boxes

Specifications: The NDS STANDARD SERIES 14" x 19" body is tapered and has a minimum wall thickness of 0.200". The body has a double wall at the top cover seat area with a minimum thickness of 0.250". The cover seat area has 16 structural support ribs on the underside of the seat, each with a minimum thickness of 0.250". The bottom of the body has a 0.500" flange. The 14" x 19" cover has an average thickness of 0.250". The valve box has a 3/8" 304 Brass nut for the bolt-down as a standard feature.









2-3/4" x 2-1/2"
Pipe Slot

Part No.	Description - Marking	Color Box/Cover	Pallet Qty.	Wt. Ea. lbs.	Product Class
Box & Cover					
113BC	14" x 19" Box, Overlapping Cover - ICV	Black/Green	78	8.00	20ND
113BCR	12" x 17" ICV Box and Bolted Cover	Black/Green	78	8.00	20ND
113BC CTN	12" x 17" Valve Box Overlap ICV Cover	Black/Green	48	9.32	20ND
113BC SAND	14" x 19" Box, Overlapping Cover - ICV	Sand/Sand	78	8.00	20ND
113BCR	14" x 19" Box, Overlapping Cover - Reclaimed Water	Black/Purple	78	8.00	20ND
113PBCR	14" x 19" Box, Overlapping Cover - Reclaimed Water	Purple/Purple	78	8.00	20ND
113BCBW	14" x 19" Box, Overlapping Bolt-Down Cover - Water	Black/Black	78	8.10	20NM
113BCBS	14" x 19" Box, Overlapping Bolt-Down Cover - Sewer	Black/Green	78	8.10	20NM
113BCE	14" x 19" Box, Overlapping Cover - Electrical	Black/Green	78	8.00	20NM
113BCDS	14" x 19" Box, Drop-in Cover - Sewer	Black/Green	78	8.00	20NM
115	14" x 19" x 6" Box, Extension, Overlapping Cover - ICV	Black/Green	48	8.00	20ND
115TBC	14" x 19" x 6" Tapered Box, Overlapping Cover - ICV	Black/Green	96	6.00	20ND
116	14" x 19" x 6" Box, Extension, Overlapping Cover - ICV	Green/Green	48	8.00	20ND
116TBC	14" x 19" x 6" Tapered Box, Overlapping Cover - ICV	Green/Green	96	6.00	20ND
116TBC SAND	14" x 19" x 6" Tapered Box, Overlapping Cover - ICV	Sand/Sand	96	6.00	20ND
Cover Only					
113C	14" x 19" Overlapping Cover - ICV	Green	300	2.00	20ND
113C SAND	14" x 19" Overlapping Cover - ICV	Sand	300	2.00	20ND
113CR	14" x 19" Overlapping Cover - Reclaimed Water	Purple	300	2.00	20ND
113CE	14" x 19" Overlapping Cover - Electrical	Green	300	2.00	20NM
Box Only					
113B	14" x 19" Box	Black	78	6.00	20NM
114B-SAND	14" x 19" Box	Sand	78	6.00	20ND
113PB	14" x 19" Box	Purple	78	6.00	20ND
113-6	14" x 19" x 6" Extension	Black	48	4.00	20ND
116TB	14" x 19" x 6" Tapered Box	Green	96	4.00	20ND
116-SAND	14" x 19" x 6" Extension	Sand	48	8.00	20ND
116TB SAND	14" x 19" x 6" Tapered Box	Sand	96	4.00	20ND
113BB	2-1/2" x 3/8" SS Bolt	Steel	(Bag of 10)	0.10	20NM
114B	14" x 19" Box	Green	78	6.00	20ND

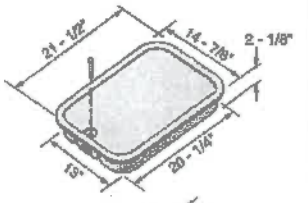
VALVE BOXES

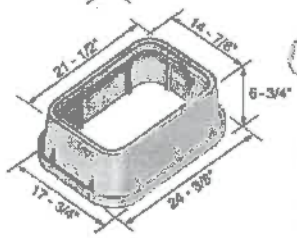
Jumbo ValveBox

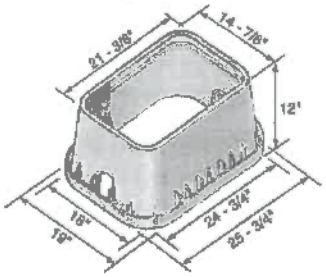
NDS PRO SERIES VALVE BOXES – COMMERCIAL GRADE

NDS Pro Series 13" x 20" Jumbo Rectangular Valve Boxes

Specifications: The NDS PRO SERIES 13" x 20" body is tapered and has a minimum wall thickness of 0.250". The body has a double wall at the top cover seat area with a minimum thickness of 0.250". The cover seat area has 16 structural support ribs on the underside of the seat, each with a minimum thickness of 0.250". The bottom of the body has a 0.500" flange. The 13" x 20" cover has an average thickness of 0.250". The valve box has a 3/8" 304 Brass nut for the bolt-down as a standard feature.







3"x 4" Pipe Slot

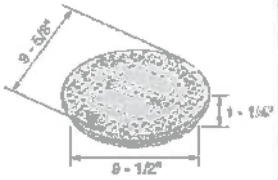
Part No.	Description - Marking	Color (Box/Cover)	Pallet Qty.	Wt. Ea. lbs.	Product Class
Box & Cover					
2188C BRN	13" x 20" Jumbo Box, Overlapping Cover - ICV	Black/Brown	56	14.00	20PR
2188C	13" x 20" Jumbo Box, Overlapping Cover - ICV	Green/Green	56	14.00	20PR
2188CB	13" x 20" Jumbo Box, Overlapping Bolt-Down Cover - ICV	Green/Green	56	14.10	20PR
220	13" x 20" x 6" Jumbo Extension, Overlapping Cover - ICV	Green/Green	32	11.00	20PR
217PBCR	13" x 20" Jumbo Box, Overlapping Cover - Reclaimed Water	Purple/Purple	56	14.00	20PR
2188CW	13" x 20" Jumbo Box, Overlapping Cover - Water	Green/Green	56	14.00	20PR
2188CS	13" x 20" Jumbo Box, Overlapping Cover - Sewer	Green/Green	56	14.00	20PR
2188CBS	13" x 20" Jumbo Box, Overlapping Bolt-Down Cover - Sewer	Green/Green	56	14.10	20PR
Cover Only					
217C BRN	13" x 20" Overlapping Cover - ICV	Brown	180	5.00	20PR
217C	13" x 20" Overlapping Cover - ICV	Green	180	5.00	20PR
217CW	13" x 20" Overlapping Cover - Water	Green	180	5.00	20PR
217CS	13" x 20" Jumbo Overlapping Cover - Sewer	Green	180	5.00	20PR
217CR	13" x 20" Jumbo Overlapping Cover - Reclaimed Water	Purple	180	5.00	20PR
Box Only					
2188	13" x 20" Jumbo Box	Green	56	9.00	20PR
218-6	13" x 20" x 6" Jumbo Extension	Green	32	8.00	20PR
1138B	2-1/2" x 3/8" SS Bolt	Steel	(Bag of 10)	0.10	20NM

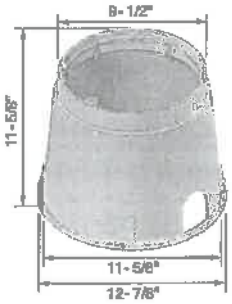
10" Round Valve Box

NDS STANDARD SERIES VALVE BOXES – RESIDENTIAL/COMMERCIAL GRADE

NDS Standard Series 10" Round Valve Boxes

Specifications: The NDS STANDARD SERIES 10" round body is tapered and has a minimum wall thickness of 0.200". The cover seat area has 6 structural support ribs on the underside of the seat, each with a minimum thickness of 0.250". The bottom of the body has a 0.500" flange. The 10" round cover has an average thickness of 0.250". The valve box has a 5/16" 304 Brass nut for the bolt-down as a standard feature.





2 - 1/2" x 2 - 3/4"
Pipe Slot

Part No.	Description - Marking	Color (Box/Cover)	Pallet Qty.	Wt. Ea. lbs.	Product Class
Box & Cover					
111BC	10" Round Box, Round Overlapping Cover - ICV	Black/Green	180	3.00	20ND
111BCB	10" Round Box, Round Overlapping Bolt-Down Cover - ICV	Black/Green	180	3.00	20ND
111BC CTN	10" Round ICV Box and Cover	Black/Green	72	3.90	20ND
111BC SAND	10" Round Box, Round Overlapping Cover - ICV	Sand/Sand	180	3.00	20ND
111BCR	10" Round Box, Round Overlapping Cover - Reclaimed Water	Black/Purple	180	3.00	20ND
111BCBR	10" Round ICV Box and Cover	Black/Green	180	3.00	20NM
111PBCR	10" Round Box, Round Overlapping Cover - Reclaimed Water	Purple/Purple	180	3.00	20ND
111BCW	10" Round Box, Round Overlapping Cover - Water	Black/Green	180	3.00	20NM
111BCS	10" Round Box, Overlapping Cover - Sewer	Black/Green	180	3.00	20NM
111BCBS	10" Round Box, Overlapping Bolt-Down Cover - Sewer	Black/Green	180	3.00	20NM
Cover Only					
111C	10" Round Overlapping Cover - ICV	Green	300	1.00	20ND
111C SAND	10" Round Overlapping Cover - ICV	Sand	300	1.00	20ND
111CR	10" Round Overlapping Cover - Reclaimed Water	Purple	300	1.00	20ND
111CE-GY	10" Round Overlapping Cover - Electrical	Gray	300	1.00	20NM
111CW	10" Round Overlapping Cover - Water	Green	300	1.00	20NM
111CS	10" Round Overlapping Cover - Sewer	Green	300	1.00	20NM
Box Only					
111B	10" Round Box	Black	180	2.00	20NM
111B SAND	10" Round Box	Sand	180	2.00	20ND
111PB	10" Round Box	Purple	180	2.00	20ND
111BB	1-1/4" x 5/16" SS Bolt	Steel	(Bag of 10)	0.10	20ND
112B	10" Round Box	Green	180	2.00	20ND

Solvent Cement

WELD-ON®
IPS CORPORATION

PRODUCT BULLETIN
711™
INDUSTRIAL GRADE
LOW VOC PVC SOLVENT CEMENT

GENERAL DESCRIPTION:

WELD-ON® 711™ is an industrial grade, gray, low VOC emission, heavy bodied, medium setting, high strength PVC solvent cement for all classes and schedules of pipe and fittings with interference fit through 12 inch (315 mm) diameter, including Schedule 80. It has good gap filling properties and its medium set allows more working time in warm weather.

APPLICATION:

WELD-ON 711 is for use on all types of PVC plastic pipe applications, Type I and Type II. It is suitable for use with potable water pressure systems, irrigation, turf, conduit, sewer, drain, waste and vent systems. Ideal for use on industrial piping systems.

Detailed directions on making solvent cemented joints are printed on the container label. An installation DVD/CD covering solvent cementing is available. It not only describes the basic principles of solvent cementing, but also covers the handling, storage and use of our products. It is highly recommended that the installer review the instructions supplied by the pipe and fitting manufacturer. **NOTE:** WELD-ON solvent cements must never be used in a PVC system using or being tested by compressed air or gases; including air-over-water booster.

AVAILABILITY:

This product is available in ½ pint (237 ml), pint (473 ml), quart (946 ml) and gallon (3.785 l) metal cans. For detailed information on containers and applicators, see our current Price List.

STANDARDS AND CERTIFICATION LISTINGS:

- Meets ASTM D 2564 Standard
- Meets SCAQMD Rule 1168/316A
- Compliant with LEED® (Leadership in Energy and Environmental Design). When using this WELD-ON Low VOC product, credit can be claimed for LEED Green Building Rating System - Indoor Environmental Quality.
- Listed by NSF International for compliance with ASTM D 2564, NSF/ANSI Standard 14 and NSF/ANSI Standard 61 for use in potable water, drain, waste, vent and sewer applications.
- Meets CSA standards B137.3 and B181.2 for use in pressure and non-pressure potable water, drain, waste, and vent applications.
- Listed by IAPMO for compliance with ASTM D 2564 and applicable sections of the latest edition of the Uniform Plumbing Code®

SPECIFICATIONS:

COLOR:	Gray
RESIN:	PVC
SPECIFIC GRAVITY:	0.966 ± 0.04
BROOKFIELD VISCOSITY:	Minimum 1,600 cP @ 73° ± 2°F (23° ± 1°C)

SHELF LIFE:

3 years in tightly sealed containers. The date code of manufacture is stamped on the bottom of the container. Stability of the product is limited by the evaporation of the solvent when the container is opened. Evaporation of solvent will cause the cement to thicken and reduce its effectiveness. Adding of thinners to change viscosity is not recommended and may significantly change the properties of the cement.

QUALITY ASSURANCE:

WELD-ON 711 is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes used in manufacturing this solvent cement.

SHIPPING:

For One Liter and Above
Proper Shipping Name: Adhesive
Hazard Class: 3
Identification Number: UN 1133
Packing Group: II
Label Required: Flammable Liquid

For Less than One Liter
Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D

SAFETY AND ENVIRONMENTAL PRECAUTIONS:

This product is flammable and considered a hazardous material. In conformance with the Federal Hazardous Substances Labeling Act, the following hazards and precautions are given. Purchasers who repackage this product must also conform to all local, state and federal labeling, safety and other regulations. VOC emissions do not exceed 510 grams per liter.

DANGER: EXTREMELY FLAMMABLE. VAPOR HARMFUL.
MAY BE HARMFUL IF SWALLOWED. MAY IRRITATE SKIN OR EYES.

Keep out of reach of children. Do not take internally. Keep away from heat, spark, open flame and other sources of ignition. Vapors may ignite explosively. Solvent cement vapors are heavier than air and may travel to source(s) of ignition at or near ground or lower level(s) and flash back. Keep container closed when not in use. Store between 40°F (5°C) and 110°F (44°C). Avoid breathing of vapors. Use only in well-ventilated area. If confined or partially enclosed, use forced ventilation. When necessary, use local exhaust ventilation to remove harmful airborne contaminants from employee breathing zone and to keep contaminates below 25 ppm TWA. Atmospheric levels must be maintained below established exposure limits contained in Section II of the Material Safety Data Sheet (MSDS). If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air-purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus. Do not smoke, eat or drink while working with this product. Avoid contact with skin, eyes and clothing. May cause eye injury. Protective equipment such as gloves, goggles and impervious apron should be used. Carefully read Material Safety Data Sheet and follow all precautions. Do not use this product for other than intended use.

"SARA Title III Section 313 Supplier Notification": This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and of 40CFR372. This information must be included in all MSDS that are copied and distributed for this material.

FIRST AID:

Inhalation:	If overcome with vapors, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact:	Flush with plenty of water for 15 minutes and call a physician.
Skin Contact:	Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion:	If swallowed, give 1 or 2 glasses of water or milk. Do not induce vomiting. Contact physician or poison control center immediately.

SPECIAL PRECAUTION:

Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. The introduction of granules or pellets of calcium hypochlorite with PVC and CPVC solvent cements and primers (including their vapors) may result in a violent chemical reaction if a water solution is not used. It is advisable to purify lines by pumping chlorinated water into the piping system – this solution will be nonvolatile. Furthermore, dry granular calcium hypochlorite should not be stored or used near solvent cements and primers.

IMPORTANT NOTE:

This product is intended for use by skilled individuals at their own risk. These suggestions and data are based on information we believe to be reliable. Installers should verify for themselves that they can make satisfactory joints under varying conditions. Toward this end, it is highly desirable that they receive personal instruction from trained instructors or competent, experienced installers. Contact IPS® Corporation or your supplier for additional information or instructions.

WARRANTY:

IPS® Corporation ("IPS Corp.") warrants that all new IPS Corp. products shall be of good quality and free from defects in material and workmanship for the shelf life as indicated on the product. If any IPS Corp. product becomes defective, or fails to conform to our written limited warranty under normal use and storage conditions, then IPS Corp. will, without charge, replace the nonconforming product. However, this limited warranty shall not extend to, nor shall IPS Corp. be responsible for, damages or loss resulting from accident, misuse, negligent use, improper application, or incorporation of IPS Corp. products into other products. In addition, any repackaging of IPS Corp. products also shall void the limited warranty. IPS Corp. shall not be responsible for, nor does this limited warranty extend to, consequential damage, or incidental damage or expense, including without limitation, injury to persons or property or loss of use. Please refer to our standard IPS Corp. Limited Warranty for additional provisions.

IPS CORPORATION

455 W. Victoria Street
Compton, CA 90220 U.S.A.
Tel: 310.898.3300
Fax: 310.898.3392

500 Distribution Parkway
Collierville, TN 38017 U.S.A.
Tel: 901.853.5001
Fax: 901.853.5008

Customer Service: 800.888.8312
www.ipscorp.com

Primer

PRIMER

WELD-ON®
IPS CORPORATION

PRODUCT BULLETIN

P-70™

INDUSTRIAL GRADE

LOW VOC PRIMER FOR PVC AND CPVC PIPES

GENERAL DESCRIPTION:

WELD-ON® P-70™ is an industrial grade, low VOC emission, non-bodied, fast acting, primer. The strong, aggressive action of P-70 primer rapidly softens and dissolves the joining surfaces of PVC and CPVC pipe and fittings. The benefit of this priming action is especially noticeable on parts being joined together in cold weather. Available in clear and purple; the latter allows easy identification when used on the joining surfaces.

APPLICATION:

WELD-ON P-70 primer, when used in conjunction with appropriate WELD-ON solvent cements, will make consistently strong, well-fused joints. It is essential that the joining surfaces of pipe and fittings be softened and remains softened prior to assembly. The main function of the primer is to expedite the penetration and softening of the surfaces. Its rate of penetration into the joining surfaces is more rapid than that of solvent cement alone. P-70 primer is suitable for use with all types, classes and schedules of PVC and CPVC pipe and fittings. It is specially recommended for use on Schedule 80 and large pipe size.

Detailed directions on making solvent cemented joints are printed on the container label. An installation DVD/CD covering solvent cementing is available. It not only describes the basic principles of solvent cementing, but also covers the handling, storage and use of our products. It is highly recommended that the installer review the instructions supplied by the pipe and fitting manufacturer. **NOTE:** WELD-ON solvent cements must never be used in a CPVC system using or being tested by compressed air or gases; including air-over-water booster.

AVAILABILITY:

Both WELD-ON P-70 clear and purple primers are available in ¼ pint (118 ml), ½ pint (237 ml), pint (473 ml), quart (946 ml) and gallon (3.785 l) metal cans. For detailed information on containers and applicators, see our current Price List.

STANDARDS AND CERTIFICATION LISTINGS:

NSF® UPC® PW/DWV/SW Purple Only

- Meets ASTM F 656 Standard
- Meets SCAQMD Rule 1168/316A
- Compliant with LEED® (Leadership in Energy and Environmental Design). When using this WELD-ON low VOC product, credit can be claimed for LEED Green Building Rating System – Indoor Environmental Quality.
- Listed by NSF International for compliance with ASTM F 656, NSF/ANSI Standard 14, and NSF/ANSI Standard 61 for use on potable water, drain, waste, vent and sewer applications.
- ***WELD-ON P-70 Purple Only*** - Listed by IAPMO for compliance with ASTM F 656 and applicable sections of the latest edition of the Uniform Plumbing Code®.

SPECIFICATIONS:

COLOR:	Clear or Purple
SPECIFIC GRAVITY:	0.858 ± 0.040
BROOKFIELD VISCOSITY:	Water Thin

SHELF LIFE:

3 years in tightly sealed containers. The date code of manufacture is stamped on the bottom of the container. Stability of the product is limited by the evaporation of the solvent when the container is opened. Adding of solvents is not recommended and may significantly change the properties of the primer.

QUALITY ASSURANCE:

WELD-ON P-70 primer is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes used in manufacturing this product.

SHIPPING:

For One Liter and Above

Proper Shipping Name:	Flammable Liquid n.o.s. (Methyl Ethyl Ketone, Tetrahydrofuran)
Hazard Class:	3
Identification Number:	UN 1993
Packing Group:	II
Label Required:	Flammable Liquid

For Less than One Liter

Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D

SAFETY AND ENVIRONMENTAL PRECAUTIONS:

This product is flammable and considered a hazardous material. In conformance with the Federal Hazardous Substances Labeling Act, the following hazards and precautions are given. Purchasers who repackage this product must also conform to all local, state and federal labeling, safety and other regulations. VOC emissions do not exceed 550 grams per liter.

DANGER: EXTREMELY FLAMMABLE. VAPOR HARMFUL.
MAY BE HARMFUL IF SWALLOWED. MAY IRRITATE SKIN OR EYES.

Keep out of reach of children. Do not take internally. Keep away from heat, spark, open flame and other sources of ignition. Vapors may ignite explosively. Solvent cement vapors are heavier than air and may travel to source(s) of ignition at or near ground or lower level(s) and flash back. Keep container closed when not in use. Store between 40°F (5°C) and 110°F (44°C). Avoid breathing of vapors. Use only in well-ventilated area. If confined or partially enclosed, use forced ventilation. When necessary, use local exhaust ventilation to remove harmful airborne contaminants from employee breathing zone and to keep contaminates below 25 ppm TWA. Atmospheric levels must be maintained below established exposure limits contained in Section II of the Material Safety Data Sheet (MSDS). If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air-purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus. Do not smoke, eat or drink while working with this product. Avoid contact with skin, eyes and clothing. May cause eye injury. Protective equipment such as gloves, goggles and impervious apron should be used. Carefully read Material Safety Data Sheet and follow all precautions. Do not use this product for other than intended use.

"SARA Title III Section 313 Supplier Notification": This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and of 40CFR372. This information must be included in all MSDS that are copied and distributed for this material.

FIRST AID:

Inhalation:	If overcome with vapors, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact:	Flush with plenty of water for 15 minutes and call a physician.
Skin Contact:	Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion:	If swallowed, give 1 or 2 glasses of water or milk. Do not induce vomiting. Contact physician or poison control center immediately.

SPECIAL PRECAUTION:

Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. The introduction of granules or pellets of calcium hypochlorite with PVC and CPVC solvent cements and primers (including their vapors) may result in a violent chemical reaction if a water solution is not used. It is advisable to purify lines by pumping chlorinated water into the piping system – this solution will be nonvolatile. Furthermore, dry granular calcium hypochlorite should not be stored or used near solvent cements and primers.

IMPORTANT NOTE:

This product is intended for use by skilled individuals at their own risk. These suggestions and data are based on information we believe to be reliable. Installers should verify for themselves that they can make satisfactory joints under varying conditions. Toward this end, it is highly desirable that they receive personal instruction from trained instructors or competent, experienced installers. Contact IPS® Corporation or your supplier for additional information or instructions.

WARRANTY:

IPS® Corporation ("IPS Corp.") warrants that all new IPS Corp. products shall be of good quality and free from defects in material and workmanship for the shelf life as indicated on the product. If any IPS Corp. product becomes defective, or fails to conform to our written limited warranty under normal use and storage conditions, then IPS Corp. will, without charge, replace the nonconforming product. However, this limited warranty shall not extend to, nor shall IPS Corp. be responsible for, damages or loss resulting from accident, misuse, negligent use, improper application, or incorporation of IPS Corp. products into other products. In addition, any repackaging of IPS Corp. products also shall void the limited warranty. IPS Corp. shall not be responsible for, nor does this limited warranty extend to, consequential damage, or incidental damage or expense, including without limitation, injury to persons or property or loss of use. Please refer to our standard IPS Corp. Limited Warranty for additional provisions.

IPS CORPORATION

455 W. Victoria Street
Compton, CA 90220 U.S.A.
Tel: 310.898.3300
Fax: 310.898.3392

500 Distribution Parkway
Collierville, TN 38017 U.S.A.
Tel: 901.853.5001
Fax: 901.853.5008

Customer Service: 800.888.8312
www.ipscorp.com

Solvent Cement@Flex Pipe

WELD-ON
IPS CORPORATION

PRODUCT BULLETIN
795™
LOW VOC PVC SOLVENT CEMENT

GENERAL DESCRIPTION:

WELD-ON® 795™ is a clear, or blue, low VOC emission, medium bodied, fast setting, high strength PVC solvent cement for all flex to flex and flex to rigid pipe and fittings with interference fit through 6 inch (160 mm) diameter, Schedule 80 through 3 inch (90 mm) diameter.

APPLICATION:

WELD-ON 795 is specially formulated to contain an elastomer which provides great joint flexibility. It cures rapidly with the dissipation of the solvent at room temperature, resulting in a very strong, flexible, water resistant bond. WELD-ON 795 is widely used in all aspects of the pool & spa industry including, but not limited to, pump, pipe, fittings and valves connections as well as for bonding PVC hose to rigid PVC fittings. It is also excellent for joining flexible vinyl to itself.

Detailed directions on making solvent cemented joints are printed on the container label. An installation DVD/CD covering solvent cementing is available. It not only describes the basic principles of solvent cementing, but also covers the handling, storage and use of our products. It is highly recommended that the installer review the instructions supplied by the pipe and fitting manufacturer. **NOTE:** WELD-ON solvent cements must never be used in a PVC system using or being tested by compressed air or gases; including air-over-water booster.

AVAILABILITY:

Clear cement is available in ¼ pint (118 ml), ½ pint (237 ml), pint (473 ml), quart (946 ml) and gallon (3.785 l) metal cans. Blue cement is available in quart (946 ml) and gallon (3.785 l) metal cans. For detailed information on containers and applicators, see our current Price List.

STANDARDS AND CERTIFICATION LISTINGS:

NSF PW/DWV/SW UPC

- Meets ASTM D 2564 Standard.
- Meets SCAQMD Rule 1168/316A.
- Compliant with LEED® (Leadership in Energy and Environmental Design). When using this WELD-ON low VOC product, credit can be claimed for LEED Green Building Rating System – Indoor Environmental Quality.
- Listed by NSF International for compliance with ASTM D 2564, NSF/ANSI Standard 14, and NSF/ANSI Standard 61 for use on potable water, drain, waste, vent and sewer applications.
- Listed by IAPMO for compliance with applicable sections of the latest edition of the Uniform Plumbing Code®, for potable water applications.

SPECIFICATIONS:

COLOR:	Clear or Blue
RESIN:	PVC
SPECIFIC GRAVITY:	0.940 ± 0.040
BROOKFIELD VISCOSITY:	Minimum 500 cP @ 73° ± 2°F (23° ± 1°C)

SHELF LIFE:

3 years in tightly sealed containers. The date code of manufacture is stamped on the bottom of the container. Stability of the product is limited by the evaporation of the solvent when the container is opened. Evaporation of solvent will cause the cement to thicken and reduce its effectiveness. Adding of thinners to change viscosity is not recommended and may significantly change the properties of the cement.

QUALITY ASSURANCE:

WELD-ON 795 is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes used in manufacturing this solvent cement.

SHIPPING:

For One Liter and Above
Proper Shipping Name: Adhesive
Hazard Class: 3
Identification Number: UN 1133
Packing Group: II
Label Required: Flammable Liquid

For Less than One Liter
Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D

SAFETY AND ENVIRONMENTAL PRECAUTIONS:

This product is flammable and considered a hazardous material. In conformance with the Federal Hazardous Substances Labeling Act, the following hazards and precautions are given. Purchasers who repackage this product must also conform to all local, state and federal labeling, safety and other regulations. VOC emissions do not exceed 510 grams per liter.

DANGER: EXTREMELY FLAMMABLE. VAPOR HARMFUL.
MAY BE HARMFUL IF SWALLOWED. MAY IRRITATE SKIN OR EYES.

Keep out of reach of children. Do not take internally. Keep away from heat, spark, open flame and other sources of ignition. Vapors may ignite explosively. Solvent cement vapors are heavier than air and may travel to source(s) of ignition at or near ground or lower level(s) and flash back. Keep container closed when not in use. Store between 40°F (5°C) and 110°F (44°C). Avoid breathing of vapors. Use only in well-ventilated area. If confined or partially enclosed, use forced ventilation. When necessary, use local exhaust ventilation to remove harmful airborne contaminants from employee breathing zone and to keep contaminates below 25 ppm TWA. Atmospheric levels must be maintained below established exposure limits contained in Section II of the Material Safety Data Sheet (MSDS). If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air-purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus. Do not smoke, eat or drink while working with this product. Avoid contact with skin, eyes and clothing. May cause eye injury. Protective equipment such as gloves, goggles and impervious apron should be used. Carefully read Material Safety Data Sheet and follow all precautions. Do not use this product for other than intended use.

"SARA Title III Section 313 Supplier Notification": This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and of 40CFR372. This information must be included in all MSDS that are copied and distributed for this material.

FIRST AID:

Inhalation:	If overcome with vapors, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact:	Flush with plenty of water for 15 minutes and call a physician.
Skin Contact:	Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion:	If swallowed, give 1 or 2 glasses of water or milk. Do not induce vomiting. Contact physician or poison control center immediately.

SPECIAL PRECAUTION:

Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. The introduction of granules or pellets of calcium hypochlorite with PVC and CPVC solvent cements and primers (including their vapors) may result in a violent chemical reaction if a water solution is not used. It is advisable to purify lines by pumping chlorinated water into the piping system – this solution will be nonvolatile. Furthermore, dry granular calcium hypochlorite should not be stored or used near solvent cements and primers.

IMPORTANT NOTE:

This product is intended for use by skilled individuals at their own risk. These suggestions and data are based on information we believe to be reliable. Installers should verify for themselves that they can make satisfactory joints under varying conditions. Toward this end, it is highly desirable that they receive personal instruction from trained instructors or competent, experienced installers. Contact IPS® Corporation or your supplier for additional information or instructions.

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IPS® Corporation ("IPS Corp.") warrants that all new IPS Corp. products shall be of good quality and free from defects in material and workmanship for the shelf life as indicated on the product. If any IPS Corp. product becomes defective, or fails to conform to our written limited warranty under normal use and storage conditions, then IPS Corp. will, without charge, replace the nonconforming product. However, this limited warranty shall not extend to, nor shall IPS Corp. be responsible for, damages or loss resulting from accident, misuse, negligent use, improper application, or incorporation of IPS Corp. products into other products. In addition, any repackaging of IPS Corp. products also shall void the limited warranty. IPS Corp. shall not be responsible for, nor does this limited warranty extend to, consequential damage, or incidental damage or expense, including without limitation, injury to persons or property or loss of use. Please refer to our standard IPS Corp. Limited Warranty for additional provisions.

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Subsurface Dripline

ECO-WRAP®

Subsurface Irrigation **Under Turf, Gardens, Shrubs, Trees**

FEATURES

- High distribution uniformity surpassed only by the Eco-Mat
- Promotes healthier plant roots
- Eliminates overspray onto sidewalks, buildings, or vehicles
- Ideal for difficult areas between flagstone and pavers
- Use with PLD-Loc or barbed PLD fittings
- Fleece-wrapped professional landscape dripline
- Transports water faster and more uniformly than bare dripline
- Pressure compensating
- Check valves keep the line charged up to 5' and prevent low point drainage
- Fleece fully moistens in less than 3 minutes and conserves water that bare dripline cannot
- Recommended for use with all Hunter Drip Control Zone Kits
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

Eco-Wrap

For maximum run length distances for the Eco-Mat® or Eco-Wrap, reference the Maximum Run Length Chart on page 169. Use 0.6 GPH for flow and 12" emitter spacing.

OPERATING SPECIFICATIONS

- Minimum filtration 120 mesh; 125 microns
- Operating pressure range: 15 to 50 PSI
- Compatible with PLD-LOC and 17 mm insert barb fittings

ECO-WRAP TECHNICAL SPECIFICATIONS	
ECO-WRAP	17 mm
Flow and Spacing	0.6 GPH and 12"
Roll Length	250'
Operating Pressure	15 to 50 PSI
Minimum Filtration	120 mesh; 125 microns

Subsurface Drip Syste

ECO-MAT®

UNMATCHED UNIFORMITY AND WATER SAVINGS

Subsurface irrigation **Under Turf, Gardens, Small Shrubs**

FEATURES

- Water-saving with nearly 100% distribution uniformity
- Promotes healthier plant roots
- Eliminates overspray onto sidewalks, buildings, or vehicles
- Perfect for irrigating difficult areas
- Use with PLD-Loc or barbed PLD fittings
- The polypropylene wrap protects against root intrusion without using toxic chemicals or metal byproducts
- Water holding capacity of 0.5 gal/yd²
- Pressure compensating
- Check valves keep the line charged up to 5' and prevent low point drainage
- Recommended for use with all Hunter Drip Control Zone Kits
- For maximum water savings, use with Hunter Soil-Clik®
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

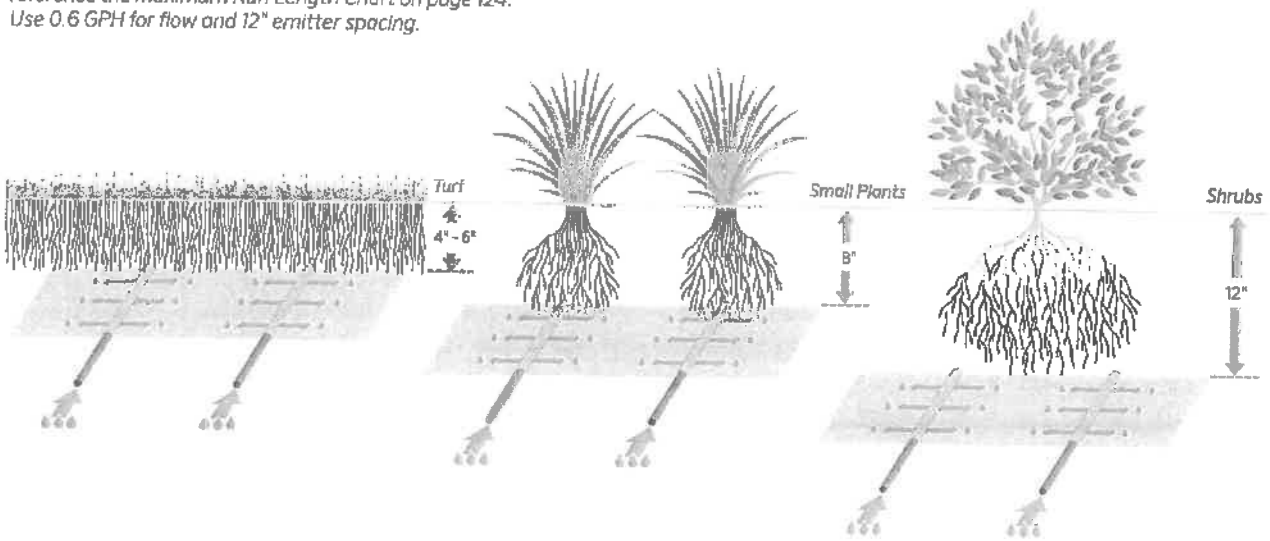
ECO-MAT TECHNICAL SPECIFICATIONS

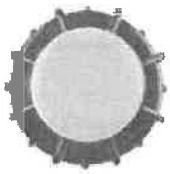
ECO-MAT	**17 mm**
Flow and Spacing	0.6 GPH and 12"
Roll Length	100' or 295'
Width	32"
ft²	100' roll is 266 ft², 295' roll is 785 ft²
Operating Pressure	15 to 50 PSI
Minimum Filtration	120 mesh; 125 microns
Lateral Row Spacing	14"

OPERATING SPECIFICATIONS

- Minimum filtration 120 mesh; 125 microns
- Operating pressure range: 15 to 50 PSI
- Compatible with PLD-LOC and 17 mm insert barb fittings
- Recommended installation depth range 4" to 12"

For maximum run length distances for the Eco-Mat or Eco-Wrap, reference the Maximum Run Length Chart on page 124. Use 0.6 GPH for flow and 12" emitter spacing.





Eco-Indicator

Pair with Eco-Mat and Eco-Wrap subsurface systems. Offers a visual signal that the system is operating. Requires 12 PSI minimum. Yellow, easy-to-see indicator stem with 6" pop up height.

Flush Valve

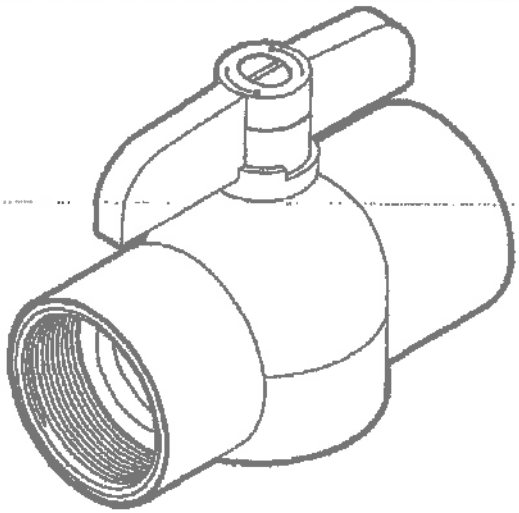
The Professional's Choice

King Bros. Industries
29101 The Old Road, Valencia, CA 91355
Toll Free: (800) 325-9468 Fax: (661) 257-4320
E-mail: valves@kbico.com Web: www.kbico.com

PVC Schedule 40 Economy Ball Valves

Features:

- EPDM O'rings.
- Viton O'rings available.
- Meets/Exceeds ASTM schedule 40 socket and material standards.
- Made of High-Impact PVC Type II material.
- Molded in the **USA** by KBI.
- 150 psi working pressure (tested to 500 psi static @ 72°F) Nominal operating pressure.
- NSF Standard listed.



Models		Size	A	L	H	W	Case	Weight
Socket	Thread							
EBV-0500-S	EBV-0500-T	1/2"	2.3"	2.7"	2..1"	1.2"	36	5.2
EBV-0750-S	EBV-0750-T	3/4"	2.6"	3.1"	2.4"	1.4"	24	5.4
EBV-1000-S	EBV-1000-T	1"	3.2"	3.5"	2.7"	1.7"	18	6.2
EBV-1250-S	EBV-1250-T	1 1/4"	4.2"	4.9"	4.0"	2.0"	6	4.2
EBV-1500-S	EBV-1500-T	1 1/2"	4.2"	5.2"	4.0"	2.5"	6	4.4
EBV-2000-S	EBV-2000-T	2"	5.2"	6.0"	5.0"	2.7"	6	7.6

FEATURES COMMON TO KBI PVC PRODUCTS

- NSF listed *
- IAPMO (UPC) listed *
- Molded in the USA by KBI
- Limited LIFETIME Warranty
- 150 psi working pressure (tested to 500 psi static @ 72°F)
- Meets/Exceeds ASTM Standards
- Made with Hi-Impact PVC Type II Cell Class 15344-C

* See individual products for details

Air Relief valve

FITTINGS

Fittings: **16-18 mm Dripline**
Uses. **Barbed and Premium Fittings**

BARBED FITTINGS

- Acetal material
- Dual barb provides stronger hold than single barb
- Ideal for use with Eco-Mat®, Eco-Wrap™, PLD
- Fits 17 mm dripline and tubing
- Brown color to match PLD dripline
- No clamps necessary
- Warranty period: 1 year

OPERATING SPECIFICATIONS

- Maximum pressure: 60 PSI

FITTINGS

PLD-075
¾" MPT x 17 mm Barb

PLD-050
½" MPT x 17 mm Barb

PLD-ELB
17 mm Barb Elbow

PLD-CPL
17 mm Barb Coupling

PLD-CAP
17 mm Barb x ½" MPT with Cap

PLD-TEE
17 mm Barb Tee

PLD-075-TBTEE
17 mm Barb Tee x ¾" Thread

PLD-BV
17 mm Barb Shut-off Valve

PLD-AVR
½" Air/Vacuum Relief Valve

PLD-LOC

- High quality glass-filled polypropylene
- Easy push-on installation, threads lock it into place
- Easier and faster than other fittings
- Fits multiple sizes of dripline and tubing (Inside diameter range from 0.520" to 0.620")
- Brown color blends in with dripline and landscape
- Reusable and ideal for drip irrigation maintenance
- Warranty period: 2 years

OPERATING SPECIFICATIONS

- Maximum pressure: 60 PSI

FITTINGS

PLD-LOC 075
¾" Male Pipe Thread x Loc

PLD-LOC 050
½" Male Pipe Thread x Loc

PLD-LOC ELB
Locking Elbow

PLD-LOC CPL
Locking Coupler

PLD-LOC CAP
End Cap x Loc

PLD-LOC TEE
Locking Tee

PLD-LOC FHS
¾" Female Hose Swivel x Loc

MICRO

Bubbler

RAIN BIRD.

Tech Spec

Bubbler Heads

Adjustable Full-Circle Bubbler
1300A-F

Designed for tree, shrub and flower areas.

1300A-F

Operating Range

- Flow: 1.0 to 2.3 gpm (0.23 to 0.52 m³/h; 0.06 to 0.14 l/s)
- Spacing: 1 to 3 feet (0.3 to 0.9 m)
- Pressure: 10 to 60 psi (0.7 to 4.0 bar)

Dimensions

- ½ inch (15/21) female threaded inlet
- Height: 1 inch (2.5 cm)
- Top diameter: 1 inch (2.5 cm)

1300A-F		
Nozzle	Pressure psi	Flow gpm
F	10	1.0
	20	1.4
•	30	1.7
	40	1.9
	50	2.1
	60	2.3

1300A-F	METRIC		
Nozzle	Pressure bar	Radius m³/h	Flow l/m
F	0.7	0.23	3.6
	1.0	0.26	4.2
•	1.5	0.30	4.8
	2.0	0.34	5.4
	2.5	0.39	6.0
	3.0	0.43	7.2
	3.5	0.48	7.8
	4.0	0.52	8.4
	4.1	0.53	8.4

Pressure Compensating Full-Circle Bubblers
1400 Series

Designed for irrigating tree, shrub and flower areas where pressure compensation is required.

1400 Series

Operating Range

- Flow: 0.25 to 2.0 gpm (0.06 to 0.46 m³/h; 0.02 to 0.13 l/s)
- Spacing: 1 to 3 feet (0.3 to 0.9 m)
- Pressure: 20 to 90 psi (1.5 to 6.0 bar)

Dimensions

- Same as 1300A-F

Models and Specifications

- 1401: 0.25 gpm (0.06 m³/h; 0.02 l/s); full circle, trickle pattern
- 1402: 0.5 gpm (0.11 m³/h; 0.03 l/s); full circle, trickle pattern
- 1404: 1.0 gpm (0.23 m³/h; 0.06 l/s); full circle, umbrella pattern
- 1408: 2.0 gpm (0.46 m³/h; 0.12 l/s); full circle, umbrella pattern

How To Specify
1404
Model
1300A-F
1401
1403
1404
1408

Specifications

1300A-F
Adjustable Flood Bubbler

The bubbler body shall be constructed of durable UV-resistant plastic. It shall have a plastic inlet filter screen to protect the nozzle against clogging, and a stainless steel adjusting screw, capable of shutting off the bubbler and regulating the flow.

The bubbler shall have a ½ inch (15,21) female threaded inlet for connecting to the piping system riser.

The bubbler shall be as manufactured by Rain Bird Corporation, Glendora, California.

1401, 1402, 1404, 1408
Pressure Compensating Flood Bubbler

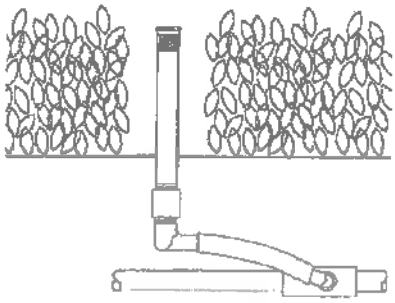
The bubbler shall have a "trickle" pattern (1401 & 1402 models) or an "umbrella" pattern (1406 & 1408 models) discharge.

The bubbler assembly shall have a plastic inlet filter screen to protect the nozzle against clogging.

The pressure compensating bubbler shall be of a permanently assembled design constructed of durable, UV-resistant plastic with an integral rubber flow washer for regulating the flow rate at an operating pressure range of 20 to 90 psi (1,5 to 6,0 bar).

The pressure compensating bubbler shall have a ½ inch (15,21) female threaded inlet for connection to the piping system riser.

The pressure compensating bubbler shall be as manufactured by Rain Bird Corporation, Glendora, California.



Rain Bird Corporation
6991 E. Southpoint Road
Tucson, AZ 85756
Phone: (520) 741-6100
Fax: (520) 741-6522

Rain Bird Technical Services
(800) RAINBIRD (1-800-724-6247)
(U.S. and Canada)

Rain Bird Corporation
970 West Sierra Madre Avenue
Azusa, CA 91702
Phone: (626) 812-3400
Fax: (626) 812-3411

Specification Hotline
800-458-3005 (U.S. and Canada)

Rain Bird International, Inc.
1000 West Sierra Madre Ave.
Azusa, CA 91702
Phone: (626) 963-9311
Fax: (626) 852-7343

The Intelligent Use of Water™
www.rainbird.com

Sprinkler Head

PRS40

PRESSURE REGULATED

Models: **Shrub, 4", 6", 12"**
Pressure Regulation: **40 PSI**

FEATURES

- Models: Shrub, 4", 6", 12"
- Gray identification cap for easy field ID
- Innovative directional flush plug design
- 6" and 12" models come standard as no side inlet, ensuring proper installation with check valve
- Drain check valve installed (14' of elevation) comes standard
- Warranty period: 5 years
- ▸ Co-molded wiper seal
- ▸ Heavy-duty spring
- ▸ Industry's strongest spray body
- ▸ Innovative seal design
- ▸ Pro-Spray check valve
- ▸ Pressure regulated to 40 PSI
- ▸ FloGuard™ technology

OPERATING SPECIFICATIONS

- Operational pressure range: 15 to 100 PSI

FACTORY INSTALLED OPTIONS

- Reclaimed water ID cap
- FloGuard technology available for check valve models

USER INSTALLED OPTIONS

- Reclaimed water ID cap (P/N 458562)
- Snap-on reclaimed cover (P/N PROS-RC-CAP)

▸ = *Advanced Feature descriptions on page 52*

PRS40 Reclaimed
PRS40 models include optional factory-installed purple reclaimed caps

Related Solutions: MP Rotator
PRS40 is designed specifically for the MP Rotator®

PROS-00-PRS40
Retracted height: 4½"
Inlet size: ½"

PROS-04-PRS40-CV
Retracted height: 5⅞"
Pop-up height: 4"
Exposed diameter: 2¼"
Inlet size: ½"

PROS-06-PRS40-CV
Retracted height: 8¾"
Pop-up height: 6"
Exposed diameter: 2¼"
Inlet size: ½"

PROS-12-PRS40-CV
Retracted height: 16⅛"
Pop-up height: 12"
Exposed diameter: 2¼"
Inlet size: ½"

SPRAYS

PRS40 – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model

PROS-00-PRS40 = 40 PSI regulated shrub adapter
PROS-04-PRS40-CV = 40 PSI regulated 4" pop-up with drain check valve
PROS-06-PRS40-CV = 40 PSI regulated 6" pop-up with drain check valve
PROS-12-PRS40-CV = 40 PSI regulated 12" pop-up with drain check valve

2 Specialty Options

(blank) = No option
R = Factory-installed reclaimed body cap
F = FloGuard technology
F-R = FloGuard technology with reclaimed body cap

Examples:
PROS-04-PRS40-CV = 4" Pop-up regulated at 40 PSI, drain check valve
PROS-06-PRS40-CV-F = 6" Pop-up regulated at 40 PSI, drain check valve, with FloGuard technology
PROS-12-PRS40-CV-R = 12" Pop-up regulated at 40 PSI, drain check valve, reclaimed body cap

MP ROTATOR®

Radius **8' to 35'**

FEATURES

- Radius can be reduced up to approximately 25% on all models
- Easy arc adjustment
- Color-coded for easy identification
- Removable filter screen ensures hassle-free service
- Wind-resistant multi-stream technology
- ▸ Automatic matched precipitation
- ▸ Double-pop
- ▸ Distribution uniformity
- ▸ Low precipitation rate

OPERATING SPECIFICATIONS

- Recommended operating pressure: 40 PSI
- Recommended filtering when operating on dirty water

OPTIONS

- Specify Pro-Spray® PRS40 pop-up for accurate pressure regulation at 40 PSI
- Adding "HT" will specify male threaded nozzles

▸ = *Advanced Feature descriptions on page 81*

MP ROTATOR – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
MP-1000-90 = 8' to 15' radius, adjustable from 90° to 210°	**(blank)** = No option
MP-1000-210 = 8' to 15' radius, adjustable from 210° to 270°	**HT** = Male threaded version *(Not available in 3500 and 1000-210)*
MP-1000-360 = 8' to 15' radius, 360°	
MP-2000-90 = 13' to 21' radius, adjustable from 90° to 210°	
MP-2000-210 = 13' to 21' radius, adjustable from 210° to 270°	
MP-2000-360 = 13' to 21' radius, 360°	
MP-3000-90 = 22' to 30' radius, adjustable from 90° to 210°	
MP-3000-210 = 22' to 30' radius, adjustable from 210° to 270°	
MP-3000-360 = 22' to 30' radius, 360°	
MP-3500-90 = 31' to 35' radius, adjustable from 90° to 210°	
MP-LCS-515 = Left corner strip, 5' x 15'	
MP-RCS-515 = Right corner strip, 5' x 15'	
MP-SS-530 = Side strip, 5' x 30'	
MP-CORNER = 8' to 15' radius, adjustable from 45° to 105°	

Examples:
MP-1000-210 = 8' to 15' radius, adjustable from 210° to 270°
PROS-06 - PRS40-CV - MP-2000-90 = 6" pop-up regulated at 40 PSI, drain check valve, with MP 2000-90.

MP1000 8' to 15' radius

MP-1000-90
90° to 210°

MP-1000-210
210° to 270°

MP-1000-360
360°

MP2000 13' to 21' radius

MP-2000-90
90° to 210°

MP-2000-210
210° to 270°

MP-2000-360
360°

MP3000 22' to 30' radius

MP-3000-90
90° to 210°

MP-3000-210
210° to 270°

MP-3000-360
360°

MP3500 31' to 35' radius

MP-3500-90
90° to 210°

MP ROTATOR PERFORMANCE DATA

MP-1000
Radius: 8' to 15'
Adjustable Arc and Full-Circle
- Maroon: 90° to 210°
- Lt. Blue: 210° to 270°
- Olive: 360°

MP-2000
Radius: 13' to 21'
Adjustable Arc and Full-Circle
- Black: 90° to 210°
- Green: 210° to 270°
- Red: 360°

MP-3000
Radius: 22' to 30'
Adjustable Arc and Full-Circle
- Blue: 90° to 210°
- Yellow: 210° to 270°
- Gray: 360°

Arc	Pressure PSI	MP-1000 Radius ft.	MP-1000 Flow GPM	MP-1000 Flow GPH	MP-1000 Precip in/hr ■	MP-1000 Precip in/hr ▲	MP-2000 Radius ft.	MP-2000 Flow GPM	MP-2000 Flow GPH	MP-2000 Precip in/hr ■	MP-2000 Precip in/hr ▲	MP-3000 Radius ft.	MP-3000 Flow GPM	MP-3000 Flow GPH	MP-3000 Precip in/hr ■	MP-3000 Precip in/hr ▲
90°	25	--	--	--	--	--	17	0.34	20.4	0.45	0.52	25	0.71	42.6	0.44	0.51
	30	12	0.17	10.2	0.45	0.52	18	0.38	22.8	0.45	0.52	27	0.76	45.6	0.40	0.46
	35	13	0.19	11.4	0.43	0.50	19	0.40	24.0	0.43	0.49	28	0.82	49.2	0.40	0.46
	40	**14**	**0.21**	**12.6**	**0.41**	**0.48**	**20**	**0.43**	**25.8**	**0.41**	**0.48**	**30**	**0.86**	**51.6**	**0.37**	**0.42**
	45	14	0.23	13.8	0.45	0.52	21	0.46	27.6	0.40	0.46	30	0.90	54.0	0.39	0.44
	50	15	0.25	15.0	0.43	0.49	21	0.47	28.2	0.41	0.47	30	0.95	57.0	0.41	0.47
	55	15	0.27	16.2	0.46	0.53	21	0.48	28.8	0.42	0.48	30	1.01	60.6	0.43	0.50
180°	25	--	--	--	--	--	16	0.6	36.0	0.45	0.52	25	1.44	86.4	0.44	0.51
	30	12	0.34	20.4	0.45	0.52	17	0.64	38.4	0.43	0.49	27	1.58	94.8	0.42	0.48
	35	13	0.38	22.8	0.43	0.50	18	0.71	42.6	0.42	0.49	28	1.70	102.0	0.42	0.48
	40	**14**	**0.42**	**25.2**	**0.41**	**0.48**	**19**	**0.77**	**46.2**	**0.41**	**0.47**	**30**	**1.82**	**109.2**	**0.39**	**0.45**
	45	14	0.44	26.4	0.43	0.50	20	0.85	51.0	0.41	0.47	30	1.93	115.8	0.41	0.48
	50	15	0.50	30.0	0.43	0.49	21	0.91	54.6	0.40	0.46	30	2.04	122.4	0.44	0.50
	55	15	0.51	30.6	0.44	0.50	21	0.95	57.0	0.41	0.48	30	2.13	127.8	0.46	0.53
210°	25	--	--	--	--	--	16	0.72	43.2	0.46	0.54	25	1.68	100.8	0.44	0.51
	30	12	0.40	24.0	0.46	0.53	17	0.75	45.0	0.43	0.49	27	1.84	110.4	0.42	0.48
	35	13	0.45	27.0	0.44	0.51	18	0.81	48.6	0.41	0.48	28	1.99	119.4	0.42	0.48
	40	**14**	**0.49**	**29.4**	**0.41**	**0.48**	**19**	**0.86**	**51.6**	**0.39**	**0.45**	**30**	**2.12**	**127.2**	**0.39**	**0.45**
	45	14	0.51	30.6	0.43	0.50	20	0.91	54.6	0.38	0.43	30	2.25	135.0	0.41	0.48
	50	15	0.57	34.2	0.42	0.48	21	0.98	58.8	0.37	0.42	30	2.37	142.2	0.43	0.50
	55	15	0.59	35.4	0.43	0.50	21	1.01	60.6	0.38	0.44	30	2.49	149.4	0.46	0.53
270°	25	--	--	--	--	--	16	0.87	52.2	0.44	0.50	25	2.19	131.4	0.45	0.52
	30	12	0.48	28.8	0.43	0.49	17	0.95	57.0	0.42	0.49	27	2.37	142.2	0.42	0.48
	35	13	0.53	31.8	0.40	0.46	18	1.03	61.8	0.41	0.47	28	2.55	153.0	0.42	0.48
	40	**14**	**0.63**	**37.8**	**0.41**	**0.48**	**19**	**1.10**	**66.0**	**0.39**	**0.45**	**30**	**2.73**	**163.8**	**0.39**	**0.45**
	45	14	0.67	40.2	0.44	0.51	20	1.17	70.2	0.38	0.43	30	2.89	173.4	0.41	0.48
	50	15	0.72	43.2	0.41	0.47	21	1.23	73.8	0.36	0.41	30	3.06	183.6	0.44	0.50
	55	15	0.75	45.0	0.43	0.49	21	1.30	78.0	0.38	0.44	30	3.22	193.2	0.46	0.53
360°	25	--	--	--	--	--	16	1.20	72.0	0.45	0.52	25	2.88	172.8	0.44	0.51
	30	12	0.69	41.4	0.46	0.53	17	1.28	76.8	0.43	0.49	27	3.15	189.0	0.42	0.48
	35	13	0.77	46.2	0.44	0.51	18	1.37	82.2	0.41	0.47	28	3.40	204.0	0.42	0.48
	40	**14**	**0.84**	**50.4**	**0.41**	**0.48**	**19**	**1.48**	**88.8**	**0.39**	**0.46**	**30**	**3.64**	**218.4**	**0.39**	**0.45**
	45	14	0.88	52.8	0.43	0.50	20	1.57	94.2	0.38	0.44	30	3.86	231.6	0.41	0.48
	50	15	0.98	58.8	0.42	0.48	21	1.68	100.8	0.37	0.42	30	4.07	244.2	0.44	0.50
	55	15	1.01	60.6	0.43	0.50	21	1.74	104.4	0.38	0.44	30	4.27	256.2	0.46	0.53

MP-3500 90°
Radius: 31' to 35'
Adjustable Arc
- Light Brown: 90°

MP-3500 180°
Radius: 31' to 35'
Adjustable Arc
- Light Brown: 180°

MP-3500 210°
Radius: 31' to 35'
Adjustable Arc
- Light Brown: 210°

Pressure PSI	MP-3500 90° Radius ft.	MP-3500 90° Flow GPM	MP-3500 90° Flow GPH	MP-3500 90° Precip in/hr ■	MP-3500 90° Precip in/hr ▲	MP-3500 180° Radius ft.	MP-3500 180° Flow GPM	MP-3500 180° Flow GPH	MP-3500 180° Precip in/hr ■	MP-3500 180° Precip in/hr ▲	MP-3500 210° Radius ft.	MP-3500 210° Flow GPM	MP-3500 210° Flow GPH	MP-3500 210° Precip in/hr ■	MP-3500 210° Precip in/hr ▲
25	33	1.04	62.4	0.37	0.42	33	2.21	132.6	0.39	0.45	33	2.59	155.4	0.39	0.45
30	34	1.13	67.8	0.38	0.43	34	2.24	134.4	0.37	0.43	34	2.84	170.4	0.41	0.47
35	34	1.21	72.6	0.40	0.47	34	2.65	159.0	0.44	0.51	34	3.08	184.8	0.44	0.51
40	**35**	**1.28**	**76.8**	**0.40**	**0.46**	**35**	**2.86**	**171.6**	**0.45**	**0.52**	**35**	**3.29**	**197.4**	**0.44**	**0.51**
45	35	1.38	82.8	0.43	0.50	35	3.10	186.0	0.49	0.56	35	3.54	212.4	0.48	0.55
50	35	1.43	85.8	0.45	0.52	35	3.21	192.6	0.50	0.58	35	3.76	225.6	0.51	0.59
55	35	1.50	90.0	0.47	0.54	35	3.28	196.8	0.52	0.60	35	3.94	236.4	0.53	0.61

Bold = Optimal pressure for the MP Rotator is 40 PSI. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 40 PSI

MP ROTATOR PERFORMANCE DATA

- **MP-LCS-515:** Ivory, MP Left Corner Strip
- **MP-RCS-515:** Copper, MP Right Corner Strip
- **MP-SS-530:** Brown, MP Side Strip

	Pressure PSI	Radius ft.	Flow GPM	Flow GPH
MP Left Corner Strip	30	4 x 14	0.19	11.4
	35	5 x 15	0.21	12.6
	40	**5 x 15**	**0.22**	**13.2**
	45	5 x 15	0.23	13.8
	50	6 x 16	0.25	15.0
	55	6 x 16	0.26	15.6
MP Right Corner Strip	30	4 x 14	0.19	11.4
	35	5 x 15	0.21	12.6
	40	**5 x 15**	**0.22**	**13.2**
	45	5 x 15	0.23	13.8
	50	6 x 16	0.25	15.0
	55	6 x 16	0.26	15.6
MP Side Strip	30	4 x 28	0.38	22.8
	35	5 x 30	0.41	24.6
	40	**5 x 30**	**0.44**	**26.4**
	45	5 x 30	0.47	28.2
	50	6 x 32	0.49	29.4
	55	6 x 32	0.51	30.6

Bold = Recommended Pressure

Notes: Strip pattern radius can be adjusted by 25%. MP Rotator is designed to maintain matched precipitation after radius adjustment. Optimal pressure for the MP Rotator is 40 PSI. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 40 PSI

MP ROTATOR PERFORMANCE DATA

MP Corner
Radius: 8' to 15'
Adjustable Arc
- Turquoise: 45° to 105°

Arc	Pressure PSI	Radius ft.	Flow GPM	Flow GPH
45°	25	--	--	--
	30	12	0.17	10.2
	35	13	0.18	10.8
	40	**14**	**0.19**	**11.4**
	45	14	0.21	12.6
	50	14	0.22	13.2
	55	15	0.23	13.8
90°	25	11	0.31	18.6
	30	12	0.34	20.4
	35	13	0.36	21.6
	40	**14**	**0.39**	**23.4**
	45	14	0.41	24.6
	50	15	0.43	25.8
	55	15	0.46	27.6
105°	25	11	0.36	21.6
	30	12	0.39	23.4
	35	13	0.42	25.2
	40	**14**	**0.45**	**27.0**
	45	14	0.48	28.8
	50	15	0.51	30.6
	55	15	0.53	31.8

Bold = Recommended Pressure

MP Strips

MP-LCS-515
Left Corner Strip
5' x 15'

MP-RCS-515
Right Corner Strip
5' x 15'

MP-SS-530
Side Strip
5' x 30'

MP Corner

MP-CORNER
Corner
8' to 15'

Male Threaded

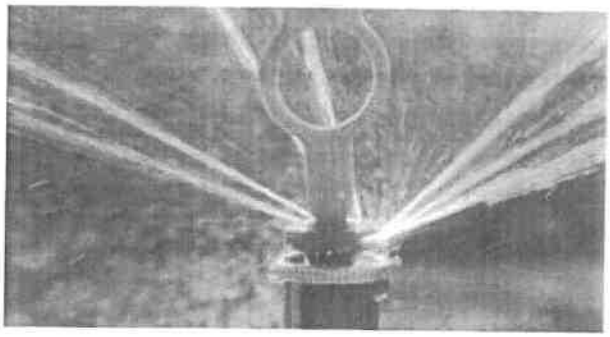
MP-HT
Male Threaded

MP Accessories

MPTOOL
Adjusts all MP Rotators

MPSTICK
Snaps onto any length of 1" PVC to allow standing adjustment. *PVC pipe not included.*

MP TOOL: For Easy Adjustments



Sprinkler Head

PRS40

PRESSURE REGULATED

Models **Shrub, 4", 6", 12"**
Pressure Regulation **40 PSI**

FEATURES

- Models: Shrub, 4", 6", 12"
- Gray identification cap for easy field ID
- Innovative directional flush plug design
- 6" and 12" models come standard as no side inlet, ensuring proper installation with check valve
- Drain check valve installed (14' of elevation) comes standard
- Warranty period: 5 years
- ▸ Co-molded wiper seal
- ▸ Heavy-duty spring
- ▸ Industry's strongest spray body
- ▸ Innovative seal design
- ▸ Pro-Spray check valve
- ▸ Pressure regulated to 40 PSI
- ▸ FloGuard™ technology

OPERATING SPECIFICATIONS

- Operational pressure range: 15 to 100 PSI

FACTORY INSTALLED OPTIONS

- Reclaimed water ID cap
- FloGuard technology available for check valve models

USER INSTALLED OPTIONS

- Reclaimed water ID cap (P/N 458562)
- Snap-on reclaimed cover (P/N PROS-RC-CAP)

▸ = *Advanced Feature descriptions on page 52*

PRS40 Reclaimed
PRS40 models include optional factory-installed purple reclaimed caps

Related Solutions: MP Rotator
PRS40 is designed specifically for the MP Rotator®

PROS-00-PRS40
Retracted height: 4½"
Inlet size: ½"

PROS-04-PRS40-CV
Retracted height: 5⅜"
Pop-up height: 4"
Exposed diameter: 2¼"
Inlet size: ½"

PROS-06-PRS40-CV
Retracted height: 8¾"
Pop-up height: 6"
Exposed diameter: 2¼"
Inlet size: ½"

PROS-12-PRS40-CV
Retracted height: 16⅛"
Pop-up height: 12"
Exposed diameter: 2¼"
Inlet size: ½"

PRS40 - SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Specialty Options
PROS-00-PRS40 = 40 PSI regulated shrub adapter	**(blank)** = No option
PROS-04-PRS40-CV = 40 PSI regulated 4" pop-up with drain check valve	**R** = Factory-installed reclaimed body cap
PROS-06-PRS40-CV = 40 PSI regulated 6" pop-up with drain check valve	**F** = FloGuard technology
PROS-12-PRS40-CV = 40 PSI regulated 12" pop-up with drain check valve	**F-R** = FloGuard technology with reclaimed body cap

Examples:
PROS-04-PRS40-CV = 4" Pop-up regulated at 40 PSI, drain check valve
PROS-06-PRS40-CV-F = 6" Pop-up regulated at 40 PSI, drain check valve, with FloGuard technology
PROS-12-PRS40-CV-R = 12" Pop-up regulated at 40 PSI, drain check valve, reclaimed body cap

MP ROTATOR®

Radius **8' to 35'**

FEATURES

- Radius can be reduced up to approximately 25% on all models
- Easy arc adjustment
- Color-coded for easy identification
- Removable filter screen ensures hassle-free service
- Wind-resistant multi-stream technology
- ▸ Automatic matched precipitation
- ▸ Double-pop
- ▸ Distribution uniformity
- ▸ Low precipitation rate

OPERATING SPECIFICATIONS

- Recommended operating pressure: 40 PSI
- Recommended filtering when operating on dirty water

OPTIONS

- Specify Pro-Spray® PRS40 pop-up for accurate pressure regulation at 40 PSI
- Adding "HT" will specify male threaded nozzles

▸ = *Advanced Feature descriptions on page 81*

MP ROTATOR - SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
MP-1000-90 = 8' to 15' radius, adjustable from 90° to 210°	**(blank)** = No option
MP-1000-210 = 8' to 15' radius, adjustable from 210° to 270°	**HT** = Male threaded version *(Not available in 3500 and 1000-210)*
MP-1000-360 = 8' to 15' radius, 360°	
MP-2000-90 = 13' to 21' radius, adjustable from 90° to 210°	
MP-2000-210 = 13' to 21' radius, adjustable from 210° to 270°	
MP-2000-360 = 13' to 21' radius, 360°	
MP-3000-90 = 22' to 30' radius, adjustable from 90° to 210°	
MP-3000-210 = 22' to 30' radius, adjustable from 210° to 270°	
MP-3000-360 = 22' to 30' radius, 360°	
MP-3500-90 = 31' to 35' radius, adjustable from 90° to 210°	
MP-LCS-515 = Left corner strip, 5' x 15'	
MP-RCS-515 = Right corner strip, 5' x 15'	
MP-SS-530 = Side strip, 5' x 30'	
MP-CORNER = 8' to 15' radius, adjustable from 45° to 105°	

Examples:
MP-1000-210 = 8' to 15' radius, adjustable from 210° to 270°
PROS-06 - PRS40-CV - MP-2000-90 = 6" pop-up regulated at 40 PSI, drain check valve, with MP 2000-90.

MP1000 8' to 15' radius

MP-1000-90
90° to 210°

MP-1000-210
210° to 270°

MP-1000-360
360°

MP2000 13' to 21' radius

MP-2000-90
90° to 210°

MP-2000-210
210° to 270°

MP-2000-360
360°

MP3000 22' to 30' radius

MP-3000-90
90° to 210°

MP-3000-210
210° to 270°

MP-3000-360
360°

MP3500 31' to 35' radius

MP-3500-90
90° to 210°

MP ROTATOR PERFORMANCE DATA

MP-1000
Radius: 8' to 15'
Adjustable Arc and Full-Circle
- Maroon: 90° to 210°
- Lt. Blue: 210° to 270°
- Olive: 360°

MP-2000
Radius: 13' to 21'
Adjustable Arc and Full-Circle
- Black: 90° to 210°
- Green: 210° to 270°
- Red: 360°

MP-3000
Radius: 22' to 30'
Adjustable Arc and Full-Circle
- Blue: 90° to 210°
- Yellow: 210° to 270°
- Gray: 360°

Arc	Pressure PSI	MP-1000 Radius ft.	MP-1000 Flow GPM	MP-1000 Flow GPH	MP-1000 Precip in/hr ■	MP-1000 Precip in/hr ▲	MP-2000 Radius ft.	MP-2000 Flow GPM	MP-2000 Flow GPH	MP-2000 Precip in/hr ■	MP-2000 Precip in/hr ▲	MP-3000 Radius ft.	MP-3000 Flow GPM	MP-3000 Flow GPH	MP-3000 Precip in/hr ■	MP-3000 Precip in/hr ▲
90°	25	--	--	--	--	--	17	0.34	20.4	0.45	0.52	25	0.71	42.6	0.44	0.51
	30	12	0.17	10.2	0.45	0.52	18	0.38	22.8	0.45	0.52	27	0.76	45.6	0.40	0.46
	35	13	0.19	11.4	0.43	0.50	19	0.40	24.0	0.43	0.49	28	0.82	49.2	0.40	0.46
	40	**14**	**0.21**	**12.6**	**0.41**	**0.48**	**20**	**0.43**	**25.8**	**0.41**	**0.48**	**30**	**0.86**	**51.6**	**0.37**	**0.42**
	45	14	0.23	13.8	0.45	0.52	21	0.46	27.6	0.40	0.46	30	0.90	54.0	0.39	0.44
	50	15	0.25	15.0	0.43	0.49	21	0.47	28.2	0.41	0.47	30	0.95	57.0	0.41	0.47
	55	15	0.27	16.2	0.46	0.53	21	0.48	28.8	0.42	0.48	30	1.01	60.6	0.43	0.50
180°	25	--	--	--	--	--	16	0.6	36.0	0.45	0.52	25	1.44	86.4	0.44	0.51
	30	12	0.34	20.4	0.45	0.52	17	0.64	38.4	0.43	0.49	27	1.58	94.8	0.42	0.48
	35	13	0.38	22.8	0.43	0.50	18	0.71	42.6	0.42	0.49	28	1.70	102.0	0.42	0.48
	40	**14**	**0.42**	**25.2**	**0.41**	**0.48**	**19**	**0.77**	**46.2**	**0.41**	**0.47**	**30**	**1.82**	**109.2**	**0.39**	**0.45**
	45	14	0.44	26.4	0.43	0.50	20	0.85	51.0	0.41	0.47	30	1.93	115.8	0.41	0.48
	50	15	0.50	30.0	0.43	0.49	21	0.91	54.6	0.40	0.46	30	2.04	122.4	0.44	0.50
	55	15	0.51	30.6	0.44	0.50	21	0.95	57.0	0.41	0.48	30	2.13	127.8	0.46	0.53
210°	25	--	--	--	--	--	16	0.72	43.2	0.46	0.54	25	1.68	100.8	0.44	0.51
	30	12	0.40	24.0	0.46	0.53	17	0.75	45.0	0.43	0.49	27	1.84	110.4	0.42	0.48
	35	13	0.45	27.0	0.44	0.51	18	0.81	48.6	0.41	0.48	28	1.99	119.4	0.42	0.48
	40	**14**	**0.49**	**29.4**	**0.41**	**0.48**	**19**	**0.86**	**51.6**	**0.39**	**0.45**	**30**	**2.12**	**127.2**	**0.39**	**0.45**
	45	14	0.51	30.6	0.43	0.50	20	0.91	54.6	0.38	0.43	30	2.25	135.0	0.41	0.48
	50	15	0.57	34.2	0.42	0.48	21	0.98	58.8	0.37	0.42	30	2.37	142.2	0.43	0.50
	55	15	0.59	35.4	0.43	0.50	21	1.01	60.6	0.38	0.44	30	2.49	149.4	0.46	0.53
270°	25	--	--	--	--	--	16	0.87	52.2	0.44	0.50	25	2.19	131.4	0.45	0.52
	30	12	0.48	28.8	0.43	0.49	17	0.95	57.0	0.42	0.49	27	2.37	142.2	0.42	0.48
	35	13	0.53	31.8	0.40	0.46	18	1.03	61.8	0.41	0.47	28	2.55	153.0	0.42	0.48
	40	**14**	**0.63**	**37.8**	**0.41**	**0.48**	**19**	**1.10**	**66.0**	**0.39**	**0.45**	**30**	**2.73**	**163.8**	**0.39**	**0.45**
	45	14	0.67	40.2	0.44	0.51	20	1.17	70.2	0.38	0.43	30	2.89	173.4	0.41	0.48
	50	15	0.72	43.2	0.41	0.47	21	1.23	73.8	0.36	0.41	30	3.06	183.6	0.44	0.50
	55	15	0.75	45.0	0.43	0.49	21	1.30	78.0	0.38	0.44	30	3.22	193.2	0.46	0.53
360°	25	--	--	--	--	--	16	1.20	72.0	0.45	0.52	25	2.88	172.8	0.44	0.51
	30	12	0.69	41.4	0.46	0.53	17	1.28	76.8	0.43	0.49	27	3.15	189.0	0.42	0.48
	35	13	0.77	46.2	0.44	0.51	18	1.37	82.2	0.41	0.47	28	3.40	204.0	0.42	0.48
	40	**14**	**0.84**	**50.4**	**0.41**	**0.48**	**19**	**1.46**	**88.8**	**0.39**	**0.46**	**30**	**3.64**	**218.4**	**0.39**	**0.45**
	45	14	0.88	52.8	0.43	0.50	20	1.57	94.2	0.38	0.44	30	3.86	231.6	0.41	0.48
	50	15	0.98	58.8	0.42	0.48	21	1.68	100.8	0.37	0.42	30	4.07	244.2	0.44	0.50
	55	15	1.01	60.6	0.43	0.50	21	1.74	104.4	0.38	0.44	30	4.27	256.2	0.46	0.53

MP-3500 90°
Radius: 31' to 35'
Adjustable Arc
- Light Brown: 90°

MP-3500 180°
Radius: 31' to 35'
Adjustable Arc
- Light Brown: 180°

MP-3500 210°
Radius: 31' to 35'
Adjustable Arc
- Light Brown: 210°

Pressure PSI	90° Radius ft.	90° Flow GPM	90° Flow GPH	90° Precip in/hr ■	90° Precip in/hr ▲	180° Radius ft.	180° Flow GPM	180° Flow GPH	180° Precip in/hr ■	180° Precip in/hr ▲	210° Radius ft.	210° Flow GPM	210° Flow GPH	210° Precip in/hr ■	210° Precip in/hr ▲
25	33	1.04	62.4	0.37	0.42	33	2.21	132.6	0.39	0.45	33	2.59	155.4	0.39	0.45
30	34	1.13	67.8	0.38	0.43	34	2.24	134.4	0.37	0.43	34	2.84	170.4	0.41	0.47
35	34	1.21	72.6	0.40	0.47	34	2.65	159.0	0.44	0.51	34	3.08	184.8	0.44	0.51
40	**35**	**1.28**	**76.8**	**0.40**	**0.46**	**35**	**2.86**	**171.6**	**0.45**	**0.52**	**35**	**3.29**	**197.4**	**0.44**	**0.51**
45	35	1.38	82.8	0.43	0.50	35	3.10	186.0	0.49	0.56	35	3.54	212.4	0.48	0.55
50	35	1.43	85.8	0.45	0.52	35	3.21	192.6	0.50	0.58	35	3.76	225.6	0.51	0.59
55	35	1.50	90.0	0.47	0.54	35	3.28	196.8	0.52	0.60	35	3.94	236.4	0.53	0.61

Bold = Optimal pressure for the MP Rotator is 40 PSI. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 40 PSI

MP ROTATOR PERFORMANCE DATA

- **MP-LCS-515:** Ivory, MP Left Corner Strip
- **MP-RCS-515:** Copper, MP Right Corner Strip
- **MP-SS-530:** Brown, MP Side Strip

	Pressure PSI	Radius ft.	Flow GPM	Flow GPH
MP Left Corner Strip	30	4 x 14	0.19	11.4
	35	5 x 15	0.21	12.6
	40	**5 x 15**	**0.22**	**13.2**
	45	5 x 15	0.23	13.8
	50	6 x 16	0.25	15.0
	55	6 x 16	0.26	15.6
MP Right Corner Strip	30	4 x 14	0.19	11.4
	35	5 x 15	0.21	12.6
	40	**5 x 15**	**0.22**	**13.2**
	45	5 x 15	0.23	13.8
	50	6 x 16	0.25	15.0
	55	6 x 16	0.26	15.6
MP Side Strip	30	4 x 28	0.38	22.8
	35	5 x 30	0.41	24.6
	40	**5 x 30**	**0.44**	**26.4**
	45	5 x 30	0.47	28.2
	50	6 x 32	0.49	29.4
	55	6 x 32	0.51	30.6

Bold = Recommended Pressure

Notes: Strip pattern radius can be adjusted by 25%. MP Rotator is designed to maintain matched precipitation after radius adjustment. Optimal pressure for the MP Rotator is 40 PSI. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 40 PSI.

MP ROTATOR PERFORMANCE DATA

MP Corner
Radius, 8' to 15'
Adjustable Arc
- Turquoise: 45° to 105°

Arc	Pressure PSI	Radius ft.	Flow GPM	Flow GPH
45°	25	--	--	--
	30	12	0.17	10.2
	35	13	0.18	10.8
	40	**14**	**0.19**	**11.4**
	45	14	0.21	12.6
	50	14	0.22	13.2
	55	15	0.23	13.8
90°	25	11	0.31	18.6
	30	12	0.34	20.4
	35	13	0.36	21.6
	40	**14**	**0.39**	**23.4**
	45	14	0.41	24.6
	50	15	0.43	25.8
	55	15	0.46	27.6
105°	25	11	0.36	21.6
	30	12	0.39	23.4
	35	13	0.42	25.2
	40	**14**	**0.45**	**27.0**
	45	14	0.48	28.8
	50	15	0.51	30.6
	55	15	0.53	31.8

Bold = Recommended Pressure

MP Strips

MP-LCS-515
Left Corner Strip
5' x 15'

MP-RCS-515
Right Corner Strip
5' x 15'

MP-SS-530
Side Strip
5' x 30'

MP Corner

MP-CORNER
Corner
8' to 15'

Male Threaded

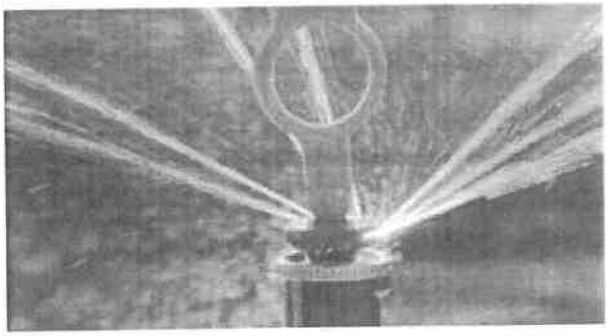
MP-HT
Male Threaded

MP Accessories

MPTOOL
Adjusts all MP Rotators

MPSTICK
Snaps onto any length of 1" PVC to allow standing adjustment. *PVC pipe not included.*

MP TOOL: For Easy Adjustments

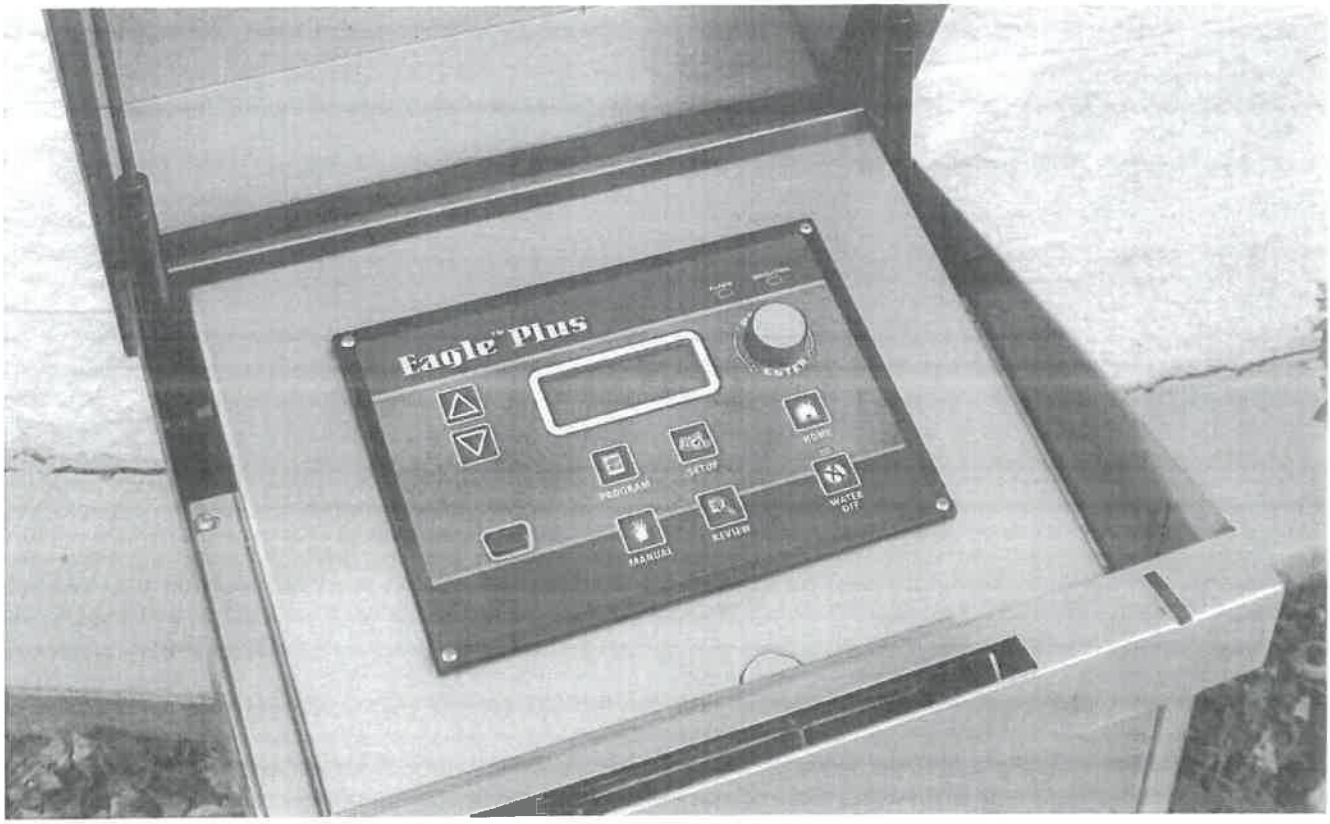


Irrigation Controller

RAIN MASTER®
CONTROL SYSTEMS

Twice 2-wire

CENTRAL CONTROL



UP TO 200 STATIONS, WITH 100 DECODERS OR LESS

Unlike other two-wire systems, the Rain Master® 2-wire protocol provides a two-way communication link between the controller, decoders and valves. This provides the means for testing and diagnostic capabilities within the 2-wire system. The simplicity of the 2-wire field installation, coupled with the enhanced capability of the Rain Master Twice controllers, sets a new precedent for 2-wire control within the irrigation industry.

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Maximizes water saving and irrigation efficiency

FLOW SENSING AND CONTROL
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Provides 2-wire capability for any Irritrol Rain Master Eagle controller

DECODER TWO-WAY COMMUNICATION
Provides troubleshooting diagnostics to retain system integrity

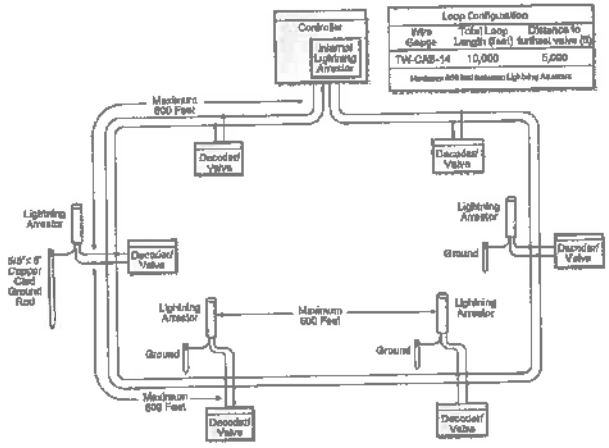
PROGRAMMABLE DECODERS
Provides flexibility in programming decoder identification

DECODER LEDS FOR EASY TROUBLE SHOOTING

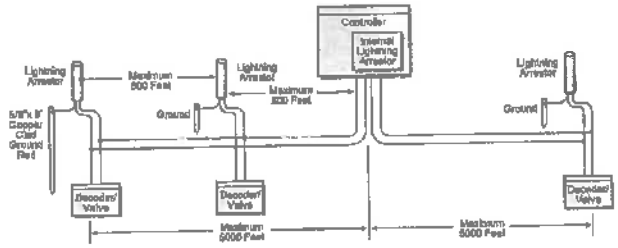
AVAILABLE FOR DX2, EAGLE™ & EAGLE™ PLUS SYSTEMS

RAIN MASTER®
CONTROL SYSTEMS

TWICE LOOP CONFIGURATION

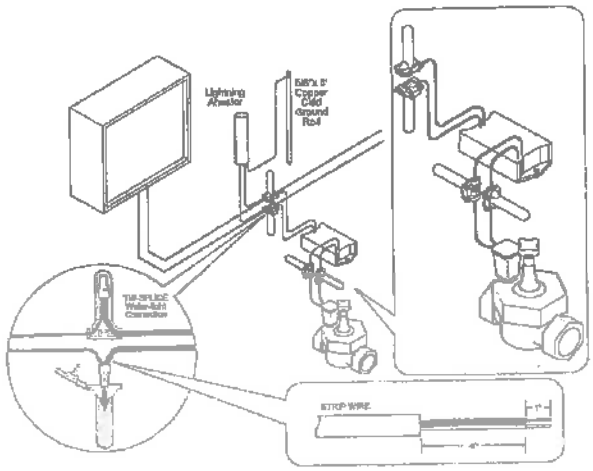


TWICE STRAIGHT LINE CONFIGURATION



Straight Line Configuration	
Wire Gauge	Total Wire Length (feet)
TW-CAB-14	5,000
Maximum 600 feet between Lightning Arrestors	

TWICE WIRE CONNECTION DETAIL



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MODULES

- Easy-to-read LED status indication for every command
- LED also displays valve activation and diagnostic reporting
- Troubleshooting capabilities:
  - LED decoder "active" indication
  - LED valve power "on" indication
  - Two-way communication verification

DECODERS

- Each decoder has a unique address (programmable at the interface module)
- Decoders will automatically shut off if communication is lost
- Wire fault detection automatically shuts down any valve
- Valves can be operated up to 100' radius of the decoder

ELECTRICAL SPECIFICATIONS

- Input power: 105-130V ac, 50/60 Hz, 0.5 amp maximum, 1 amp idle
- Output power: 24V ac, 1.5 amps maximum total output or (36 VA) 1.0 amp per station or master valve
- UL, CUL, and FCC approved

SPECIFYING INFORMATION

Model	Controller Description
TW-DX48-PWM	DX2, up to 48 stations, painted wall mount
TW-DX48-SWM	DX2, up to 48 stations, stainless wall mount
TW-DX48-SPED	DX2, up to 48 stations, stainless steel security pedestal
TW-DX48-UFEN	DX2, up to 48 stations, stainless steel ultimate front entry enclosure
TW-EGI36*	Eagle, up to 36 decoders, steel wall mount
TW-EGI36-SB*	Eagle, up to 36 decoders, stainless steel wall mount
TW-EGI36-SPED*	Eagle, up to 36 decoders, 14 gauge stainless steel security pedestal
EGP-TWi*	Eagle Plus, up to 200 stations, painted wall mount
EGP-TWi-S*	Eagle Plus, up to 200 stations, stainless steel pedestal
EGP-TWi-SPED*	Eagle Plus, up to 200 stations, 14 gauge stainless steel security pedestal
EGP-TWi-PSB*	Eagle Plus, up to 200 stations, 14 gauge stainless steel security pedestal

Remove "i" for standalone option

DIMENSIONS

- **TW model:** H: 10" W: 13" D: 4.5"
- **TW & SB model:** H: 17.5" W: 13" D: 4.5"
- **TW-SPED model:** H: 35" W: 16" D: 14"

OPTIONAL 2-WIRE DECODERS AND ACCESSORIES

Model	Description
TW-D-1	Single valve AC decoder
TW-D-2	Dual valve AC decoder
TW-D-4	Quad valve AC decoder
TW-LA-1	Lightning arrestor (every 600 feet)
TW-SPLICE	14-gauge water-tight connectors
TW-CAB-14	14-gauge (red/black) Polycoated (blue) wire

Rain Sensor

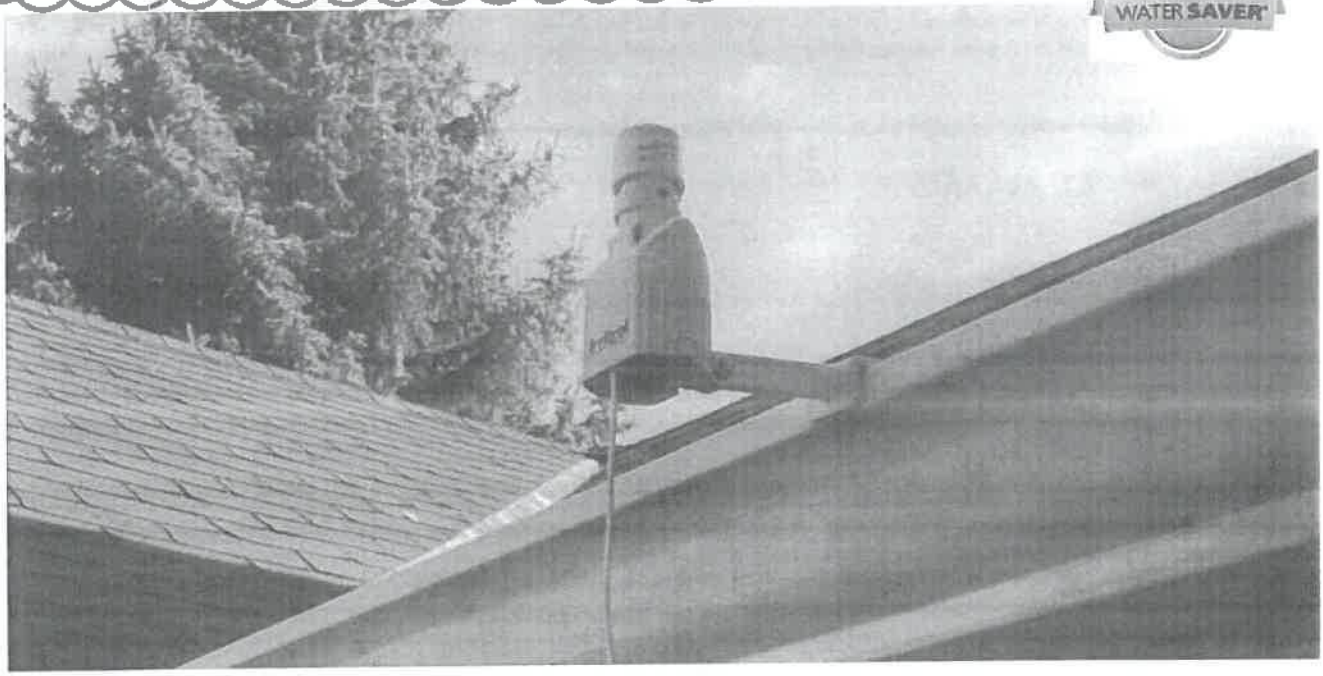
Irritrol®

RAIN SENSORS

RAINSENSOR™ SERIES RAIN AND FREEZE SENSORS

WIRED/WIRELESS

WATER SAVER



Taking water management to the next level, Irritrol's proven RainSensor™ Series makes watering in the rain a mistake of the past. The reliable wireless and wired rain sensors conserve water by preventing irrigation during or after sufficient rainfall, while the wireless rain/freeze sensor also helps reduce vegetation damage and icing conditions when the temperature drops below a predetermined set point. With its compact design and host of convenient features, the RainSensor Series is the perfect compliment to any standard controller.

KEY FEATURES & BENEFITS

WIRELESS MODELS
Require less labor for the installer

CONSTANT COMMUNICATION BETWEEN TRANSMITTER AND RECEIVER
Assures that even after a controller power outage, the controller is continually updated with the sensor's "wet" or "dry" status

VERSATILE MOUNTING OPTIONS
Requires no special tools – Quick-Clip™ gutter bracket and ½" conduit adapter included

SIGNAL STRENGTH INDICATOR
Ensures correct installation, communication link and signal integrity (wireless models)

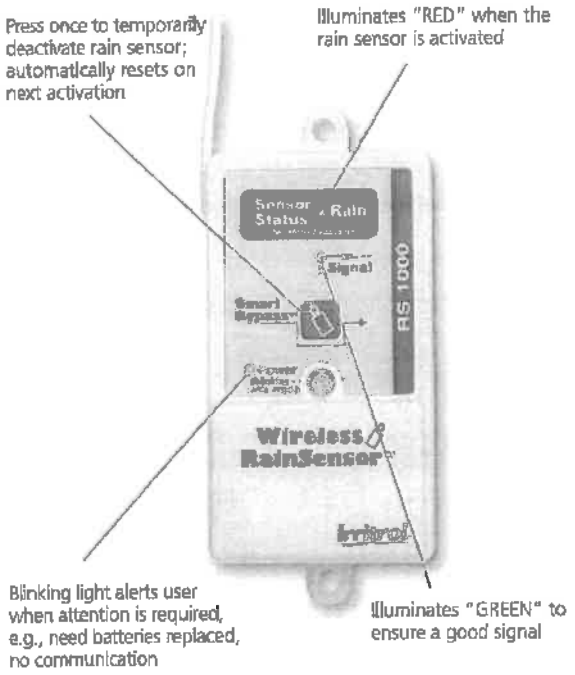
SMART BYPASS™ FOR EASY SYSTEM OVERRIDE
Allows for temporary deactivation while automatically resetting on next activation (wireless models)

FULLY ADJUSTABLE SHUTOFF POINTS
From ⅛" to ¾" of accumulated rainfall

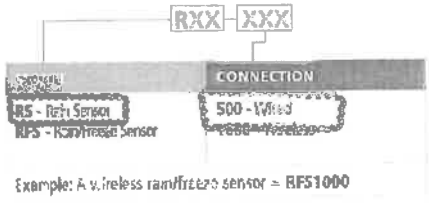
DRY-OUT RATE ADJUSTMENT FOR RESET DELAY
Allows for setting the ideal dryout time

PATENTED WIRELESS TECHNOLOGY
Unsurpassed by the competition

SUPERIOR PATENTED WIRELESS TECHNOLOGY



SPECIFYING INFORMATION



Example: A wireless rain/freeze sensor = RFS1000

ADDED FEATURES

RS1000/RFS1000

- Compatible with nearly all controllers
- Visual sensor status and alert indicators verify consistent operation
- Slide/snap-on cover provides additional protection to weather-proof receiver from the elements
- Power failure memory protection
- Three-year warranty

RFS1000

- Rain and freeze sensors fully integrated into one unit
- Highly accurate 41°F digital activation point

RS500

- Compatible with virtually all controllers
- 25-foot cable (UV-resistant, white jacket included) provides installation flexibility
- Easy, tool-free conversion to normally open operation
- Five-year warranty

OPERATING SPECIFICATIONS

- Sensor type: industry-standard hygroscopic discs
- Rain sensitivity: adjustable nominal ⅛" to ¾"
- Operating temperature: -20°F to 120°F
- Housing material: UV-resistant engineered polymer
- Wireless only features:
  - Transmission range: over 300 feet line-of-sight
  - Frequency: 418 MHz
  - Battery: Two CR2032 3V cells, 5-year life (typical)

ELECTRICAL SPECIFICATIONS

- Receiver power: 22-28 V ac/V dc, 100mA (to be used with Class 2, UL-approved transformer)
- Load rating: normally open or normally closed — 3A @ 24 V ac
- UL Listed, FCC, CE, IC

MODELS

Model	Description
RS1000	Wireless rain sensor
RFS1000	Wireless rain/freeze sensor
RS500	Wired rain sensor

DIMENSIONS

- **Transmitter:** H: 1 ½", W: 1 ¾", D: 3 ¾"
- **Receiver:** H: 1 ½", W: 1", D: 3"

OPTIONAL ACCESSORIES

- RS1000-RX rain receiver for multiple controllers
- RFS1000-RX rain/freeze receiver for multiple controllers
- RSCAP cap/disk/spindle assembly
- RSBATT-TX battery pack (includes 2 batteries)

Decoders

RAIN MASTER®
CONTROL SYSTEMS

Twice 2-wire

CENTRAL CONTROL

UP TO 200 STATIONS, WITH 100 DECODERS OR LESS

Unlike other two-wire systems, the Rain Master® 2-wire protocol provides a two-way communication link between the controller, decoders and valves. This provides the means for testing and diagnostic capabilities within the 2-wire system. The simplicity of the 2-wire field installation, coupled with the enhanced capability of the Rain Master Twice controllers, sets a new precedent for 2-wire control within the irrigation industry.

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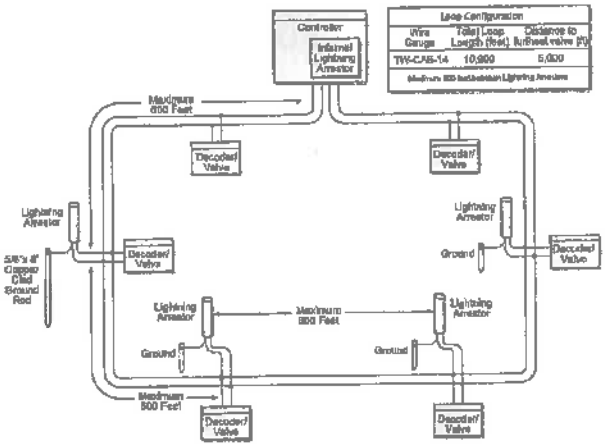
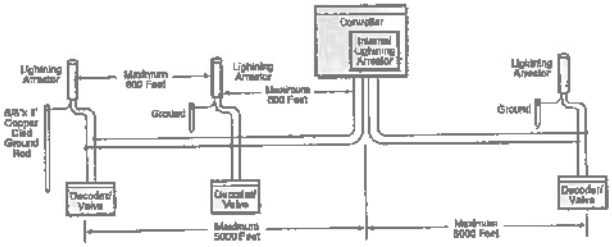
RAIN MASTER®
CONTROL SYSTEMS

TWICE LOOP CONFIGURATION

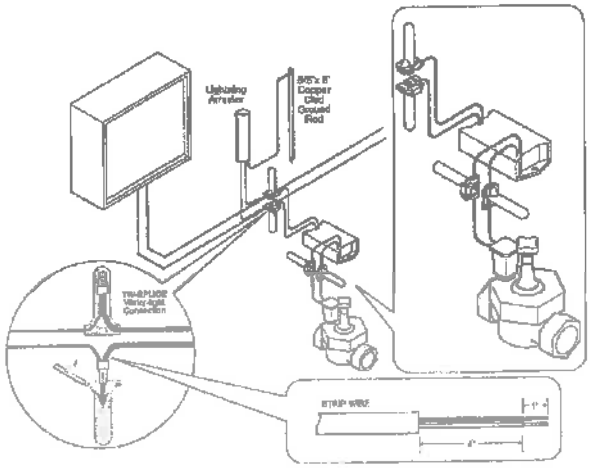


TWICE STRAIGHT LINE CONFIGURATION



Straight Line Configuration	
Wire Gauge	Total Wire Length (feet)
TW-CAB-14	5,000
Maximum 600 feet between Lightning Arrestors	

TWICE WIRE CONNECTION DETAIL



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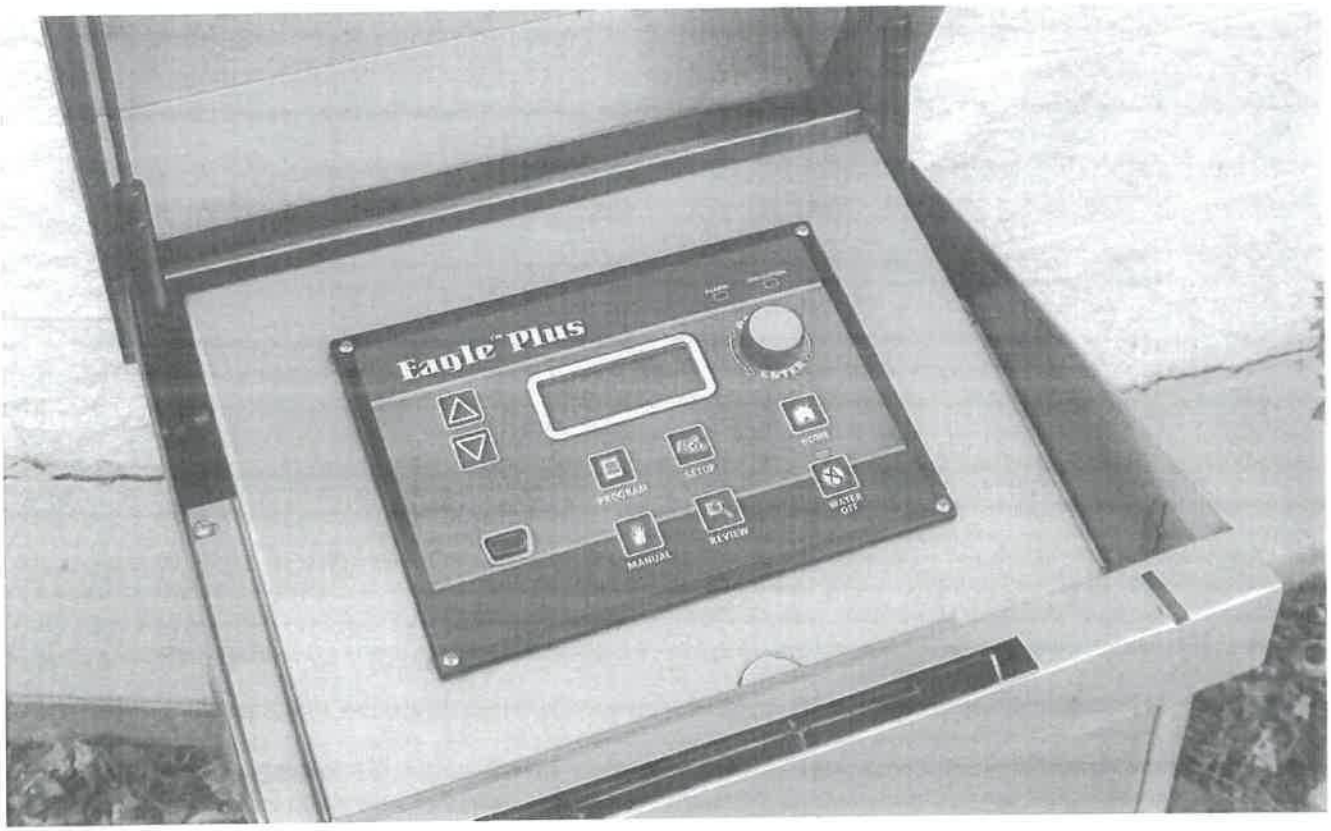
TW-CAB-14	14-gauge (red/black) Polycoated (blue) wire

Lightning

RAIN MASTER®
CONTROL SYSTEMS

Twice 2-wire

CENTRAL CONTROL



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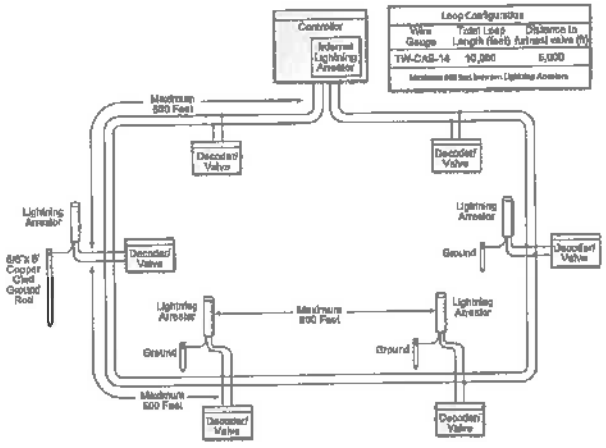
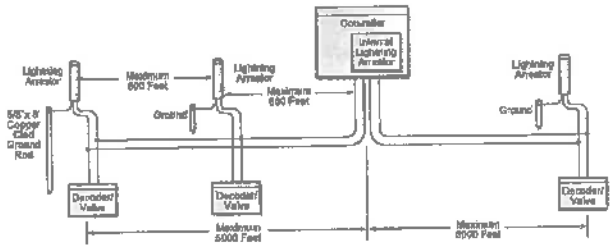
TWICE LOOP CONFIGURATION

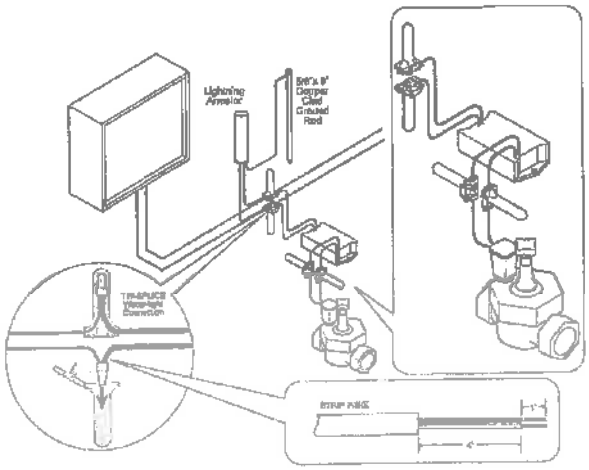


TWICE STRAIGHT LINE CONFIGURATION



Straight Line Configuration	
Wire Gauge	Total Wire Length (feet)
TW-CAB-14	5,000
Maximum 600 feet between Lightning Arrestors	

TWICE WIRE CONNECTION DETAIL



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EGP-TWi-SPED*	Eagle Plus, up to 200 stations, 14 gauge stainless steel security pedestal
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Remove "i" for standalone option

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Connectors

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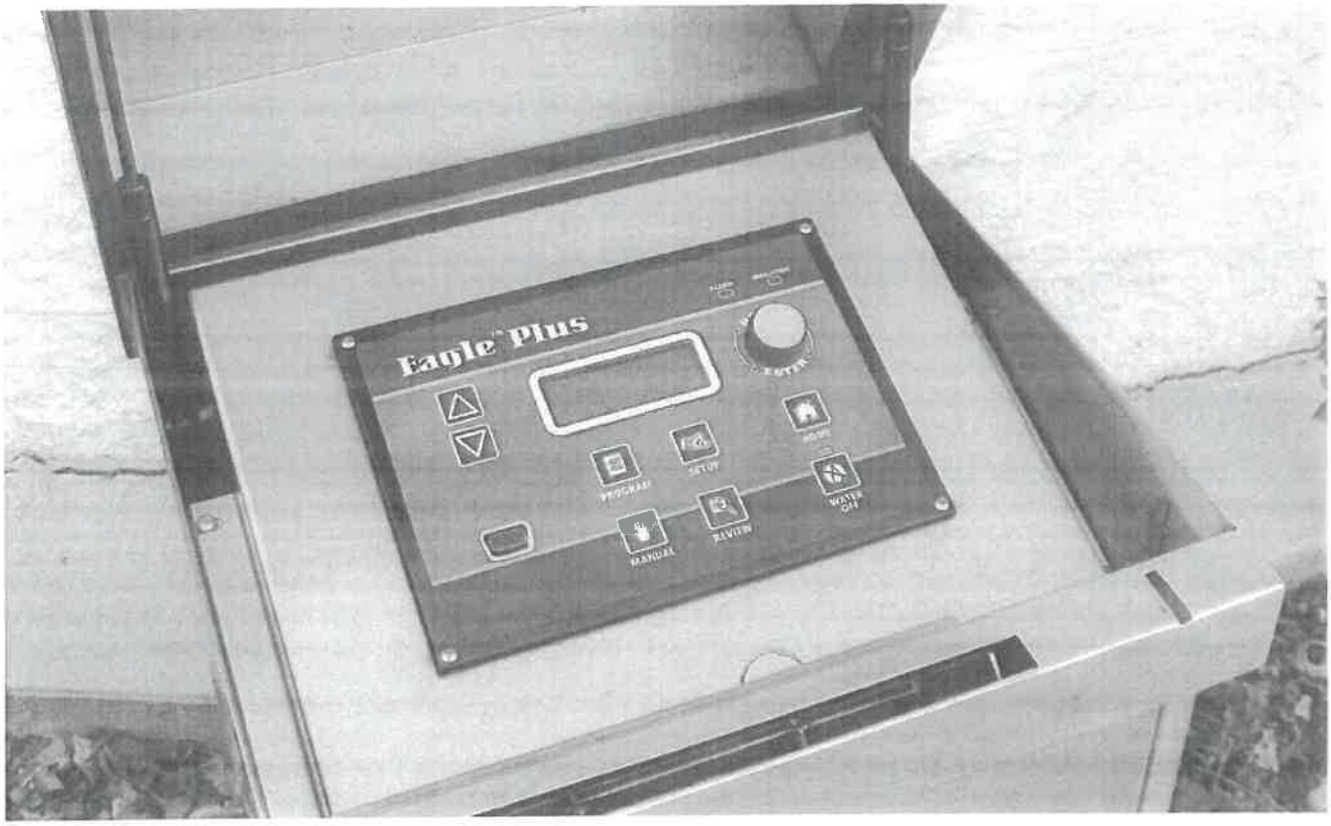
CONTROL SYSTEMS

Twice 2-wire

CENTRAL CONTROL



UP TO 200 STATIONS, WITH 100 DECODERS OR LESS

Unlike other two-wire systems, the Rain Master® 2-wire protocol provides a two-way communication link between the controller, decoders and valves. This provides the means for testing and diagnostic capabilities within the 2-wire system. The simplicity of the 2-wire field installation, coupled with the enhanced capability of the Rain Master T wice controllers, sets a new precedent for 2-wire control within the irrigation industry.

KEY FEATURES & BENEFITS

EVAPOTRANSPIRATION (ET) BASED SCHEDULING
Maximizes water saving and irrigation efficiency

FLOW SENSING AND CONTROL
Monitors system flow and responds to upper, lower, unscheduled and no flow conditions

2-WIRE INTERFACE MODULE
Provides 2-wire capability for any Irritrol Rain Master Eagle controller

DECODER TWO-WAY COMMUNICATION
Provides troubleshooting diagnostics to retain system integrity

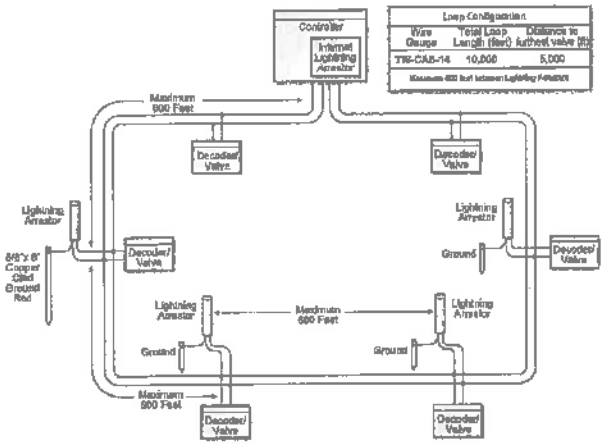
PROGRAMMABLE DECODERS
Provides flexibility in programming decoder identification

DECODER LEDS FOR EASY TROUBLE SHOOTING

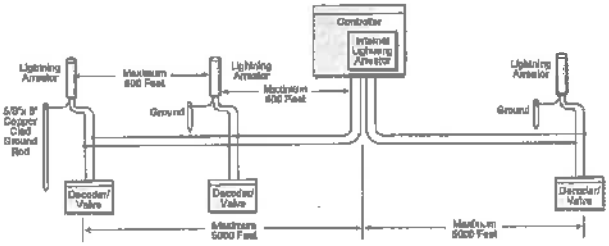
AVAILABLE FOR DX2, EAGLE™ & EAGLE™ PLUS SYSTEMS

RAIN MASTER®
CONTROL SYSTEMS

TWICE LOOP CONFIGURATION

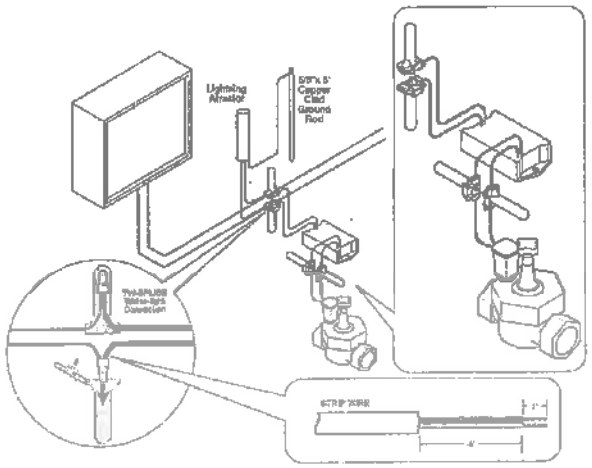


TWICE STRAIGHT LINE CONFIGURATION



Straight Line Configuration	
Wire Gauge	Total Wire Length (feet)
TW-CAB-14	5,000
Maximum 600 feet between Lightning Arrestors	

TWICE WIRE CONNECTION DETAIL



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MODULES

- Easy-to-read LED status indication for every command
- LED also displays valve activation and diagnostic reporting
- Troubleshooting capabilities:
  - LED decoder "active" indication
  - LED valve power "on" indication
  - Two-way communication verification

DECODERS

- Each decoder has a unique address (programmable at the interface module)
- Decoders will automatically shut off if communication is lost
- Wire fault detection automatically shuts down any valve
- Valves can be operated up to 100' radius of the decoder

ELECTRICAL SPECIFICATIONS

- Input power: 105-130V ac, 50/60 Hz, 0.5 amp maximum, 1 amp idle
- Output power: 24V ac, 1.5 amps maximum total output or (36 VA) 1.0 amp per station or master valve
- UL, CUL, and FCC approved

SPECIFYING INFORMATION

Model	Controller Description
TW-DX48-PWM	DX2, up to 48 stations, painted wall mount
TW-DX48-SWM	DX2, up to 48 stations, stainless wall mount
TW-DX48-SPED	DX2, up to 48 stations, stainless steel security pedestal
TW-DX48-UFEN	DX2, up to 48 stations, stainless steel ultimate front entry enclosure
TW-EGi36*	Eagle, up to 36 decoders, steel wall mount
TW-EGi36-SB*	Eagle, up to 36 decoders, stainless steel wall mount
TW-EGi36-SPED*	Eagle, up to 36 decoders, 14 gauge stainless steel security pedestal
EGP-TWi*	Eagle Plus, up to 200 stations, painted wall mount
EGP-TWi-S*	Eagle Plus, up to 200 stations, stainless steel pedestal
EGP-TWi-SPED*	Eagle Plus, up to 200 stations, 14 gauge stainless steel security pedestal
EGP-TWi-PSB*	Eagle Plus, up to 200 stations, 14 gauge stainless steel security pedestal

Remove "i" for standalone option

DIMENSIONS

- **TW model:** H: 10" W: 13" D: 4.5"
- **TW & SB model:** H: 17.5" W: 13" D: 4.5"
- **TW-SPED model:** H: 35" W: 16" D: 14"

OPTIONAL 2-WIRE DECODERS AND ACCESSORIES

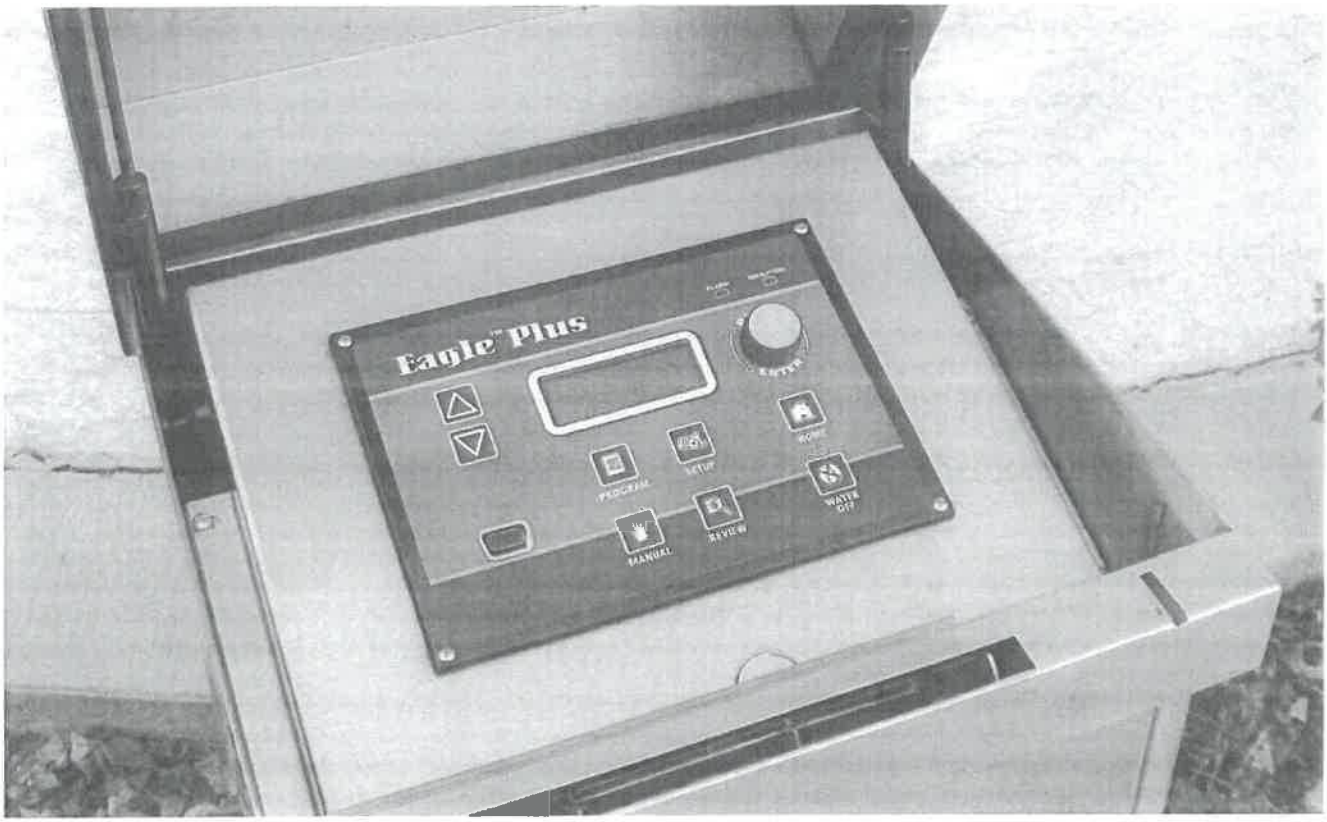
Model	Description
• TW-D-1	Single valve AC decoder
• TW-D-2	Dual valve AC decoder
• TW-D-4	Quad valve AC decoder
• TW-LA-1	Lightning arrestor (every 600 feet)
• TW-SPLICE	14-gauge water-tight connectors
• TW-CAB-14	14-gauge (red/black) Polycoated (blue) wire

2wire

RAIN MASTER®
CONTROL SYSTEMS

Twice 2-wire

CENTRAL CONTROL



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RAIN MASTER®
CONTROL SYSTEMS

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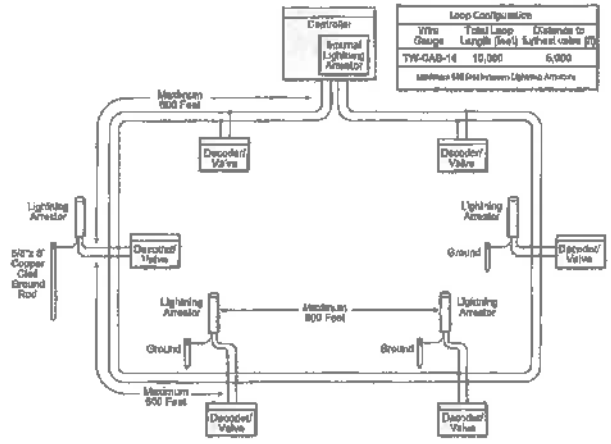
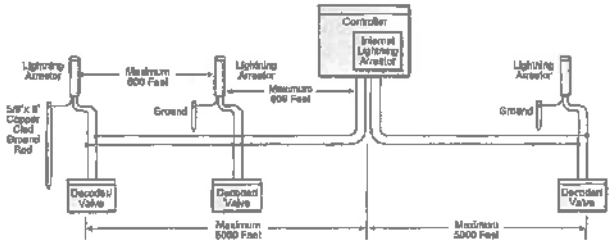
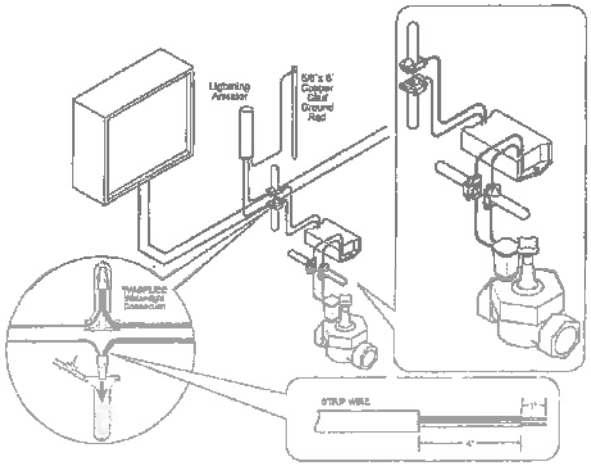


TWICE STRAIGHT LINE CONFIGURATION



Straight Line Configuration	
Wire Gauge	Total Wire Length (feet)
TW-CAB-14	5,000
Maximum 600 feet between Lightning Arrestors	

TWICE WIRE CONNECTION DETAIL



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TW-CAB-14	14-gauge (red/black) Polycoated (blue) wire

Ground Rod Kit

P.O. Box 368 Union, NJ 07083-0368, 908-687-7810, 800-327-2443, Fax: 908-687-8860

Paige® grounding systems

spec P7345D - Rev 3

GROUNDING, BONDING AND SHIELDING PRODUCTS

COPPER GROUND PLATES

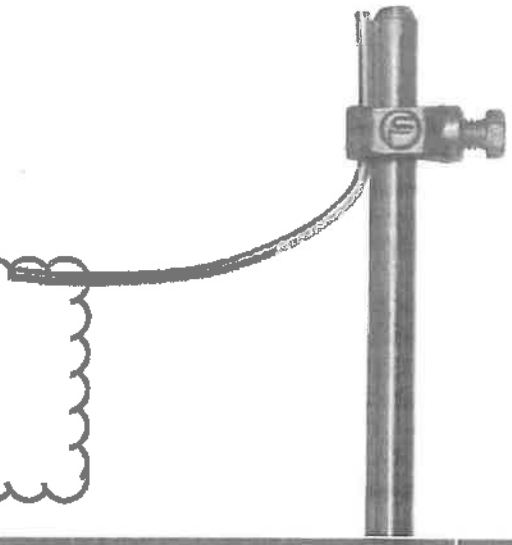
- Made to National Electrical Code® requirements
- 4" x 96" x 0.064" Solid Copper with 25 feet of 6AWG bare copper wire welded to the plate. Paige part number 182199L
- 4" x 36" x 0.064" Solid Copper with 10 feet of 10AWG bare copper wire welded to the plate. Paige part number 182201

COPPER-CLAD GROUND RODS

- UL® listed
- 5/8" Diameter x 8' Long. Paige part number 182000
- 5/8" Diameter x 10' Long. Paige part number 182007

GROUND ROD CLAMPS, CAST BRONZE

- UL® listed
- For 5/8" Diameter ground rods. Paige part number 182005



BARE COPPER WIRE

- Soft-Annealed, uncoated copper, 14AWG - 2AWG.
- 250, 500, and 1,000 foot spools. Custom lengths possible.
- Solid or stranded.
- Paige part numbers:

	Wire Size (AWG)									
	18	16	14	12	10	8	6	4	2	1/0
Solid	160120	160137	160248	160364	160465	160629	160635	160678	160738	-
Stranded	-	-	-	160365	160466	160630	160636	160679	160739	160074

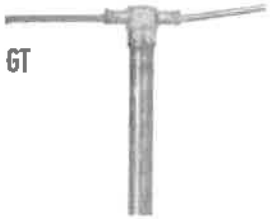
CADWELD PLUS "ONE-SHOT"

- Permanently welds multiple bare copper wires together or bare copper wire to 5/8" diameter ground rods, so the connection doesn't loosen or corrode
- UL® listed. Exothermic reaction welding process meets National Electrical Code® requirements

PLUSCU

PG11L

GR



GT

NT

NX

CADWELD CONNECTIONS			
Wire Sizes (AWG)	No. of Connections	Cadweld Part No.	Paige Part No.
6 & 8	1	GR1161GPLUS	1820037P
6 & 8	2	GT1161GPLUS	1820039P
6 & 8	3	NTT161GPLUS	1820038P
6 & 8	4	NX1161GPLUS	1820060P
4	1	GR1161LPLUS	1820043P
4	2	GT1161LPLUS	1820053P
4	3	NT1161LPLUS	1820054P
4	4	NX1161LPLUS	1820061P
6 & 8	4	PG11LPLUS	1820074P
PLUSCU Battery Control Unit			1820040CU

GROUND ENHANCEMENT MATERIALS/EARTH CONTACT BACKFILLS

- Superior conductive material that improves the effectiveness of ground rods/plates.
- It permanently reduces resistance-to-ground, regardless of soil conditions.
- Ideal for use in dry conditions, rocky ground and sandy soils.
- 50 pound bags
- PowerSet™ hardens when wetted and can be used in any application. Paige part number 1820058.
- PowerFill™ is non-hardening and must be used in non-porous soils. Paige part number 1820059.

SAND BACKFILL

Sand

- Washed Plaster
- Washed Masonry
- Washed Concrete
- Dry Plaster
- Fill Dirt
- Fill Sand
- Playground Sand
- SE 30 Sand
- ~~D20 Sand~~
- Gas Sand
- SDG&E Sand
- White Sand
- Screened Fill Sand

Rock

- Birdseye
- 5/16" Chip
- Pea Gravel
- #4 Gravel
- 3/8" Crushed
- 1/2" Crushed
- 3/4" Crushed
- #3 Gravel
- 1" Crushed
- #67 Rock
- 1-1/2" Crushed
- #2 Gravel
- Salt & Pepper Gravel
- 3" Minus
- 6" Minus
- Rip Rap (All Facing Classes)

Base & Permeable

- 3/4" Class 2 Base
- 3/4" Class 1 Base
- CAB
- CMB (Crushed Misc Base)
- Recycled Base
- Class 2 Permeable
- FAA Base
- Cold Mix
- Hot Asphalt

Concrete Mixes

- Premix
- 3/8" Concrete Mix
- 1/2" Concrete Mix
- 3/4" Concrete Mix

Landscape Materials

- 3/4" Gold
- White Rock
- Pink Rock
- Red Lava
- Arizona River Rock
- Top Soil
- Compost
- Soil Mix
- Planter Mix
- Top Soil Mix
- Sports Mix
- Screened D.G. (Decomposed Granite)
- Stabilized D.G. (Decomposed Granite)
- 50/50 Sand & Fine Seedcover
- Path Mix
- Recreation Sand
- Decorative Cobble

Erosion Control

- Sand Bags (Bulk or Palletized)
- Entrance Rock
- Straw Waddle
- Silt Fence

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Hazardous Materials Hauling

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Sports Turf Materials

- USGA Spec Sand
- USGA Bridging Gravel
- Bunker Sand
  - Augusta White
  - Desert Tan
  - P.S. 50/50
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- Divot Greens
- SoCal Distributor - Dakota Peat Moss
- Custom Blending (Any & All)
- Hilltopper Mound Mix
- MSU Infield Mix
- Track Fines

Hazardous Hauling

- Export Materials

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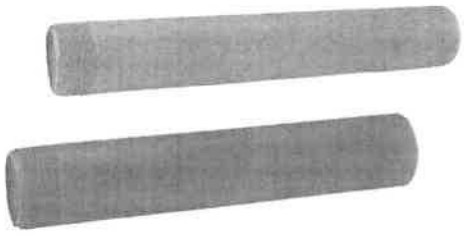
Serving all of California & Arizona with Quality Sand & Gravel Since 1968

Swing Joint w Sprayhead

LASCO
Fittings, Inc.

SUBMITTAL SHEET

NIPPLES SCHEDULE 80 PVC & CPVC



LASCO Fittings, Inc., an Aalberts Industries company, specializes in the production and sale of injection molded fittings for Irrigation, Plumbing, Industrial, Pool/Spa and Retail markets. LASCO Fittings, Inc. operates a 26-acre manufacturing facility in Brownsville, TN. With eight Regional Distribution Facilities strategically located within the United States, LASCO provides worldwide distribution and overnight service.

Injection Molded PVC Nipples in sizes 1/2" through 4"

LASCO Fittings, Inc.'s line of PVC injection molded and machine threaded PVC Nipples offers a variety of configurations in sizes 1/4" through 4" in diameter and lengths ranging from 1⅜" thorugh 36".

STANDARDS AND SPECIFICATIONS – PVC & CPVC Nipples
ASTM D-2464 – Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
ASTM F-437 – Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings.
ASTM D-1784 – Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
ASTM D-1785 – Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
MATERIAL – LASCO Schedule 80 Fittings are produced from PVC Type 1, Grade 1, Cell Classification 12454-B. LASCO CPVC Fittings are produced from Type IV, Grade 1, Cell Classification 23447-B.

DO NOT USE LASCO FITTINGS FOR COMPRESSED AIR OR GASES.
DO NOT TEST PVC PIPING SYSTEMS WITH COMPRESSED AIR OR GASES.
DO NOT USE FITTINGS WITH LIQUIDS NOT RECOMMENDED BY LASCO.
MODIFICATIONS OF FITTINGS VOIDS THE WARRANTY.

MADE IN USA

Limited Warranty

LASCO Fittings, Inc. products are warranted to be free from manufacturing defects in materials and workmanship. They are warranted against rot, rust, and electrolytic corrosion for a period of three years from date of installation. If LASCO products prove defective due to manufacturing defects in material or workmanship during that period, the manufacturer will provide new replacement units of the same type and size. No remedy will be granted under this warranty if LASCO products are not used strictly in accordance with LASCO's directions with respect to use and storage or if the products have been modified in any way. THE MANUFACTURER'S LIABILITY UNDER EXPRESSED OR IMPLIED WARRANTY OR FOR ANY REASON IS LIMITED TO FURNISHING REPLACEMENT UNITS OR GRANTING A CREDIT FOR DEFECTIVE UNITS. NO LABOR EXPENSE OR CONSEQUENTIAL DAMAGES WILL BE PAID BY LASCO. THIS WARRANTY IS IN LIEU OF ALL OTHER GUARANTEES AND WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE, EXCEPT FOR ANY WARRANTIES IMPLIED BY LAW FOR NONCOMMERCIAL CONSUMERS. ANY SUCH WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

414 Morgan Street • Brownsville, TN 38012
(731) 772-3160 | www.lascofittings.com

LASCO
Fittings, Inc.

SUBMITTAL SHEET

SCHEDULE 40 PVC

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Injection Molded PVC Pipe Fittings in sizes 3/8" through 12"

LASCO Fittings, Inc.'s comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 3/8" through 12" conforming to ASTM D 2466.

STANDARDS AND SPECIFICATIONS – Schedule 40

ASTM D-1784 – Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly Vinyl Chloride) (CPVC) Compounds.
ASTM D-2466 – Socket Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
ASTM F-1970 – Standard Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems.
MATERIAL – LASCO Schedule 40 Fittings are produced from PVC Type 1, Cell Classification 12454-B.
– O-rings are produced from a Buna-N (Nitrile) material.
LISTINGS – NSF/ANSI Standard 61, Annex G: Drinking Water System Components Weighted average lead content of ≤0.25% and is in compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) NSF/ANSI Standard 14: Plastics Piping system Components and Related Materials. Includes /ANSI Standard 61, Annex G

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AALBERTS INDUSTRIES

Flex PIPE

LOW VOLUME
TUBING

DISTRIBUTION TUBING

Model	Description	Quantity
POLYETHYLENE MICRO TUBING		
SLV-PE-125-063-3500	0.125" x 0.063"	3,500' coil
SLV-PE-128-076-3500	0.128" x 0.076"	3,500' coil
SLV-PE-176-105-2000	0.176" x 0.105"	2,000' coil
SLV-PE-187-125-100	0.187" x 0.125"	100' coil
SLV-PE-187-125-1000	0.187" x 0.125"	1,000' coil
SLV-PE-188-128-3000	0.188" x 0.128"	3,000' coil
SLV-PE-220-160-100	0.220" x 0.160"	100' coil
SLV-PE-220-160-1000	0.220" x 0.160"	1,000' coil
SLV-PE-220-160-2500	0.220" x 0.160"	2,500' coil
SLV-PE-225-155-2500	0.225" x 0.155"	2,500' coil
SLV-PE-250-125-2000	0.250" x 0.125"	2,000' coil
SLV-PE-250-170-100	0.250" x 0.170"	100' coil
SLV-PE-250-170-1000	0.250" x 0.170"	1,000' coil
SLV-PE-250-170-2000	0.250" x 0.170"	2,000' coil
SLV-PE-272-188-1500	0.272" x 0.188"	1,500' coil
SLV-PE-275-210-1500	0.275" x 0.210"	1,500' coil
SLV-PE-307-250-1000	0.307" x 0.250"	1,000' coil
SLV-PE-350-250-500	0.350" x 0.250"	500' coil
SLV-PE-350-250-1000	0.350" x 0.250"	1,000' coil
SLV-PE-375-250-750	0.375" x 0.250"	750' coil
SLV-PE-455-375-1000	0.455" x 0.375"	1,000' coil
SLV-PE-455-375-CL24	0.455" x 0.375" x 24"	24" cut
VINYL MICRO TUBING		
SLV-PVC-187-125-100	0.187" x 0.125"	100' coil
SLV-PVC-187-125-2000	0.187" x 0.125"	2,000' coil
SLV-PVC-220-160-100	0.220" x 0.160"	100' coil
SLV-PVC-220-160-1000	0.220" x 0.160"	1,000' coil
SLV-PVC-220-160-2500	0.220" x 0.160"	2,500' coil
SLV-PVC-250-170-100	0.250" x 0.170"	100' coil
SLV-PVC-250-170-1000	0.250" x 0.170"	1,000' coil
SLV-PVC-250-170-2000	0.250" x 0.170"	2,000' coil

SUPPLY TUBING

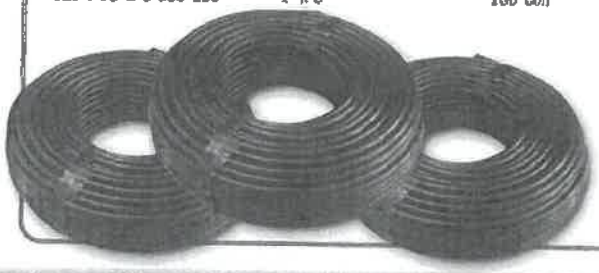
Model	Description	Quantity
SUPRA FLEX™ POLY SUPPLY TUBING		
SLV-PE-620-520-100	.620" x .520"	100' coil
SLV-PE-620-520-500	.620" x .520"	500' coil
SLV-PE-620-520-1000	.620" x .520"	1,000' coil
SLV-PE-700-600-100	.700" x .600"	100' coil
SLV-PE-700-600-500	.700" x .600"	500' coil
SLV-PE-700-600-1000	.700" x .600"	1,000' coil
SLV-PE-700-600-CL24	.700" x .600"	24" cut length
SLV-PE-710-620-100	.710" x .620"	100' coil
SLV-PE-710-620-500	.710" x .620"	500' coil
SLV-PE-710-620-1000	.710" x .620"	1,000' coil
SLV-PE-940-820-100	.940" x .820"	100' coil
SLV-PE-940-820-500	.940" x .820"	500' coil
SLV-PE-940-820-1000	.940" x .820"	1,000' coil
SLV-PE-1174-1050-250	1.174" x 1.050"	250' coil
SLV-PE-1200-1060-250	1.200" x 1.060"	250' coil
A/R FLEX PVC TUBING – FOR USE WITH RECYCLED/RECLAIMED WATER		
SLV-PVC-AR-050-500	½" Irrigation Size Hose (¾" IPS)	500' Coil
SLV-PVC-AR-IPS-050-200	½" IPS	200' Coil
SLV-PVC-AR-IPS-075-200	¾" IPS	200' Coil
SLV-PVC-AR-IPS-100-100	1" IPS	100' Coil

www.salcodrip.com

More Sizes Available Upon Request

FLEXIBLE IPS HOSE

Model	Description	Quantity
FLEXIBLE IPS HOSE		
SLV-PVC-IPS-050-100	½" IPS	100' coil
SLV-PVC-IPS-050-200	½" IPS	200' coil
SLV-PVC-IPS-075-100	¾" IPS	100' coil
SLV-PVC-IPS-075-200	¾" IPS	200' coil
SLV-PVC-IPS-100-100	1" IPS	100' coil



Model	Description	Quantity
NON-ALGAECIDE FLEXIBLE IPS HOSE		
SLV-PVC-NA-IPS-050-CL24	½" IPS	24" cut length
SLV-PVC-NA-IPS-050-CL30	½" IPS	30" cut length
SLV-PVC-NA-IPS-050-CL36	½" IPS	36" cut length
SLV-PVC-NA-IPS-050-CL48	½" IPS	48" cut length
SLV-PVC-NA-IPS-050-CL60	½" IPS	60" cut length
SLV-PVC-NA-IPS-075-CL24	¾" IPS	24" cut length
SLV-PVC-NA-IPS-075-CL30	¾" IPS	30" cut length
SLV-PVC-NA-IPS-075-CL36	¾" IPS	24" cut length
SLV-PVC-NA-IPS-075-CL42	¾" IPS	42" cut length
SLV-PVC-NA-IPS-075-CL48	¾" IPS	48" cut length
SLV-PVC-NA-IPS-075-CL60	¾" IPS	60" cut length
SLV-PVC-NA-IPS-100-CL36	1" IPS	36" cut length
SLV-PVC-NA-IPS-100-CL60	1" IPS	60" cut length

Drain Rock

Sand

- Washed Plaster
- Washed Masonry
- Washed Concrete
- Dry Plaster
- Fill Dirt
- Fill Sand
- Playground Sand
- SE 30 Sand
- B20 Sand
- Gas Sand
- SDG&E Sand
- White Sand
- Screened Fill Sand

Rock

- Birdseye
- 5/16" Chip
- Pea Gravel
- #4 Gravel
- 3/8" Crushed
- 1/2" Crushed
- 3/4" Crushed
- #8 Gravel
- 1" Crushed
- #67 Rock
- 1-1/2" Crushed
- #2 Gravel
- Salt & Pepper Gravel
- 3" Minus
- 6" Minus
- Rip Rap (All Facing Classes)

Base & Permeable

- 3/4" Class 2 Base
- 3/4" Class 1 Base
- CAB
- CMB (Crushed Misc Base)
- Recycled Base
- Class 2 Permeable
- FAA Base
- Cold Mix
- Hot Asphalt

Concrete Mixes

- Premix
- 3/8" Concrete Mix
- 1/2" Concrete Mix
- 3/4" Concrete Mix

Landscape Materials

- 3/4" Gold
- White Rock
- Pink Rock
- Red Lava
- Arizona River Rock
- Top Soil
- Compost
- Soil Mix
- Planter Mix
- Top Soil Mix
- Sports Mix
- Screened D.G. (Decomposed Granite)
- Stabilized D.G. (Decomposed Granite)
- 50/50 Sand & Fine Seedcover
- Path Mix
- Recreation Sand
- Decorative Cobble

Erosion Control

- Sand Bags (Bulk or Palletized)
- Entrance Rock
- Straw Waddle
- Silt Fence

Sports Turf Materials

- USGA Spec Sand
- USGA Bridging Gravel
- Bunker Sand
  - Augusta White
  - Desert Tan
  - P.S. 50/50
  - P.S. 75-25
- Top Dressing
- Divot Greens
- SoCal Distributor - Dakota Peat Moss
- Custom Blending (Any & All)
- Hilltopper Mound Mix
- MSU Infield Mix
- Track Fines

Hazardous Hauling

- Export Materials

Hourly Trucking

Serving all of California & Arizona with Quality Sand & Gravel Since 1968

ID TAGS

IRRIGATION ID TAGS STANDARD YELLOW

Christy's

PRODUCT SPECIFICATIONS

PRODUCT TYPE: Valve Identification Tag

DESCRIPTION: *Christy's*™ Standard ID Tags are ideal for high-visibility point-of-use identification. The top hole has been designed to pass a 16 gauge or smaller solenoid "pigtail" wire, or it can be attached to hose bibbs, valves, or handles with a nylon tie, or to the lid of a valve box with a bolt (not included). The hole can also be drill enlarged. The outlet reinforcement on our marking tags has 180LB. pull out resistance. This provides for an easily installed, virtually vandal-proof, custom identification product.

Through the use of custom designed plates, we can accommodate almost any request. A sampling of our current special legends and logos is listed on the following pages. Additionally, our marking tags are available in a variety of colors, to conform to both locally developed standards, as well as APWA and AWWA national standards.With our standard Alpha-Numeric numbering, the valve or marking designation can be seen from a distance of up to 50 feet.

Our standard yellow tags, (Irrigation Industry Standard) can accommodate up to three 1-1/8" alpha-numeric characters per side. We commonly provide standard sequences ranging from A1 . . . A36 through Z1 . . . Z36. In addition, we can accommodate practically any special alpha-numeric numbering requirement. This allows for logical and consistent zone, controller, valve or area sequence identification.

For Example:(A1A, A1B, A1C . . .A1Z) (AAA, AAB, AAC . . .AAZ) (C26,C27. . .C99) (125,126,127...)

SPECIFICATIONS:

Short Form: *Christy's*™ Standard size Identification Tags are to be provided as designated in the plans, conforming to the noted size, color and legend specifications listed.

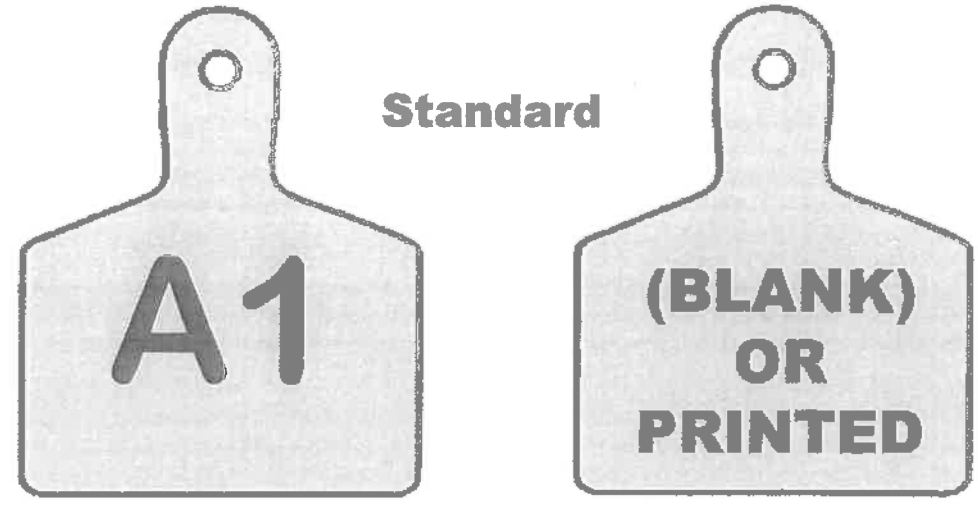
Standard Specification: Identification Tags provided, will be manufactured from polyurethane Behr Desopan, incorporating an integral attachment neck and reinforced attachment hole and will be capable of withstanding 180LBS. pull out resistance.

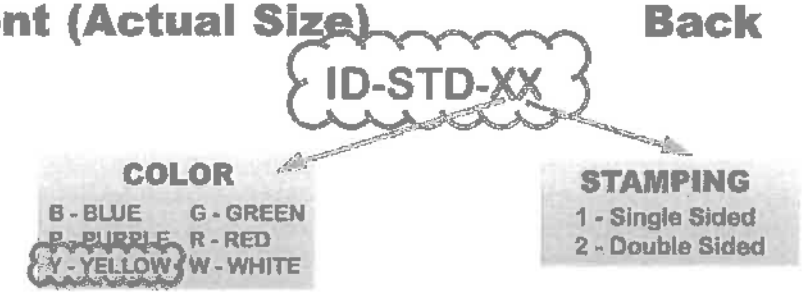
The identification tag shall be approximately 2.25" X 2.75" (*Christy's*™ Standard Tag) in size. All lettering shall be hot-stamped in black and capable of withstanding outdoor usage. The standard alpha-numeric designations shall incorporate alpha-numeric lettering 1-1/8" in height. Special lettering, designations or stampings will be the maximum size available based on the manufacturers judgement and will be hot-stamped as well

The tag color will be _____ (Yellow, Purple, Blue, Green, Red or White).

The marking tag will be _____ (Single or Double) side stamped with the following designation, message or identification sequence _____ (see styles on following pages or design template below) or *Christy's*™ style # _____. The marking tag shall be manufactured by T. Christy Enterprises, Inc., Anaheim, CA. (800-258-4583).

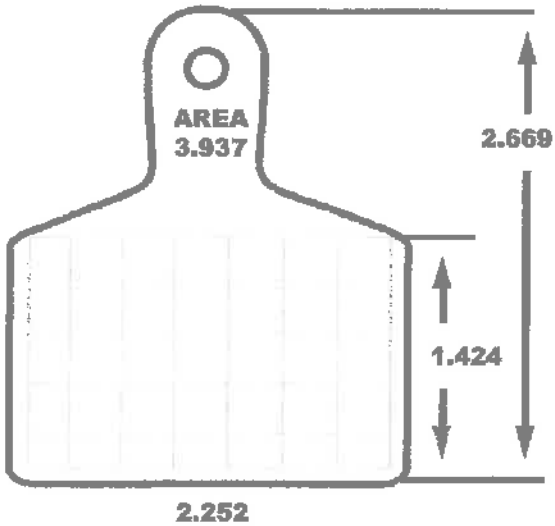
T. Christy Enterprises, Inc., 655 E. Ball Road, Anaheim, CA 92805-5910 • 800-BLU-GLUE • (714) 507-3300 • FAX (714) 507-3310





Our yellow tag (ID-STD-Y1) is a standard in the irrigation industry for valve sequence identification.

DESIGN TEMPLATE



STANDARD

Our standard size tag will accommodate up to three characters per side for valve identification purposes.

Reclaimed ID TAGS

IRRIGATION ID TAGS RECYCLED/RECLAIMED

Christy's™

Front Back

PRODUCT SPECIFICATIONS

PRODUCT TYPE: Valve Identification Tag - Recycled/Reclaimed Maxi

DESCRIPTION: *Christy's*™ Maxi size Recycled/Reclaimed ID Tags are ideal for high-visibility point-of-use identification. The top hole has been designed to pass a 16 gauge or smaller solenoid "pigtail" wire, or it can be attached to hose bibbs, valves, or handles with a nylon tie, or to the lid of a valve box with a bolt (not included). The hole can also be drill enlarged. The outlet reinforcement on our marking tags has 180LB. pull out resistance. This provides for an easily installed, virtually vandal-proof, custom identification product.

Through the use of custom designed plates, we can accommodate almost any request. Our purple Maxi size tags are industry standard for marking systems using Recycled/Reclaimed water. Style number RC005 is in English and style number RC006 is bilingual.

Our Maxi size tag can accommodate up to four characters per side. We commonly provide standard sequences ranging from A1 . . . A36 through Z1 . . . Z36. In addition, we can accommodate practically any special alpha-numeric numbering requirement. This allows for logical and consistent zone, controller, valve or area sequence identification.

For Example:(A1A, A1B, A1C . . .A1Z) (AAA, AAB, AAC . . .AAZ) (C26,C27. . .C99) (125,126,127...)

SPECIFICATIONS:

Short Form: *Christy's*™ Maxi size, Recycled/Reclaimed Identification Tags are to be provided as designated in the plans, conforming to the noted size, color and legend specifications listed.

Standard Specification: Identification Tags provided, will be manufactured from polyurethane Behr Desopan, incorporating an integral attachment neck and reinforced attachment hole and will be capable of withstanding 180LBS. pull out resistance.

The identification tag shall be approximately 3" x 4" (*Christy's*™ Maxi Tag) in size. All lettering shall be hot-stamped in black and capable of withstanding outdoor usage. The standard alpha-numeric designations shall incorporate alpha-numeric lettering 1-1/8" in height. Special lettering, designations or stampings will be the maximum size available based on the manufacturers judgement and will be hot-stamped as well

The tag color will be Purple.

The marking tag will be _____ (Single or Double) side stamped with the following designation or message (see styles on following pages or design template below) or *Christy's*™ style #: 005, 006, 009 or 011. The marking tag shall be manufactured by T. Christy Enterprises, Inc., Anaheim, CA. (800-258-4583)

T. Christy Enterprises, Inc., 655 E. Ball Road, Anaheim, CA 92805-5910 • 800-BLU-GLUE • (714) 507-3300 • FAX (714) 507-3310

Specifying A Stock Legend Maxi Tag

ID-MAX-PX-RC XXX

NOTE: *Please make a selection from each category for the requested tag.*

STAMPING

1 - SINGLE SIDED
2 - DOUBLE SIDED

SUFFIX #

Suffix # indicates exact wording on both front and back of MAXI tag. See page 10 for a list of 3 digit suffix numbers that are available.

EX: ID-MAX-P2-RC006

MAXI

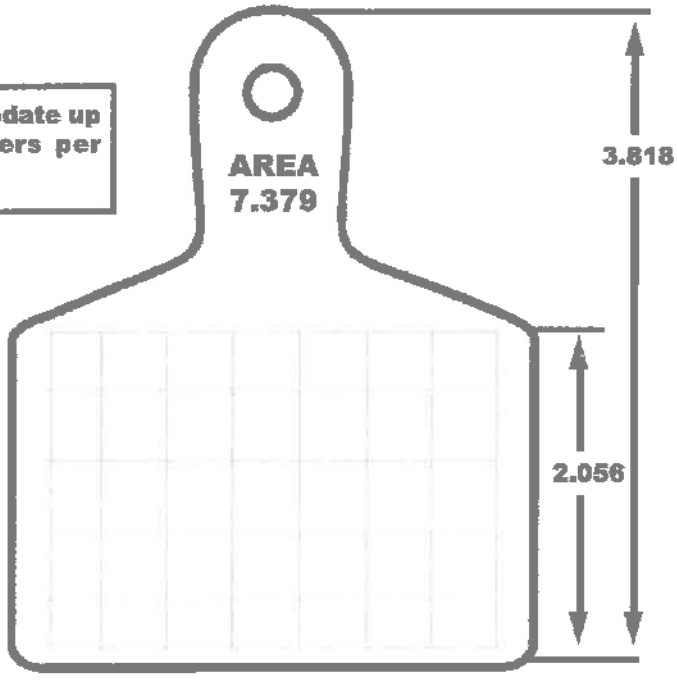
This is our most common tag for identifying Recycled/Reclaimed water systems.

Front

Back

DESIGN TEMPLATE

Maxi size can accommodate up to four 1-1/4" characters per side.



MAXI

STOCK MAXI TAGS

Suffix #005

Front Back

Suffix #006

Front Back

NOTE: Must Specify Alpha-Numeric Sequence

Suffix #009

Front Back

Suffix #011

(Standard - Purple or Green)

Front Back

CONTROLLER MANUAL

RAIN MASTER™ EAGLE PLUS

User's Guide

- Installation
- Setup
- Programming
- Operation
- Troubleshooting

Irritrol®

Introduction

Thank you for choosing the Irritrol Rain Master Eagle Plus controller for your landscape irrigation system. We at Irritrol take great pride in developing and building the finest irrigation products in the world, and are confident that your new Rain Master Eagle Plus will provide the control features, resource management tools, ease of use and robust design for years of dependable service.

Programming Features

- Station Run Time from 1 minute to 23 hours and 59 minutes, in 1-minute increments.
- Station delay setting from 1 minute to 19 minutes and 59 seconds.
- Cycle run time, Maximum Cycle time, and Soak time on a per-station basis
- Pump activation independent of the master valve on a per-program basis
- Program stacking or single program operation
- Watering day routine options on a per-program basis include: 14-Day , Skip Days and Odd/Even-numbered days.
- Definable watering window from 1 minute to 24 hours.
- Cycle-and-Soak or standard run time programming on a per-program basis.
- Copy functions for program-to-program and station run time.
- Programmable Master Valve and a Pump output control capabilities:

Automatic Watering Operations

- Evapotranspiration (ET) based scheduling.
- Percentage adjustment on a per-program basis to allow an increase or decrease of all station runtimes within that program from 0 – 300% in 1% increments.
- Calculated station run time executed to the nearest second.
- Programmable Water Off to postpone irrigation from 1 to 9 days.
- Automatic minimization of the water window by dynamically scheduling station starts when other stations are in the Soak mode.

Evapotranspiration (ET) Features

- ET processing on a per program basis.
- Multiple ET sources as the basis for its ET calculations:
  - ••Historical ET data
  - ••Manually entered ET data
  - ••Weather Center II weather station
  - ••Internet (with iCentral communication enabled).

Control Module Features

- Non-volatile memory retains all controller setup and programming information during power outages or seasonal shutdowns.
- A real-time clock with non-volatile backup to maintain the current date and time during power outages without the need of batteries.
- Automatically monitors all critical operating voltages and resets microprocessor during power "brown-out" or error conditions.
- Automatic electronic fuse resets automatically - eliminates fuses or circuit breakers.
- Automatic resumption of watering programs after power outage from the point of interruption.
- Automatically detects problems on all output and input circuits.
- Built-in self-test for internal circuitry.
- Robust surge protection on field output circuits.

Input Monitoring Features

- Rain sensor ready–accepts rain sensor or weather station input.
- Connectivity and input for two flow-sensing devices.
- Programmable flow sensor pipe sizes for standard Rain Master flow sensors and non-standard pipe sizes.
- Programmable flow monitoring for:
  - Mainline flow limit
  - Unscheduled flow limit
  - Single-station flow limit
  - Sample delay
  - Measured station flow.

Two-Wire Decoder System Control Features

(Two-Wire Decoder System Models Only)

- Two-Wire Decoder board installs in place of standard station output boards
- Fully integrated Two-Wire Decoder capabilities
- Provides control of up to 100 decoders for a total of 202 field outputs
- Auto detection and configuration during power-up
- Decoder programming and monitoring capabilities include:
  - Decoder and station number association
  - Output current
  - Station short/open circuit
  - Decoder presence detection.

Table of Contents

Control Module Overview

1 - Large LCD Display

The large format LCD display presents all setup, programming, system control and monitoring functions in an interactive menu-driven format.

Note: *To conserve power, the LCD backlight dims automatically after five minutes of inactivity. The backlight is restored automatically with any controller input.*

The Home screen is displayed by default when the controller is in the standby mode to provide basic controller status information.

The top line of the **Home** screen provides the current day (**1**), current time (**2**), and week 1 or week 2 of the two-week watering schedule (**3**). When equipped for iCentral communications, an antenna symbol (**4**) with signal strength indication bars will be shown.

The second line indicates the current number of configured automatic programs: None or 1–8 for standard systems, or 1–16 for Two-Wire systems. When the controller is in the Water Off mode, WATER OFF is displayed.

The bottom line of the **Home** screen provides: Main menu access (**5**), the pending number of alarms (**6**), and display sequence arrow(s) (**7**).

2 - Screen Sequence Keys

The **NEXT** and **BACK** screen sequence keys are associated with the corresponding and arrow symbols when displayed. Pressing a sequence key steps forward or backward through a multiple-screen sequence.

3 - Irrigation and Alarm Monitors

The Irrigation LED monitor illuminates to indicate system watering activity. The Alarm LED monitor illuminates when a system Alarm or Alert is generated. The Alarm monitor LED will remain illuminated until cleared by the user. An audible Alert option can be enabled that will "chirp" every six seconds to indicate one or more Alarm and or Alert conditions.

4 - Selection Dial

The selection **Dial** is the main user-interface component, providing a single rotary/push-button dial to select and input all controller setup and operating features.

5 - Direct Access Menu Keys

Direct access to each primary menu function is provided by pressing the corresponding selection key as follows:

PROGRAM Key – Selects the MAIN PROGRAM menu. Provides program-related options including: new program setup, existing program review, program modification, deletion, and copy functions.

SETUP Key – Selects the MAIN SETUP menu. Provides access to all setup option menus including: CONTROLLER operating options, FLOW monitor setup, PROGRAM operating options, COMM setup, ET setup, and TWO-WIRE system setup.

MANUAL Key – Selects the MANUAL OPERATIONS menu enabling manual control operations including: SINGLE STATION and MULTI-STATION operation, PROGRAM operation and multiple TEST functions.

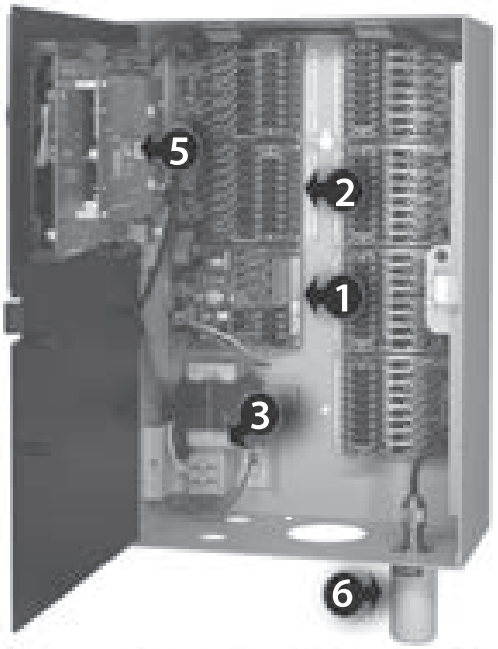
REVIEW Key – Selects the REVIEW menu for quick access to all controller PROGRAM details, historical data logs for IRRIGATION events, ALARM events, FLOW results, ET rates, iCentral communications and controller software version.

HOME Key – Returns directly to the HOME menu from any location within the menu hierarchy.

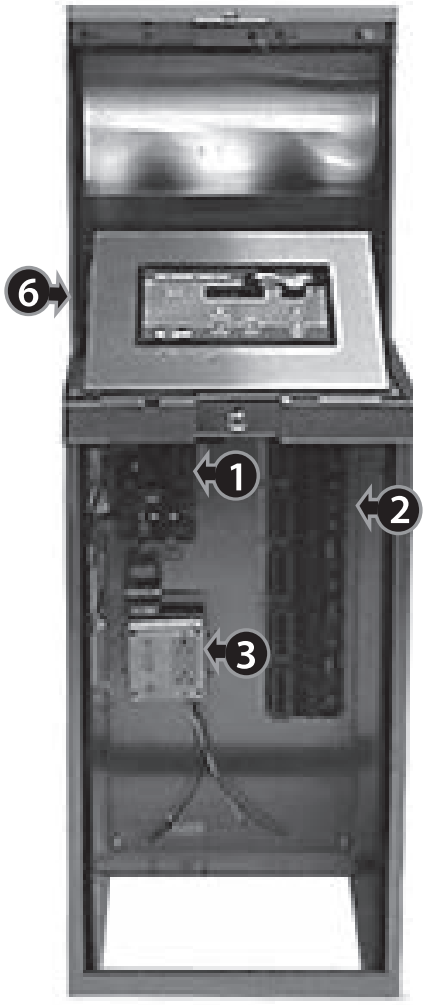
6 - WATER OFF Key – Terminates all automatic watering activity. When selected, all current automatic controller operation shuts down and remains off until the WATER OFF mode is released. The Water Off LED monitor illuminates when the controller is in the WATER OFF mode.

7 - Pro Max Remote Control Receptacle – Provides easy access for connection and remote operation with the (optional) Pro Max remote control system.

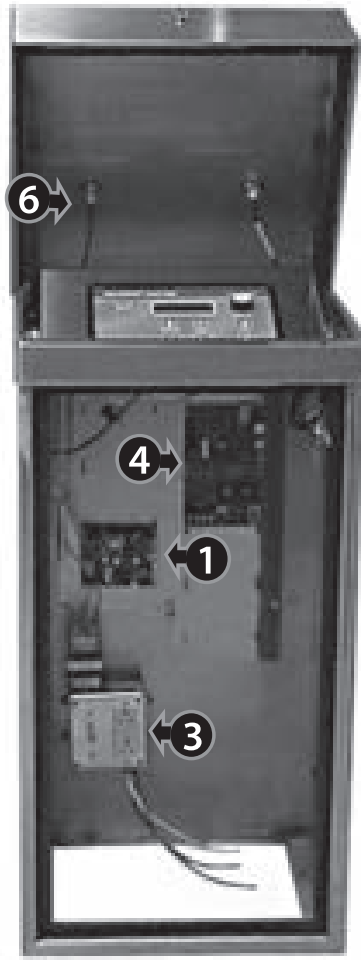
Controller Interior Component Overview



Wall-mount Enclosure



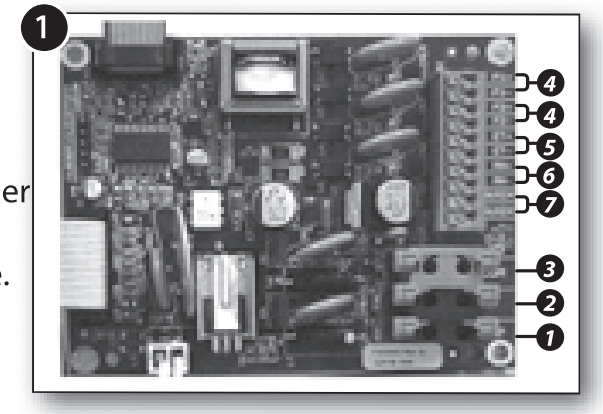
PSB Pedestal-mount Enclosure



SPED Pedestal-mount Enclosure

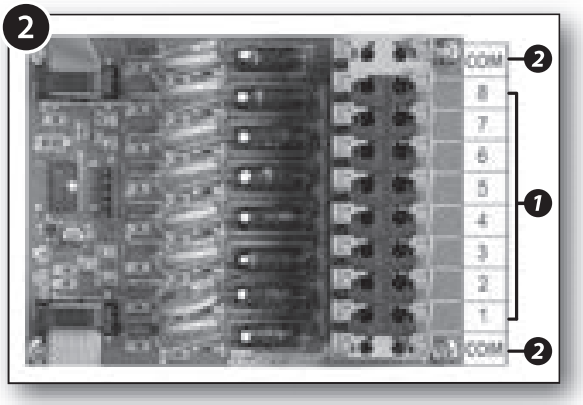
1 - Master Valve/Pump/Sensor Module

This module provides connections for all auxiliary components including: pump (**1**), master valve (**2**), field common (**3**), two flow sensors (**3**), a Weather Center II (**5**) **or** a rain/freeze sensor (**6**), and a 24 VAC power source.



2 - Station Output Module
(standard configuration)

Each output module provides connections for eight station outputs (**1**) and two field commons (**2**). Up to six station output modules can be installed for a total of 48 station outputs.

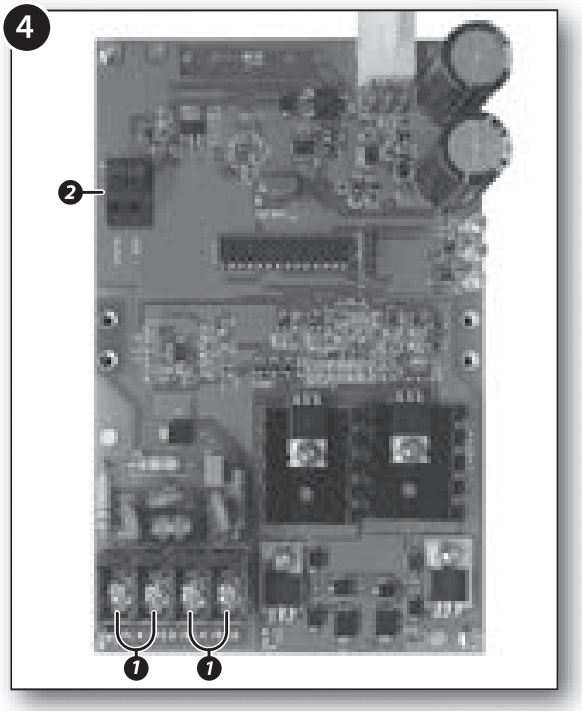


3 - Main Power Connection

Terminal block (wall-mount models) or junction box provide connections for Line, Neutral, and Equipment Ground wiring. Pedestal models provide On/Off switch and power outlet.

4 - Two-Wire Decoder Module (optional)

A single Two-Wire Decoder module replaces the 8-station output board(s) and connects to the control module via a two-wire, plug-in cable assembly. The Decoder module provides two separate decoder control wire pairs (**1**) and a quick-disconnect terminal block to facilitate decoder programming (**2**).



5 - iCentral with GSM Communications Modem (optional)

The iCentral modem mounts on the back of the control module to provide wireless communications capability with the iCentral control system.

6 - iCentral Antenna (optional)

External antenna (optional) provides unity gain and 200 watt power-handling capacity for loing-range communication. (Pedestal antenna location indicated but not shown in illustration.)

Selecting the Controller Setup Options

The controller setup options determine how the controller displays and manages the various tasks required to control and monitor your irrigation system.

A set of default controller setup and operating options is established on initial power-up. The table below lists the various controller setup menu items, the available options and the factory default settings.

Setup Menu	Option	Default
Current Time	Numeric Value, AM/PM	**12:00:00 a.m.**
Current Date	Alpha/Numeric	**Thursday, 01/ 01/2009**
Clock Format	12- or 24-Hour	**12-Hour**
Access Code	4-Digit Numeric	**0000**
Program Stacking	Yes or No	**Yes**
Stacking Limits	1 to 8 Programs	**3 Programs**
Station Delay	0–19 min, 0–59 sec	**0 min, 0 sec**
Master Valve Config.	NC or NO	**NC (normally closed)**
Units Format	U.S. Standard or Metric	**U.S. Standard**
Date Format	mm/dd/yy or dd/mm/yy	**mm/dd/yy**
Odd/Even Days Off	Yes or No	**No**
Rain Days Off	1–9 or None	**None**
Water Window	0–24 Hours	**24 (12:00 a.m.–11:59 p.m.)**
Audible Alarm	On or Off	**Off**

Note: *Synchronizing the controller with the current date and time should be accomplished first. The remaining settings can be changed at any time. Some of the settings will influence corresponding programming and controller operations. These features are explained in detail within the applicable section of the User's Guide.*

Upon initial power-up and after the controller has been without power for an extended period of time, the SETUP DATE/TIME screen is displayed by default. Enter the actual time and date per the following step-by-step procedure. When you have completed this initial procedure, you will be familiar with the Eagle Plus menu structure and how the multifunctional **Dial** allows you to easily navigate to select, change, adjust and enter the various controller programming and setup options.

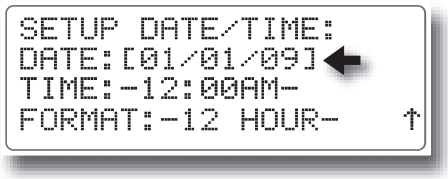
⚠ **IMPORTANT: All setup and programming selections must be entered (saved to memory) by pressing the Dial *before* pressing any of the Direct Access keys. The controller will disregard any selection that has not been saved.**

Note: *An audible "chirp" tone is generated each time a valid Key or Dial entry is made. An invalid action is indicated by the chirp tone four times in rapid succession.*

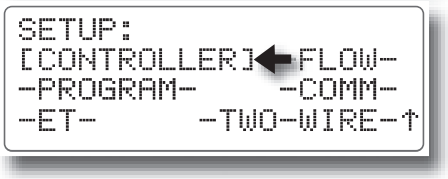
Setting the Current Time and Date

Note: *Menu items displayed between dashes can be selected. Turn the* ***Dial*** *in either direction to choose (bracket) the menu item, then press the* ***Dial*** *to select.*

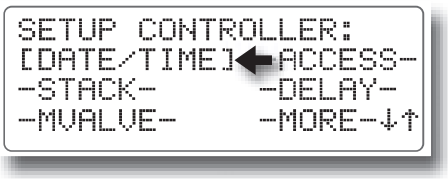
1. The controller will display the SETUP DATE/TIME screen upon initial power up.



2. Press the **SETUP** key to display the SETUP menu.

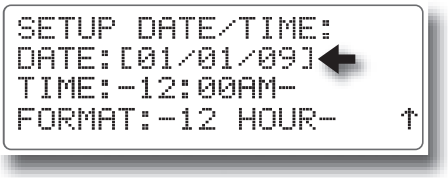


4. Press the **Dial** to select the CONTROLLER menu. The DATE/TIME option is chosen by default.

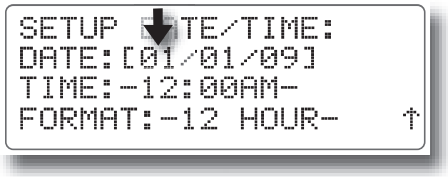


5. Press the **Dial** to select and display the SETUP DATE/TIME screen. The DATE option is chosen by default.

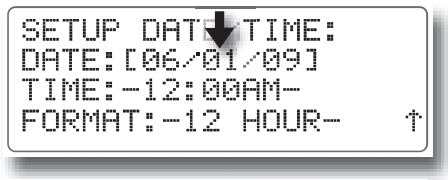
   Note: *In this procedure example, the date and time will be changed from the default settings to June 15, 2011, 2:45.*



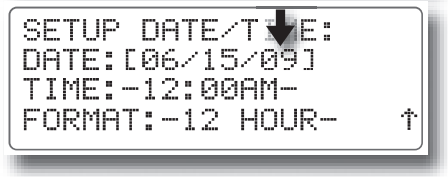
6. Press the **Dial –** the Month digits (01) will begin flashing.



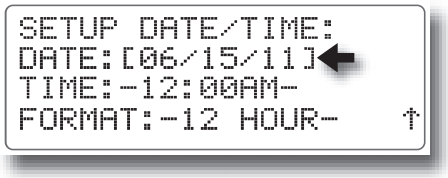
7. Turn the **Dial** to display the current month (06 = June), then press the **Dial** to enter the change. The Day digits (01) will begin flashing.



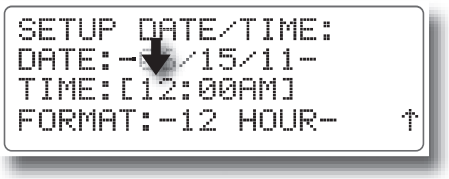
8. Turn the **Dial** to display the current day (15), then press the **Dial** to enter the change. The Year digits (09) will begin flashing.



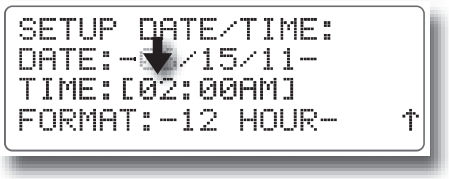
9. Turn the **Dial** to display the current year (11), then press the **Dial** to enter the change.



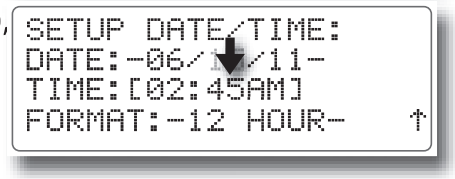
10. Turn the **Dial** right one step to choose Time, then press the **Dial** to select. The current hour digits will begin flashing.



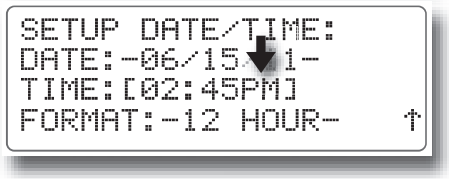
11. Turn the **Dial** to display the current hour (02:), then press the **Dial** to enter the change. The minutes digits will begin flashing.



12. Turn the **Dial** to display the current minute (:45), then press the **Dial** to enter the change. The AM designator will begin flashing.



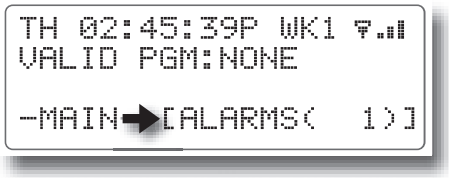
13. Turn the **Dial** to display PM, then press the **Dial** to enter the change.



14. Press the **HOME** key to exit the SETUP menu.

Note: *The initial Alarms shown on the Home screen are generated by default during the power-up process and not indicative of a problem. Clear the Alarms as follows:*

- Turn the **Dial** right one step to choose ALARMS.
- Press the **Dial** to select ALARMS.
- The cause of the alarm will be displayed. Press the **Dial** as needed to clear the alarms.



Setting a Security Access Code

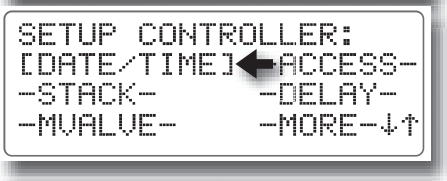
This feature enables the user to establish an access code that must be entered to gain access to various controller functions.

The access code can be any four-digit number between 0001 and 9999. After the code has been established, a security level is applied that determines which of the controller functions can remain accessible without entering the code.

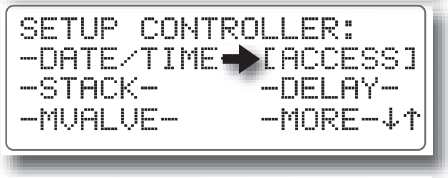
- **All –** Disables access code requirement – enables unrestricted controller use.
- **Restricted –** Requires access code to unlock Program and Setup functions. Manual, Review and Water Off functions remain unrestricted.
- **No Access –** Requires access code to unlock all controller functions.

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER option is chosen by default. Press the **Dial** to select CONTROLLER.

   The SETUP CONTROLLER menu is displayed with the DATE/TIME option chosen by default.



2. Turn the **Dial** right one step to choose the ACCESS option.



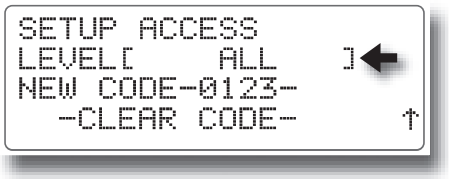
3. Press the **Dial** to select and display the SETUP ACCESS screen.

   Note: *Select an access code that's easy to recall, then keep a copy of it written down for reference if needed. If you forget or misplace your code, contact Technical Support at 1-800-777-1477.*

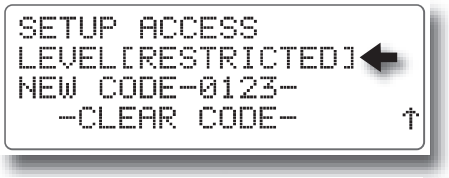
4. Press the **Dial** to begin. Four zeros will be displayed with the first digit flashing. Either turn the **Dial** to change this digit, or press the **Dial** to select the next digit in sequence. Repeat for all four digits.

   Note: *All four digits of the access code must be selected and saved to retain the code in memory. Exiting this procedure before entering the last digit restores the default or previous access code.*

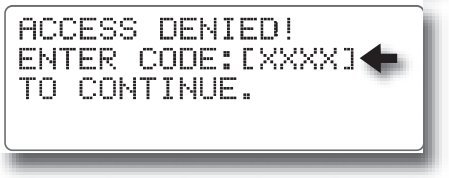
5. Entering the fourth access code digit prompts the next screen in the access setup sequence. Turn the **Dial** to choose the LEVEL option, then press the **Dial** to select.



6. Turn the **Dial** to display the preferred security level: RESTRICTED, NO ACCESS or ALL, then Press the **Dial** to enter the selection.



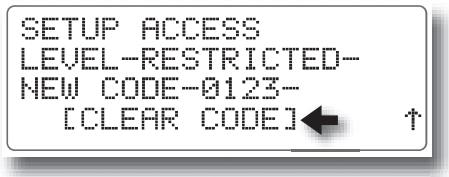
Note: *Once the access code has been entered, the controller functions will remain accessible until midnight. The access code must be entered each time once the restrictions have been applied to gain controller access. If attempting to enter an incorrect access code, the ACCESS DENIED screen will be displayed.*



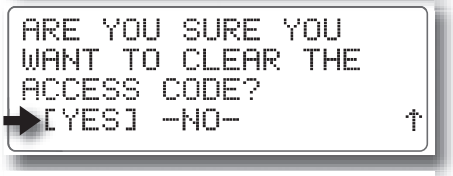
7. When finished, press the **HOME** key to return to the HOME screen.

To Clear and Reset the Current Access Code:

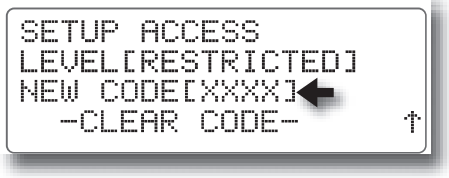
1. Starting from the SETUP ACCESS screen (shown at right), turn the **Dial** to choose CLEAR CODE, then press the **Dial** to select.



2. A safety screen is prompted. Turn the **Dial** to choose the **Yes** option, then press the **Dial** to delete the access code.



3. To reset the access code, repeat access code setup procedure, beginning at step 4.



4. When finished, press the **HOME** key to return to the HOME screen.

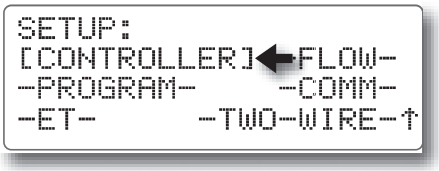
Setting the Program Stack Option

This controller setup option enables you to specify whether multiple irrigation programs can run simultaneously, or must be "stacked" or constrained to run one at a time in chronological order.

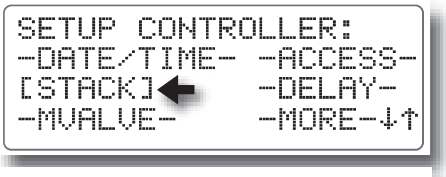
By default, Program Stack is a global option, established for all programs, but can be disabled for individual programs as preferred. The Program Stack range is adjustable from 1– 8 programs. When the Stack option is disabled for a specific program, that program is allowed to run simultaneously with other programs.

⚠ Caution: Before disabling the Stack option, it is very important to consider the total current load and flow demand imposed on the system during simultaneous multiple-program operations.

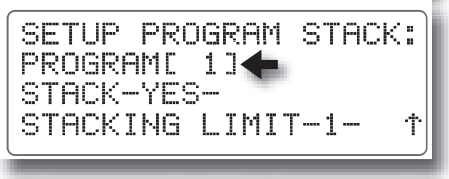
1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.



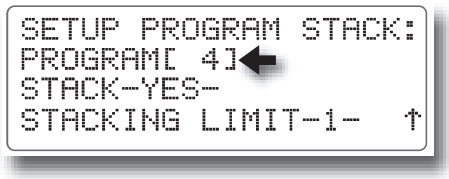
2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right two steps to choose STACK.



3. Press the **Dial** to display the SETUP PROGRAM STACK screen. The **Program** option is chosen by default. Press the **Dial** to select. The program number will begin flashing.

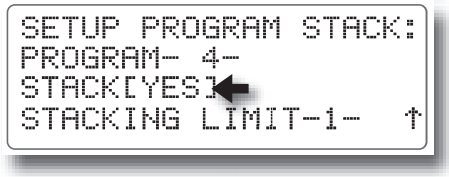


4. Turn the **Dial** to display the preferred program number (1–8 for standard systems, or 1–16 for two-wire decoder systems). Press the **Dial** to enter the number.

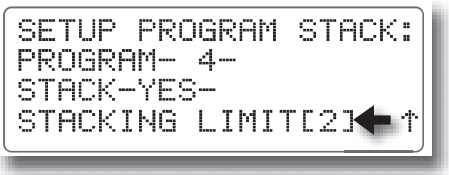


5. Turn the **Dial** right one step to choose the STACK option, then press the **Dial** to select. The current option will begin flashing. Turn the **Dial** to display the preference, then press the **Dial** to enter.

   Note: *The **Stacking Limit** option is applicable only with the **Yes** option selected.*



6. Turn the **Dial** right one step to choose STAKING LIMIT, then press the **Dial** to select. The current number will begin flashing. Turn the **Dial** to display the preferred number from 1–8, then press the **Dial** to enter the selection.

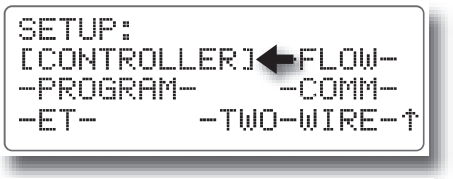


7. When finished, press the **HOME** key to return to the HOME screen.

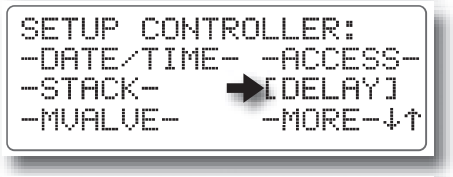
Setting the Station Delay Option

Irrigation systems that utilize a pump station and/or slow-closing valves may require a delay or dwell time to occur between the station operating sequence. The Station Delay feature enables you to enter a delay period from 1 second to 19 minutes. Note that the Station Delay period is applied globally to all station operating sequences.

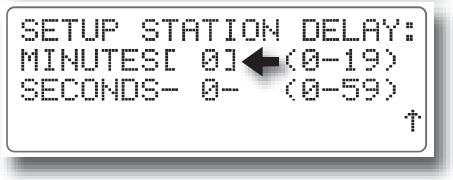
1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.



2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 3 steps to choose DELAY.



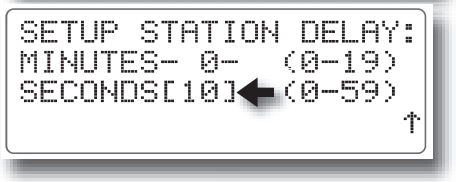
3. Press the **Dial** to display the SETUP STATION DELAY screen. The MINUTES option is chosen by default. If the preferred delay period is less than 1 minute, turn the **Dial** right one step to choose **Seconds**.



4. Press the **Dial** to select. The current value (0 by default) will begin flashing.

5. Turn the **Dial** to display the SECONDS value. Press the **Dial** to enter.

6. When finished, press the **HOME** key to return to the HOME screen.

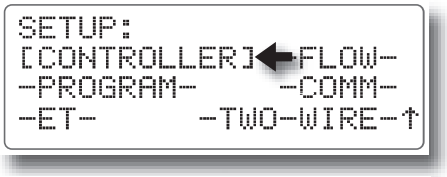


Setting the Master Valve Option

When a master valve is utilized in the irrigation system to control the main line water supply, it is imperative that the Master Valve configuration option corresponds correctly to either a Normally Open or a Normally Closed valve. The default Master Valve configuration option is Normally Closed.

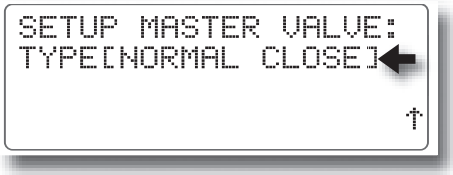
For example, if a system flow limit is exceeded, the controller will turn off power to the master valve, causing it to close, when configured for Normally Closed operation, When configured for a Normally Open master valve, the controller will apply constant power to the valve, causing it to remain closed.

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.

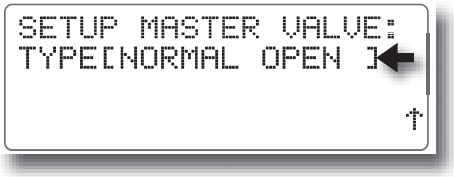


2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 4 steps to choose MVALVE, then press the **Dial** to select.

3. The SETUP MASTER VALVE screen is displayed. The NORMAL CLOSE option is chosen by default. Press the **Dial** to select. The option will begin flashing.



4. Turn the **Dial** to display the NORMAL OPEN option, then press the **Dial** to enter.



5. When finished, press the **HOME** key to return to the HOME screen.

Setting the Regional Options

Regional options enable you to configure the display information for various regional options including: units of measure, display language and date format. The chart below provides the Regional options and the default settings.

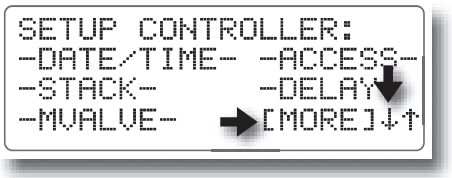
Units	Language	Date Format
English Metric	- English (default) - Spanish - French - German - Italian	MM/DD/YY (month, day, year - default) DD/MM/YY (day, month, year)

Note: *Regional option availability differs for Domestic and International controller models. Domestic models provide optional selection of the Date Format only.*

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.

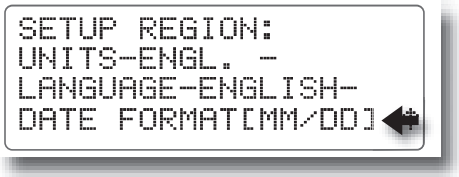
2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 5 steps to choose MORE, then press the **Dial** to select.

   Note: *Pressing the* ***NEXT*** *key will also access the next screen in sequence (indicated by the down arrow symbol).*

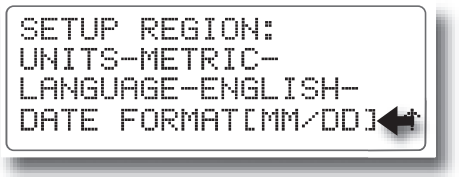


3. The SETUP MORE screen is displayed with the REGION option chosen by default. Press the **Dial** to select.

4. The SETUP REGION menu screen is displayed with the DATE FORMAT chosen by default.



5. Press the Dial to select. Turn the **Dial** to display the preferred option, then press the **Dial** to enter the selection.



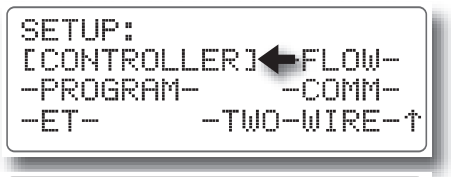
6. When finished, press the **HOME** key to return to the HOME screen.

Setting the Odd/Even Day Option

By default, the Odd/Even calendar day scheduling option is disabled. In order to utilize this control feature in the Program Setup options, it must first be enabled in the Controller Setup options.

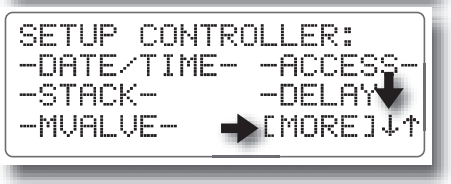
***Note**: For additional information regarding the function and implementation of the Odd/Even feature, refer to Program Setup Options on page **21**.*

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.



2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 5 steps to choose MORE, then press the **Dial** to select.

   ***Note:** Pressing the **NEXT** key will also access the next screen in sequence (indicated by the down arrow ↓ symbol).*



3. The SETUP MORE screen is displayed with the REGION option chosen by default. Turn the **Dial** right one step to choose the ODD/EVEN option, then press the Dial to select.

5. The SETUP ODD/EVEN screen is displayed with WATERING - NO chosen by default.

   ***Note:** For this option, it is preferable to set TYPE first, and then set the WATERING - YES/NO option. (See step 6 below.)*

6. Turn the **Dial** to choose TYPE, then press the **Dial** to select. Turn the **Dial** to display EVEN or ODD, then press the **Dial** to enter.

7. Turn the **Dial** left one step to choose WATERING, then press the **Dial** to select. Turn the **Dial** to display YES, then press the **Dial** to select.

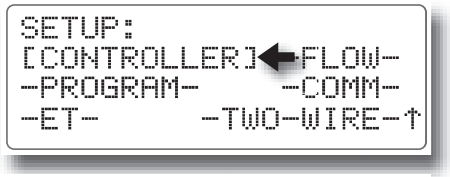
   A WARNING screen will be displayed. Press the **Dial** to select OK, or turn **Dial** to choose CANCEL, then press the **Dial** to return to the previous screen.

8. When finished, press the **HOME** key to return to the HOME screen.

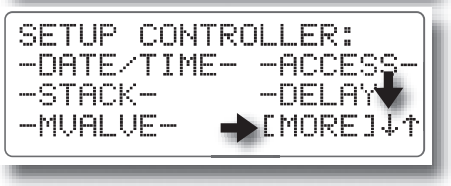
Setting the Audible Alert Option

The Audible Alert option is Off by default. When enabled, an Alarm condition will trigger an Alert "chirp" tone every six seconds until the Alarm condition is cleared.

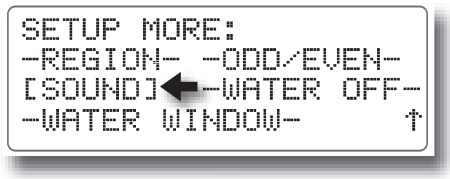
1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.



2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 5 steps to choose MORE, then press the **Dial** to select.
   Note: *Pressing the* ***NEXT*** *key will also access the next screen in sequence (indicated by the down arrow ↓ symbol).*



3. The SETUP MORE screen is displayed with the REGION option chosen by default. Turn the **Dial** right two steps to choose SOUND, then press the **Dial** to select.



4. The SETUP SOUND screen is displayed with the OFF option selected by default.
5. Press the **Dial** to select, then turn the **Dial** to display ON. Press the **Dial** to enter the selection.

6. When finished, press the **HOME** key to return to the HOME screen.

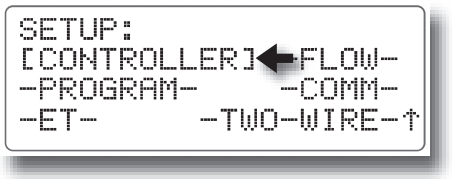
Setting the Timed Water-Off Mode

This feature provides a means of placing the controller in the Water Off mode for a timed duration from 1 to 9 days.

Note: *The Water Off mode can be terminated at any time by any one of the following methods:*

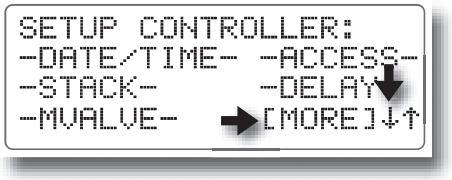
- Press the **WATER OFF** key.
- Reset the Water Off day duration to NONE.
- Choose TURN WATER ON from the MAIN menu, then press the **Dial** to select TURN WATER OFF.

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.

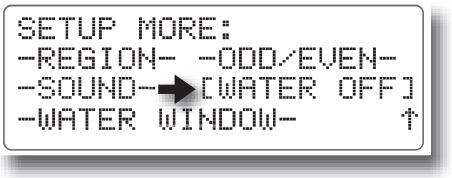


2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 5 steps to choose MORE, then press the **Dial** to select.

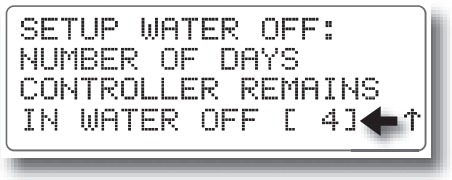
   Note: *Pressing the* ***NEXT*** *key will also access the next screen in sequence (indicated by the down arrow symbol).*



3. The SETUP MORE screen is displayed with the REGION option chosen by default. Turn the **Dial** right three steps to choose WATER OFF, then press the **Dial** to select.



4. The SETUP WATER OFF screen is displayed. Press the **Dial** to select [None], then turn the **Dial** to display 1 to 9 days.



5. Press the **Dial** to enter. The controller will switch to the WATER OFF mode and the LED indicator will illuminate.

   Note: *If a 1-day duration is selected, the WATER OFF mode will be automatically released at the day change (Midnight).*

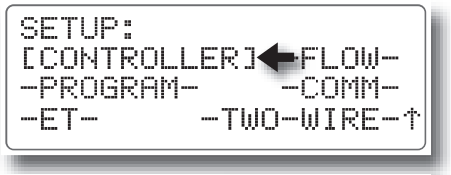
6. When finished, press the **HOME** key to return to the HOME screen.

Setting the Water Window Duration

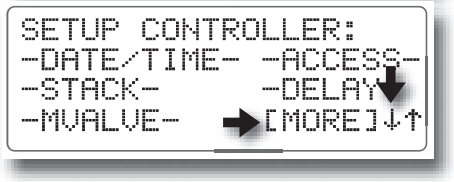
This option enables you to define a specific period (or window) of time within the 24-hour day to complete all scheduled watering activity. Once established, any scheduled watering activity that would either start or continue running outside of the window will be ignored. Built-in programming alerts will be displayed if a water window scheduling conflict occurs. By default, the Water Window setting is 24 hours.

Note: *When decreasing the Water Window, it is important to consider that an increase in station run time through the use of the Percent Adjust and/or ET control features, can extend program watering duration beyond the Water Window limit,resulting in an Alarm condition.*

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.

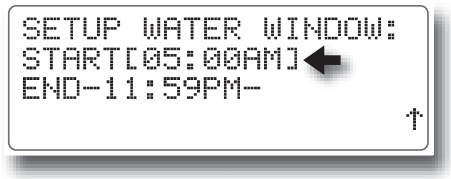


2. The SETUP CONTROLLER menu is displayed. Turn the **Dial** right 5 steps to choose MORE, then press the **Dial** to select.
   Note: *Pressing the* ***NEXT*** *key will also access the next screen in sequence (indicated by the down arrow symbol).*



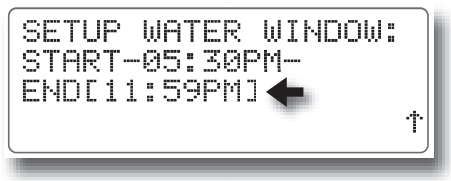
3. The SETUP MORE screen is displayed with the REGION option chosen by default. Turn the **Dial** right four steps to choose WATER WINDOW, then press the **Dial** to select.

4. The SETUP WATER WINDOW screen will be displayed. Press the **Dial** to select START time. Turn the **Dial** to display the preferred start time hour, then press the **Dial** to enter. The minutes digits will begin flashing.



5. Turn the **Dial** to display the preferred start time minutes. Press the **Dial** to enter. The AM/PM indicator will begin flashing (12-hour mode only). Turn the **Dial** to display the AM/PM preference, then press the **Dial** to enter.

6. Turn the **Dial** right one step to choose the END time. Set the END time using the same procedure as the START time.



7. When finished, press the **HOME** key to return to the HOME screen.

Selecting the Program Setup Options

Within the Controller Setup menu options, the selections made applied universally to all active programs. Within the Program Setup options, operating parameters specific to each program are established.

The table below lists the various available Program Setup options and the factory default settings.

Setup Program Menu	Option	Default
Type	- Water Days: 14-Day/Skip Day - Irrigation/Non-Irrigation - Cycle and Soak: Yes/No	**14-Day** **Irrigation** **No**
Odd/Even Days	- Enabled/Disabled	**Disabled**
Weather	- ET: Enabled/Disabled - Rain Sensor: Yes/No	**Disabled** **No**

Program Type

- **Water Days –** A 14-day schedule is the default option that enables individual days of a recurrent, two-week schedule to be assigned. The Skip-Day option constrains active days to a specified interval, ranging from every day (skip 0 days), to once every 31 days (skip 30 days).
- **Irrigation/Non-Irrigation –** Programs can be defined for either irrigation control or non-irrigation control; e.g., outdoor lighting or filter pumps as preferred.
- **Cycle/Soak –** The Cycle and Soak option enables a delay period to be interspersed with the station run time to help reduce runoff due to a low absorption rate or to prevent furrowing and seed loss during an initial turf grow-in period.

Odd/Even Days

When enabled, either Odd- or Even-day watering is specified. Within the individual Program Setup options, the specified option (Odd or Even) is displayed with a YES/NO option. Selecting YES assigns the schedule to the program; selecting NO ignores the schedule.

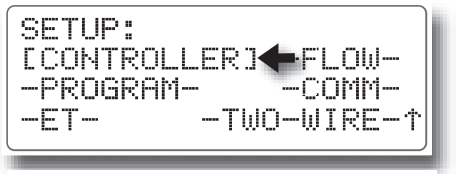
Note: *The Odd/Even day scheduling option must be enabled within the Controller Setup options to be selectable within the Program Setup options.*

Master Valve /Pump:

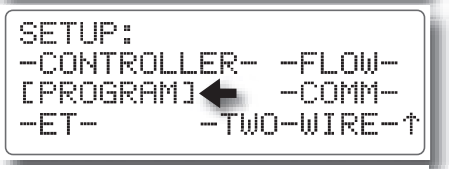
This option enables/disables concurrent operation of the Master Valve (MV) and/or Pump on a per-program basis. By default, both Master Valve and Pump output controls are assigned to all irrigation programs and disabled for all non-irrigation programs.

Setting the Program Type Option

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.



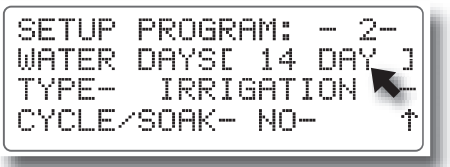
2. Turn the **Dial** right two steps to choose PROGRAM, then press the **Dial** to select.



3. The SETUP PROGRAM menu screen is displayed with TYPE chosen by default. Press the **Dial** to select.

4. The next SETUP PROGRAM screen in sequence is displayed with the program number chosen by default. Press the **Dial** to select. Turn the **Dial** to display the preferred program number, then press the **Dial** to enter.

5. Turn the **Dial** right one step to choose the WATER DAYS. The 14 DAY option is displayed by default. Press the **Dial** to select.



6. Turn the **Dial** to display SKIP DAY or 14 DAY option as preferred, then press the **Dial** to enter the selection.

7. Turn the **Dial** right one step to choose the Program TYPE option, then press the **Dial** to select.

8. Turn the **Dial** to display NON IRRIGATION (i.e. for outdoor lighting) or IRRIGATION option, then press the **Dial** to enter the selection.

9. Turn the **Dial** right one step to choose the CYCLE /SOAK option.

10. Turn the **Dial** to display the YES or NO option, then press the **Dial** to enter the selection.

11. When finished, press the **HOME** key to return to the HOME screen.

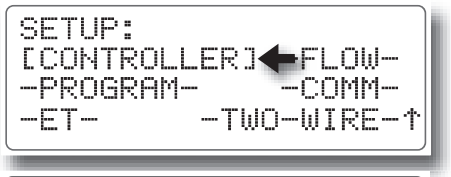
Setting the Program Odd/Even Calendar Days Option

Note: *To assign program(s) to an Odd or Even numbered calendar day schedule, the Odd /Even schedule option must be established first within the Controller setup parameters. Refer to page 15 for Controller Odd/Even setup procedures.*

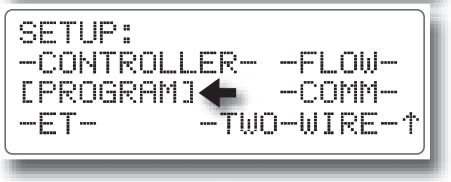
Note: *Programs can only be assigned to an Odd OR Even schedule, as specified within Controller setup parameters. In other words, one program can not be assigned to an Even schedule and another program assigned to an Odd schedule.*

Note: *When the Odd/Even program option is enabled, watering will NOT occur on the 31st day of the month or Leap Day (February 24).*

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.

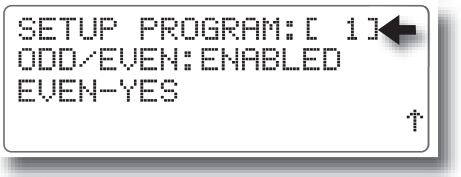


2. Turn the **Dial** right two steps to choose PROGRAM, then press the **Dial** to select.



3. The SETUP PROGRAM menu screen is displayed with the TYPE option chosen by default. Turn the **Dial** right one stop to choose the ODD/EVEN option, then press the **Dial** to select.

4. The program number is chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preferred program number. Press the **Dial** to enter the selection.



5. Turn the **Dial** right one step to choose the YES/NO option**.** By default the Odd or Even option is not selected for programs.

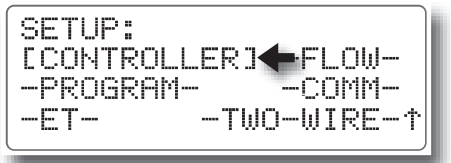
6. To assign the EVEN day option to this program, press the **Dial** to select NO. The option will begin flashing. Turn the **Dial** to display YES, then press the **Dial** to enter the selection.

7. Repeat this procedure for each program number as required, beginning at step 4.
8. When finished, press the **HOME** key to return to the HOME screen.

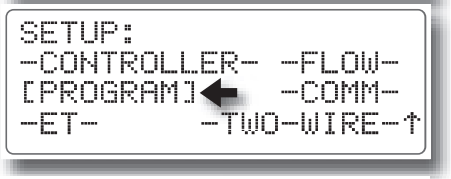
Setting the Program Master Valve/Pump Control Options

Note: *By default, the master valve and pump control options are enabled for all programs. Disabling these functions may be required for non-irrigation programs.* *See page 13 for Master Valve/Pump configuration and setup procedures.*

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.



2. Turn the **Dial** right two steps to choose PROGRAM, then press the **Dial** to select.



3. Press the **Dial** to display the SETUP PROGRAM menu screen. TYPE is chosen by default.

4. Turn the **Dial** right two steps to choose MV/PUMP.

5. Press the **Dial** to display the MASTER VALVE and PUMP screen. The program number is chosen by default.

6. Press the **Dial** to select the program number. Turn the **Dial** to display the preferred program number, then press the **Dial** to enter.

7. Turn the **Dial** right one step to choose the MASTER VALVE option**.** YES is selected by default. To disable MASTER VALVE operation for this program, press the **Dial** to select, turn the **Dial** to display NO, then press the **Dial** to select.

8. Turn the **Dial** right one step to choose the PUMP option**.** YES is selected by default. To disable PUMP operation for this program, turn the **Dial** to display NO, then press the **Dial** to select.

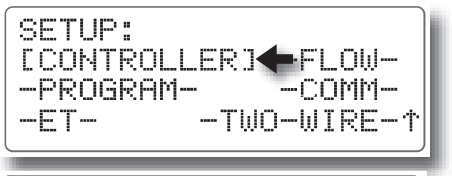
9. Repeat this procedure for each program as preferred, beginning at step 5.
10. When finished, press the **HOME** key to return to the HOME screen.

Setting the Program Weather Options

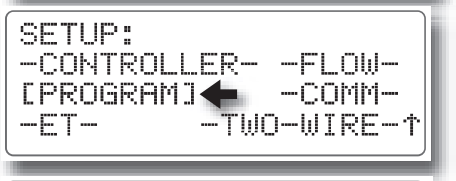
The optional ET (Evapotranspiration) and/or Rain Sensor control features are disabled by default for all programs. In order to utilize either of these features, they must first be enabled within the Weather option screen.

Note: *When ET is enabled for a program, a Percent Adjustment applied to that program will be ignored. Refer to Modify Program options, page 41 for additional information.*

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Press the **Dial** to select.

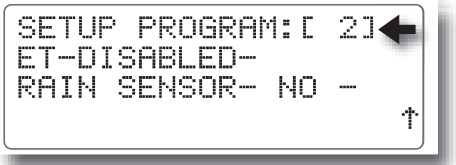


2. Turn the **Dial** right two steps to choose PROGRAM, then press the **Dial** to select.

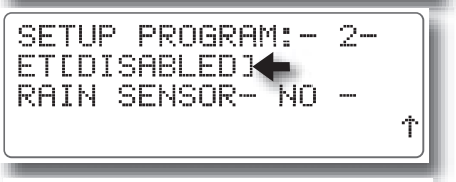


3. Turn the **Dial** right two steps to choose the WEATHER option. Press the **Dial** to display the ET and RAIN SENSOR option screen. The program number is chosen by default.

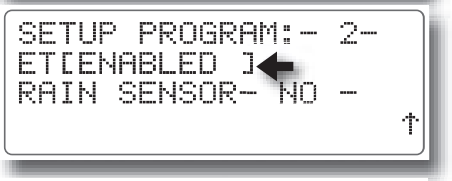
4. Press the **Dial** to select. The program number will begin flashing. Turn the **Dial** to display the preferred program number, then press the **Dial** to enter the selection.



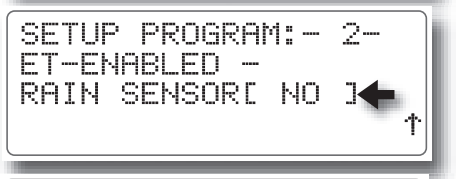
5. Turn the **Dial** right one step to choose the ET option. DISABLED is selected by default.



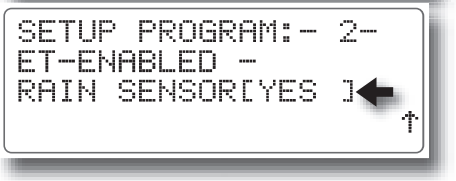
6. Press the **Dial** to select. Turn the **Dial** to display the ENABLED option. Press the **Dial** to enter the selection.



7. Turn the **Dial** right one step to choose the RAIN SENSOR option. NO is selected by default.



8. Press the **Dial** to select. Turn the **Dial** to display the YES option to enable the option for this program.
9. Repeat this procedure for each program number as preferred, beginning at step 4.



10. When finished, press the **HOME** key to return to the HOME screen.

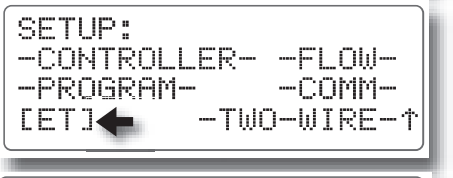
Selecting the ET Setup Options

All required ET configuration parameters are provided within the ET Setup Menu screen. The table below lists the available ET setup options and default settings.

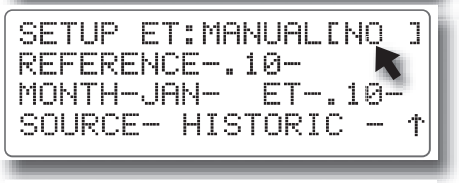
ET Setup Menu	Option	Default
Manual Adjust	No or .010 – .490	**No**
Reference ET	.00–.50	**.10**
Reference Month	Jan–Dec	**Jan**
ET	.00–.50	**.10**
Source	Historic, Internet or Weather Station	**Historic**

1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default.

2. Turn the **Dial** right four steps to choose ET, then press the **Dial** to select.



3. Press the **Dial** to display the SETUP ET menu screen. The MANUAL option is chosen by default.



4. Press the **Dial** to select. The default value will begin flashing. Turn the **Dial** to change the value to the preferred setting. Press the **Dial** to save.

5. Turn the **Dial** to choose the next option to be adjusted. Repeat the procedure beginning at Step 3.
6. When finished, press the **HOME** key to return to the HOME screen.

Selecting the Flow Sensor Setup and Operation Options

The Eagle Plus can support two separate flow sensors to continuously monitor main line and individual station flow rates. If a flow rate is detected outside the specified parameter, an Alarm condition is triggered.

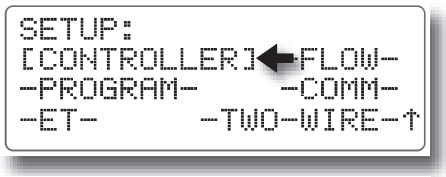
The controller supports Standard and Custom flow sensor configurations. The Standard option applies factory-default K and Offset values for Rain Master flow sensors. The Custom option enables K and Offset values to be set as preferred.

The table below lists the flow sensor setup options, and default settings.

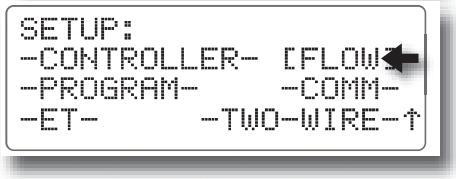
Flow Setup Menu	Option	Default
Sensors (Material/Size)	Bronze: 1.0", 1.25", 1.5", 2.0" & 2.5" PVC: 1.5", 2.0", 3.0" & 4.0"	**1.5" PVC**
Usage	None, Flow 1, Flow 2, Flow 1 & Flow 2	**Flow 1**
Type	Standard or Custom	**Standard**
Delay	1–6 Minutes	**2 Minutes**
Flow Limits	Station: 0–999 GPM Main: 1–5000 GPM Unscheduled: 0–999 GPM	**200 GPM** **500 GPM** **200 GPM**
Learned Flow	1–All	**1**
Limit Adjust	5–80%	**20%**
Totalizer	0–999,999 Gallons	**0 Gallons**

Set the Sensor Enable/Disable Option

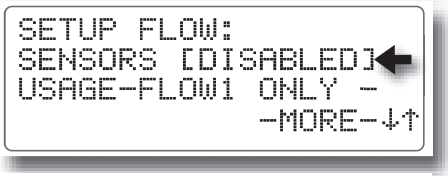
1. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default.



2. Turn the **Dial** right one step to choose FLOW, then press the **Dial** to select and display the SETUP FLOW screen.

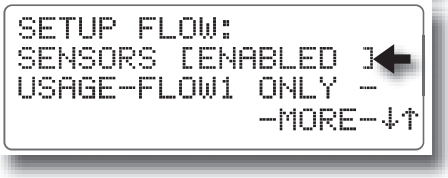


3. The SENSORS option is chosen by default. Press the **Dial** to select.



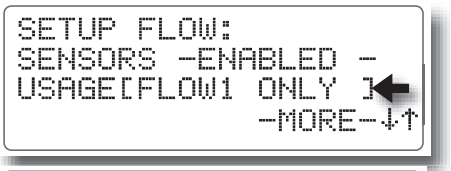
4. Turn the **Dial** to display ENABLED, then press the **Dial** to enter the selection.

   Note: *SENSORS ENABLED must be selected to access the remaining Flow setup features.*

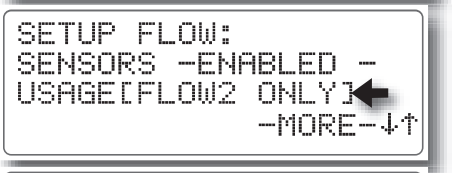


Setting the Usage Option

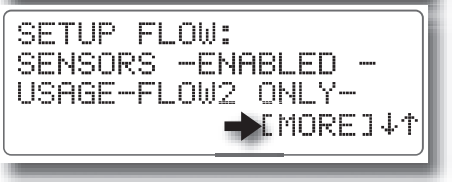
1. Turn the **Dial** to choose the USAGE option. The FLOW 1 ONLY option is selected by default. Press the **Dial** to select.



2. Turn the **Dial** to display the preferred option (FLOW 1, FLOW 2, FLOW 1 & 2 or NONE). Press the **Dial** to enter the selection.

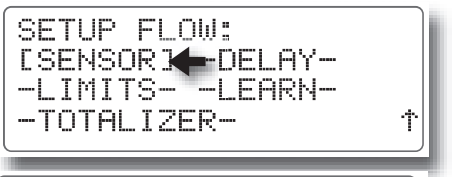


3. Turn the **Dial** to choose the MORE option or press the **Next** ▽ key.

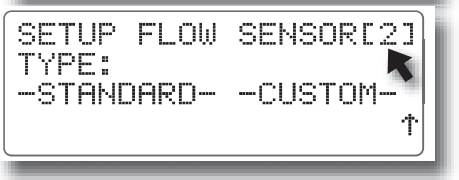


Setting the Standard/Custom Sensor Options

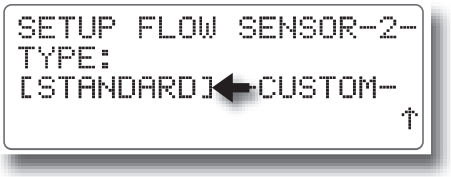
1. The SETUP FLOW menu is displayed with the SENSORS option chosen by default. Press the **Dial** to select SENSORS.



2. The SETUP FLOW SENSOR screen is displayed, with the sensor number option chosen by default. Press the **Dial** to select, then turn the **Dial** to display SENSOR 1 or 2. Press the **Dial** to enter the selection.

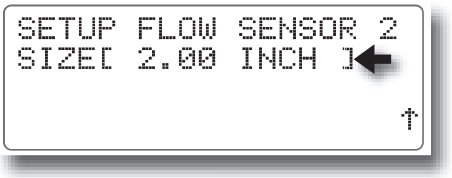


3. Turn the **Dial** to choose the STANDARD for Rain Master flow sensor or CUSTOM for alternate flow sensor makes. Press the **Dial** to select.



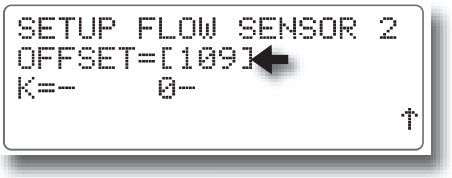
• For Rain Master Flow Sensors:

4. The sensor SIZE option is chosen. Press the **Dial** to select, then turn the **Dial** to display the actual sensor size. Press the **Dial** to enter the selection.

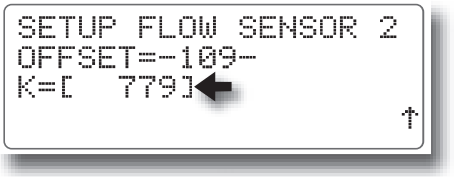


• For Alternate Flow Sensors:

4. The sensor OFFSET value option is chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preferred value (**0–999**). Press the **Dial** to enter the selection.



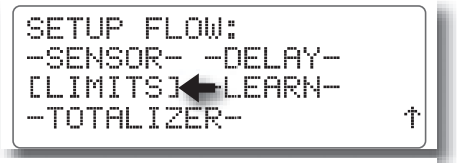
5. Turn the **Dial** to choose the **K** value. Press the **Dial** to select, then turn the **Dial** to display the preferred value (**0–32767**). Press the **Dial** to enter the selection.



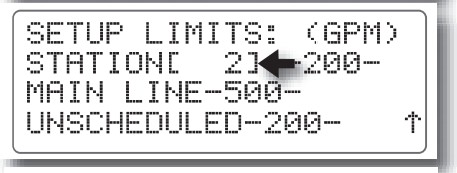
Setting the Flow Limits Options

Flow rate alarm criteria are based on the flow rate values specified in the LIMITS screen. In most cases, the factory default values can serve as a starting point until the actual flow rate values are known. Using the Learned Flow procedure provided on **Page 28**, will enable the actual flow rate values to be automatically acquired and entered in Flow Limits screen in lieu of setting the values manually.

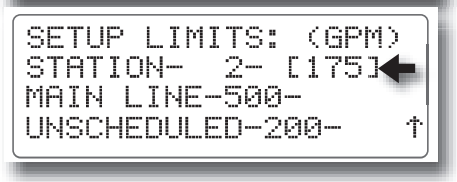
1. Press the **Back** key to step back to the SETUP FLOW menu. Turn the **Dial** to choose LIMITS.



2. The **Station** number option is chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preferred station number. Press the **Dial** to enter.



3. Turn the **Dial** to choose the STATION flow limit. Press the **Dial** to select, then turn the **Dial** to display the preferred value from **0** to **999**. Press the **Dial** to enter the selection.

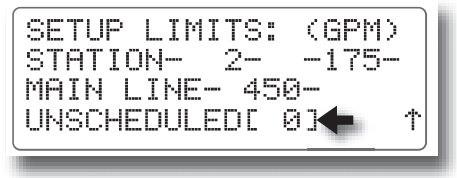


⚠ **IMPORTANT: When the PROGRAM STACKING option is not used, multiple programs/stations are allowed to operate simultaneously. The MAIN LINE flow limit must be set to correspond with the maximum cumulative flow rate during multi- program operation.**

4. Turn the **Dial** to choose the **Main Line** flow limit. Press the **Dial** to select, then turn the **Dial** to display the preferred value from **0** to **9999**. Press the **Dial** to enter.

Note: *Setting the Unscheduled flow limit establishes the maximum allowable flow through the main line while the irrigation system is static. If the flow rate exceeds the limit, an Alarm is triggered and the system will shut down until the cause is resolved. A small or zero value for unscheduled flow is generally sufficient unless supplemental irrigation is used; i.e., via a quick-coupler or gate valve. In this case, the Unscheduled flow limit must be set at the maximum supplemental flow rate.*

5. Turn the **Dial** to choose the UNSCHEDULED flow limit. Press the **Dial** to select, then turn the **Dial** to display the preferred value from **0** to **999**. Press the **Dial** to enter the selection.

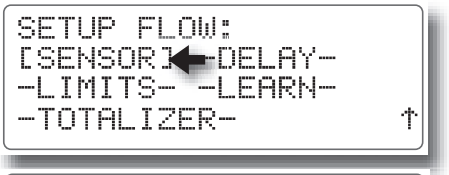


Setting the Delay Option

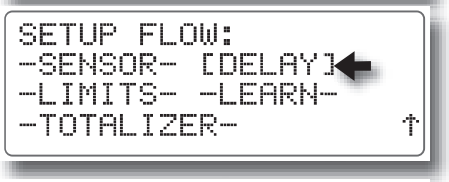
The Delay time entered in this setup screen determines how long a station will run before the flow data is sampled.

Note: *An extra 10 seconds will be added to the selected Delay time.*

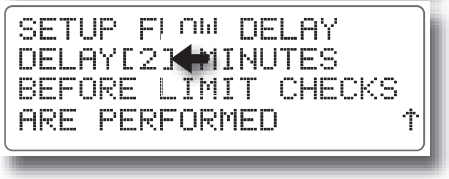
1. Press the **BACK** key to step back through the menu sequence to the SETUP FLOW menu.



2. Turn the **Dial** right one step to choose the DELAY option. Press the **Dial** to select.



3. The SETUP FLOW DELAY screen is displayed with the delay time chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preference from **1** to **6** minutes. Press the **Dial** to enter the selection.

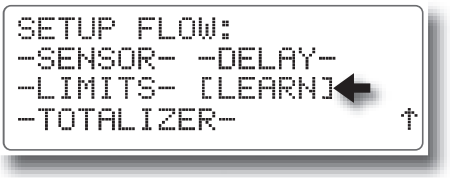


Setting the Learned Flow Options

During the Learned Flow procedure, each station assigned to a selected program is operated in sequence for the run time specified in the Delay option screen. An additional 10 seconds is added at the end of the delay period in which the nominal flow rate is acquired. To help prevent false threshold Alarms due to typical variations in flow rate, the controller establishes the maximum flow rate value by increasing the nominal flow rate by a specified percentage factor from 5 to 80%.

Note: *To utilize the learned flow feature, at least one valid automatic watering program must be defined.*

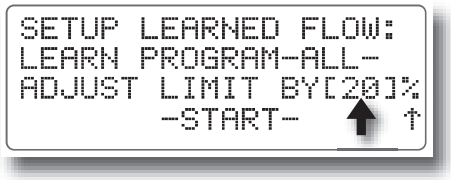
1. Press the **BACK** key to step back to the SETUP FLOW menu. Turn the **Dial** to choose the **Learn** option, then press the **Dial** to enter the selection.



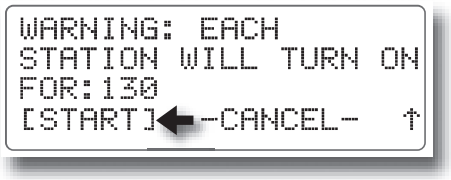
   Note: *Established programs can be selected by number, or when more than one valid program exists, the ALL option will be displayed. When the ALL option is selected, all valid programs will run one at a time in numeric sequence.*

2. The SETUP LEARNED FLOW menu is displayed, with the program number option chosen by default. Press the **Dial** to select, then turn the **Dial** to display a specific program number, or select **All** to run all programs in sequence.

3. Turn the **Dial** to choose the ADJUST LIMIT value. Press the **Dial** to select, then turn the **Dial** to display the preferred increase from **5** to **80%**. Turn the **Dial** to choose START, then press the **Dial** to select.

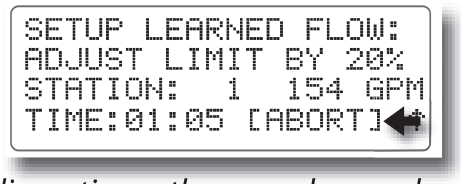


4. A WARNING screen is displayed. The station run time (DELAY) time plus 10 seconds is indicated, and the START option is chosen by default.



Note: *Choosing and selecting the CANCEL option discontinues the procedure and reverts to the SETUP LEARNED FLOW screen.*

5. Press the **Dial** to start the operation. A status screen will be displayed identifying the station number being tested, the current flow rate, and the run time remaining.

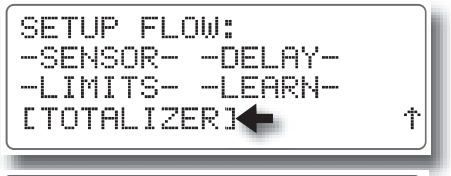


Note: *Choosing and selecting the ABORT option discontinues the procedure and reverts to the SETUP LEARNED FLOW screen.*

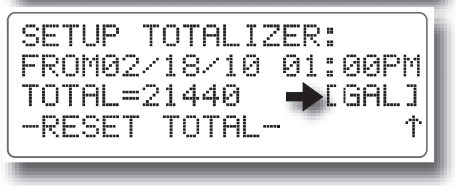
Resetting the Flow Totalizer

All flow sensor data is stored in the controller memory and can be reviewed at any time. The flow totalizer feature monitors the flow data registered by each flow sensor and displays the combined total volume. The totalizer can be set to display flow data in GAL (gallons), CCF (100 cubic feet), or ACRE-FEET (ACF) as preferred. The RESET feature enables the totalizer to be reset to zero and begin compiling total flow data from that point forward.

1. Press the **BACK** key to step back to the SENSOR FLOW menu. Turn the **Dial** to choose the TOTALIZER option. Press the **Dial** to select.

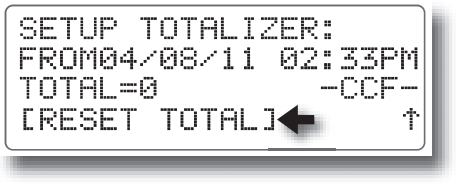


2. The GAL (gallons) display units option is chosen by default. To select an alternate unit of measure, press the **Dial** to select, then turn the **Dial** to display the preferred option. Press the **Dial** to enter the selection.



Note: *The TOTAL will be automatically converted to the equivalent unit measure.*

3. Turn the **Dial** to choose RESET TOTAL. Press the **Dial** to reset the totalizer to **0**. The previous date and time will is updated to the current date and time. All data will be logged beginning at this time and date.



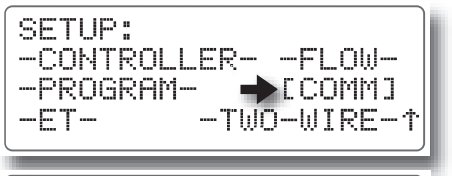
Setting the Communications Options

Note: *The iCentral ™ interface board and external antenna must be installed to access and utilize the following controller functions.*

The Eagle Plus can take full advantage of the iCentral capabilities when equipped with the optional iCentral interface board and antenna. Additional functions include, remote programming, ZipET ™ evapotranspiration data, and the Smart Alerts™ , comprehensive alert messaging.

The straight-forward communication setup options include: Enable, Disable, and Test. The communications test checks signal strength and two-way communications with the iCentral. The 60-second test is monitored as it progresses. When testing has concluded, the relative signal strength is rated as: Excellent, Good, Fair, Poor, or None. In addition, a CSQ value from 0–32 is provided.

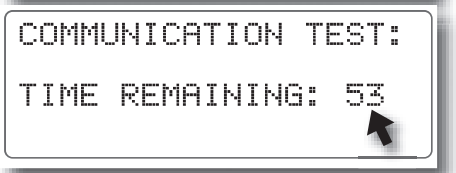
1. Press the **SETUP** key to display the SETUP menu. Turn the **Dial** to choose COMM.

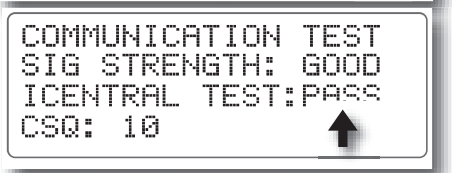


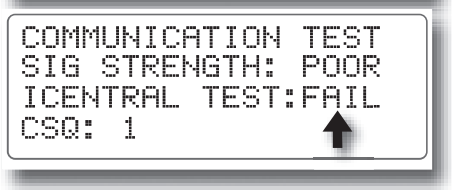
2. Press the **Dial** to display the SETUP COMMUNICATION screen. The ENABLED option is chosen by default.

3. Turn the **Dial** to select START, then press the **Dial** to initiate the test.

4. The count-down screen will be displayed.
   - To terminate the test, press the **BACK** key.
   - The results will be displayed at the conclusion.







Note: *If the signal strength is NONE or POOR, and/the or the CSQ number is low, and/or FAIL is indicated, contact Rain Master technical support at 1-800-777-1477 for recommended troubleshooting procedures.*

Two-Wire Decoder System Setup

When the Eagle Plus is equipped with the Two-Wire Decoder interface board, access to the Two-Wire setup menu options become available. The setup functions for the Two-Wire Decoder system include:

- **Program Decoder –** Provides Decoder programming and setup options.
- **Show Stations –** Retrieves and displays current station address information.
- **Test –** Provides multiple test functions for Decoder station address verification.

Note: *If the decoder board is not installed or a hardware malfunction has occurred, the prompt screen shown at right will be displayed.*

```
SETUP TWO-WIRE
TWO-WIRE BOARD NOT
FUNCTIONING OR NOT
PRESENT.
```

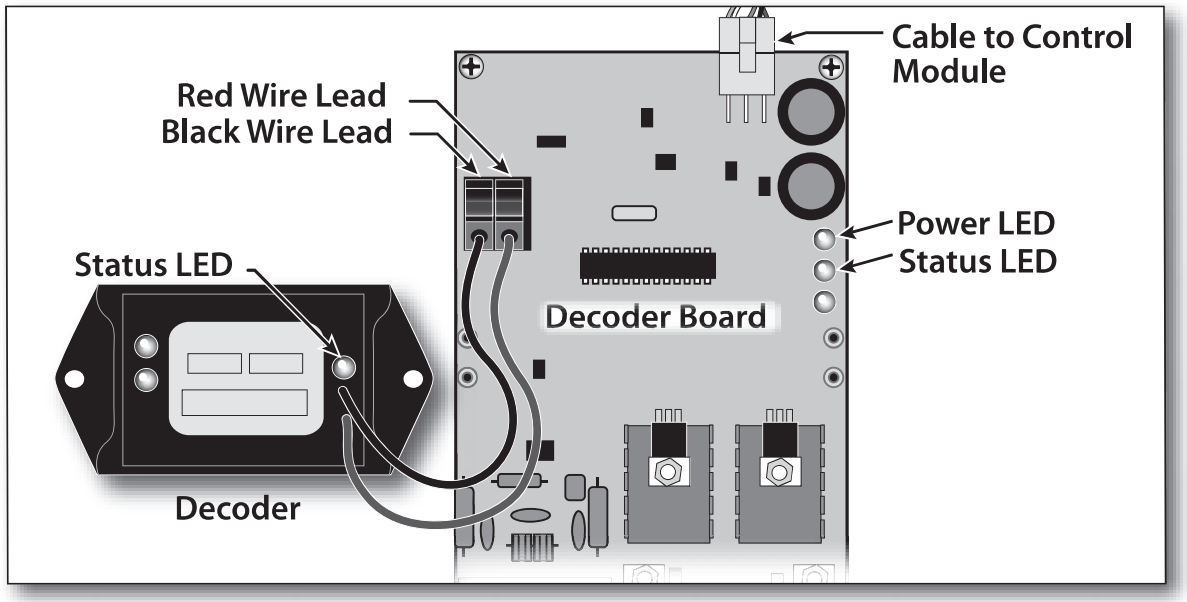
Programming the Decoders

Rain Master decoders are available in 1-, 2-, and 4-station output models, and as shipped from the factory, have no pre-defined station assignments. To be recognized by the Eagle Plus controller, each station must be addressed as either a station number from 0 – 200, a Master Valve, or a Pump control. To facilitate decoder programming, a quick-connect terminal block is provided on the Two-Wire Decoder board.

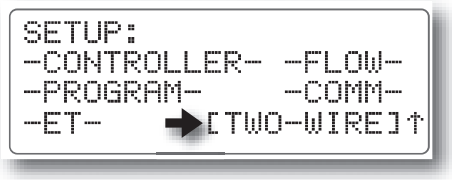
Note: *The Eagle Plus enables the decoders to be temporarily connected and programmed without disconnecting power. Confirm the Power LED on the Decoder board is illuminated before continuing. If it is not illuminated, confirm that power is on and the Decoder board is properly connected to Control Module.*

⚠ CAUTION: Red and Black decoder wires must be connected to the decoder board terminal block in the correct orientation. Damage to the decoder and/or controller may result from crossing the wire connection.

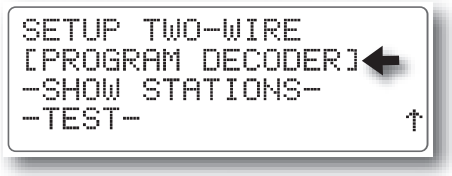
1. Insert the red and black decoder leads into the corresponding quick-release terminal connectors as indicated below.



2. Press the **SETUP** key to display the SETUP menu. The CONTROLLER menu item is chosen by default. Turn the **Dial** right five steps to choose the TWO-WIRE menu option, then press the **Dial** to select.

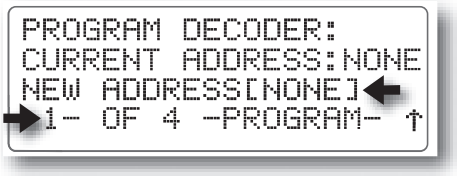


3. The SETUP TWO-WIRE menu screen is displayed with PROGRAM DECODER option chosen by default. Press the **Dial** to select. Status LEDs on the Decoder Board and Decoder should begin blinking to confirm communication.

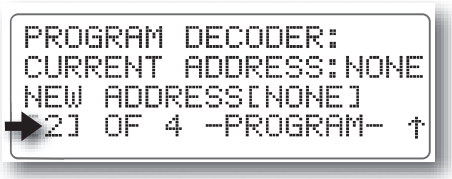


Note: *If the Decoder Status LED does not illuminate periodically, confirm the red and black lead wires are properly connected to the terminal block. A faulty decoder is indicated if the Status LED does not illuminate.*

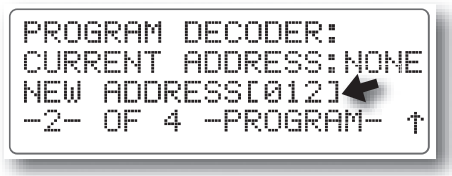
4. The PROGRAM DECODER screen is displayed with the NEW ADDRESS option chosen. ***Note:*** *In this example, NONE indicates that decoder station slot 1 (of 4 available slots) has no programmed address.*



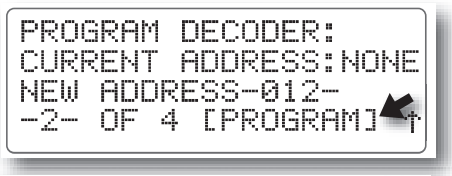
5. To select a different decoder station slot number, turn the **Dial** to choose the slot number, then press the **Dial** to select. Turn the **Dial** to display the preferred number, then press the **Dial** to enter the selection.

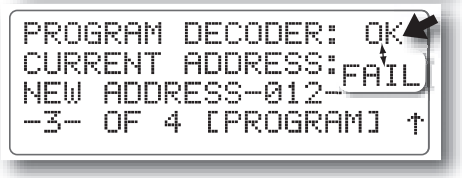


6. Press the **Dial** to choose NEW ADDRESS. Turn the **Dial** to display the preferred address (001–200, MV, PMP or NONE), then press the **Dial** to enter. *In this example, station number 12 will be assigned to decoder station slot 2 of 4.*



7. Turn the **Dial** to choose PROGRAM, then press the **Dial** to begin the procedure. Within a few moments the results will be displayed. If programming was successful, OK will be momentarily displayed in the upper right corner, and the next decoder station number in sequence will be displayed. If programming was not successful, FAIL will be displayed and an Alarm will be generated.





Note: *To clear the Alarm, refer to Resolving Alarms, page* ***52****.*

8. Repeat the programming procedure for all decoder stations as required.

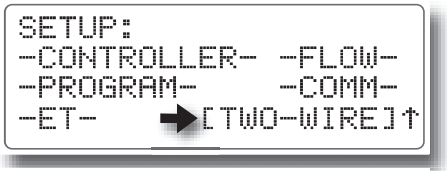
Testing the Two-Wire Decoder System

The Two-Wire Decoder system test feature provides methods of testing the decoder installation to easily verify communication, station assignment and operating status and log the results. The following test options are available:

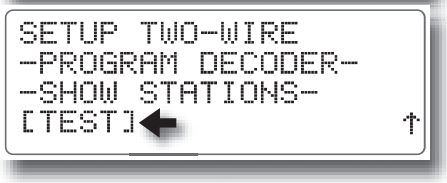
- **Single Station**: Tests a selected Decoder station number.
- **Find Decoders**: Searches communication path for all responding Decoders.
- **All Programmed**: Tests all decoder stations (1–200, Master Valve or Pump) that have been defined within a program.
- **All Stations**: Tests all decoder stations, Master Valve and Pump controls.
- **Alarm Logging Options**: Test results can be logged as Alarms indicating Pass and/or Fail as selected.
  - •• **Log Fail Alarm**: When selected, a decoder station that fails the test criteria will be logged.
  - •• **Log Pass Alarm**: When selected, a decoder station that passes the test criteria will be logged

Single Station Test

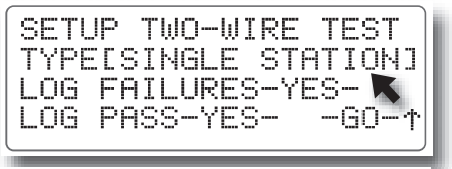
1. Press the **SETUP** key to display the SETUP menu. Turn the **Dial** to choose the TWO-WIRE option, then press the **Dial** to select.



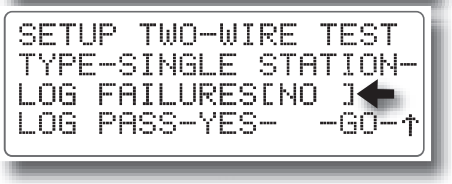
2. The SETUP TWO-WIRE menu screen is displayed with the PROGRAM DECODER option chosen by default. Turn the **Dial** to choose the TEST option, then press the **Dial** to select.



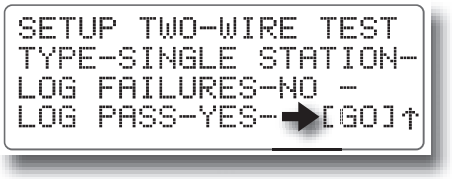
3. The SETUP TWO-WIRE TEST screen is displayed with SINGLE STATION test type chosen by default.



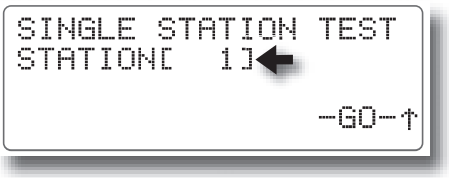
4. Turn the **Dial** to choose the LOG FAILURES option. To change the current setting, press the **Dial** to select, then turn the Dial to display the preference. Repeat this procedure for the LOG PASS option as preferred.



5. Turn the **Dial** to choose GO, then press the **Dial** to continue.

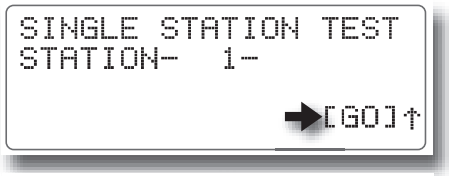


6. The SINGLE STATION TEST screen will be displayed with STATION 1 chosen by default.
   To change the station selection, press the **Dial** to select, turn the **Dial** to display the preferred station number, then press the **Dial** to enter.



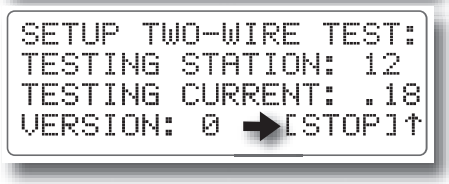
7. Turn the **Dial** to choose GO, then press the **Dial** to start the test.

   Note: *The test will take approximately 3 minutes.*

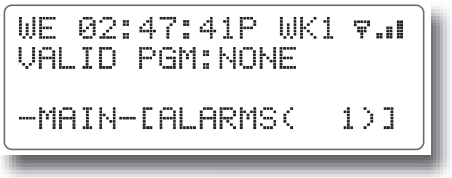


8. The test results will be displayed. Based on the Alarm Log options selected, an alarm may be generated.

   Note: *To pause or stop the test, turn the **Dial** to choose STOP, then press the **Dial** to pause the test. To resume the test, press the **Dial** again. To terminate the test, press the **BACK** key.*

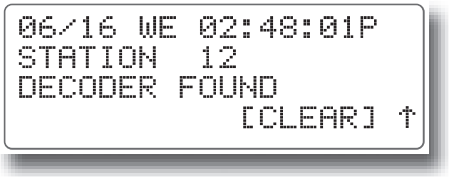


9. Press the **HOME** key to return to the **Home** screen. Turn the **Dial** to choose ALARMS, then press the **Dial** to review the Alarm screen.



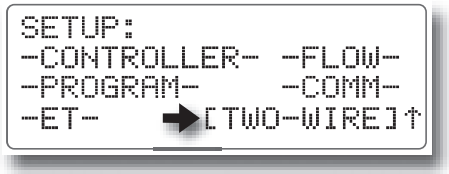
10. Turn the **Dial** to choose CLEAR, then press the **Dial** to clear the alarm.

    Note: *Clearing alarms removes the screen prompts and turns off the Alarm LED indicator. Logged alarm information is accessed from the REVIEW menu screen.*

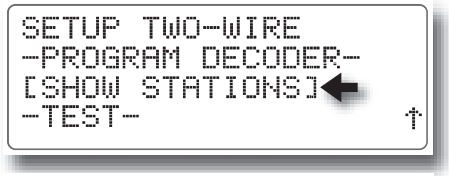


Find Decoders Test

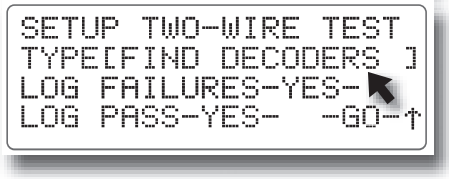
1. Press the **SETUP** key to display the SETUP menu. Turn the **Dial** to choose the TWO-WIRE option, then press the **Dial** to select.



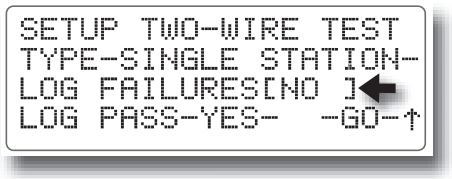
2. The SETUP TWO-WIRE menu screen is displayed with the PROGRAM DECODER option chosen by default. Turn the **Dial** to choose TEST, then press the **Dial** to select.



3. The SETUP TWO-WIRE TEST screen is displayed with SINGLE STATION test type chosen by default. Press the **Dial** to select, then turn the **Dial** to display FIND DECODERS.

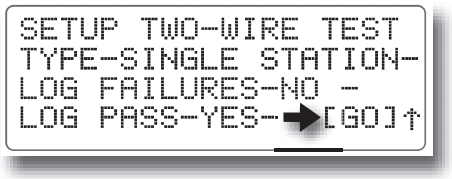


4. Turn the **Dial** to choose the LOG FAILURES option. To change the current setting, press the **Dial** to select, then turn the **Dial** to display the preference. Repeat this procedure for the LOG PASS option as preferred.



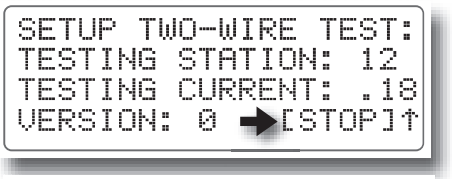
5. Turn the **Dial** to choose GO, then press the **Dial** to begin the test.

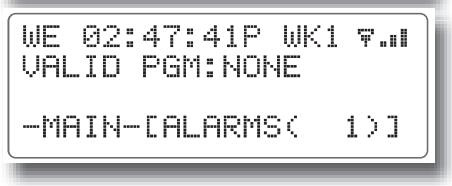
   Note: *The test will take approximately 3 minutes.*



6. The test results will be displayed. Based on the Alarm Log options selected, an alarm may be generated.

   Note: *To pause or stop the test, turn the **Dial** to choose STOP, then press the **Dial** to pause the test. To resume the test, press the **Dial** again. To terminate the test, press the **BACK** key.*





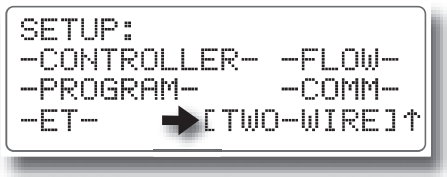
7. Press the **HOME** key to return to the **Home** screen. Turn the **Dial** to choose ALARMS, then press the **Dial** to review the Alarm screen.

All Stations Test

Note: *To run the ALL STATIONS test, refer to the FIND DECODERS test procedure on the previous page. Select the ALL STATIONS option in lieu of FIND DECODERS in step 3.*

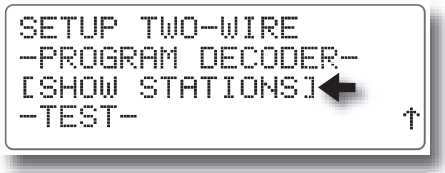
Show Stations

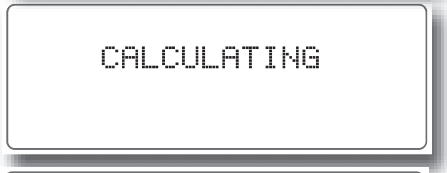
1. Press the **SETUP** key to display the SETUP menu. Turn the **Dial** to choose the TWO-WIRE option, then press the **Dial** to select.



2. The SETUP TWO-WIRE menu screen is displayed with the PROGRAM DECODER option chosen by default. Turn the **Dial** to choose SHOW STATIONS, then press the **Dial** to begin.

   Note: *The test will take approximately 3 minutes.*





3. The controller will search for all stations assigned to any of the 16 watering programs. The results will be display on one or more sequential screens Press the **NEXT** and **BACK** keys to access and review the screens.

Programming for Automatic Operation

The Eagle Plus enables you to define up to 8 automatic programs for a conventional control system, or up to 16 programs for a decoder system.

A program is comprised of the following three primary operating parameters that must be established to create a valid program:

- **An active day schedule**
- **A program start time**
- **A station run time.**

The operating options selected within the various Setup menus are applied to the programs to further define and regulate controller operations.

⚠ **IMPORTANT: A program becomes valid only after all three primary operating parameters have been entered. Once a valid program is entered, all user-defined program values will remain intact. Failing to enter all three parameters correctly, or prior to the display timing-out, will invalidate that program. It is recommended to always confirm the valid program status whenever creating or modifying programs.**

Creating a New Program

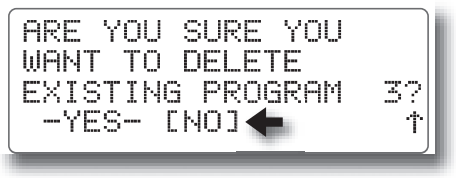
Setting a Two-Week Watering Schedule

1. Press the **PROGRAM** key to display the PROGRAM menu. The MODIFY menu item is chosen by default. Turn the **Dial** to choose the NEW option, then press the **Dial** to select.

2. The NEW PROGRAM screen is displayed with the program number chosen by default. To change the program number assignment, press the **Dial** to select, then turn the **Dial** to change the program number. Press the **Dial** to enter the selection.

3. Turn the **Dial** to choose CREATE PROGRAM, then press the **Dial** to select.

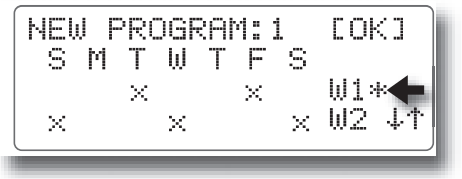
Note: *If the program number selected is already an established (valid) program, a prompt screen will be displayed. Selecting YES will overwrite the existing program; selecting NO will leave the program unchanged. Repeat Step 2 and 3 to select an available program number, then continue to Step 4.*



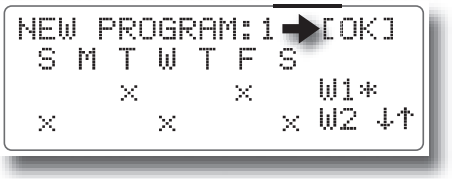
4. The two-week schedule screen is displayed with S (Sunday) of W1 (Week 1) chosen by default.

5. To select the day, press the **Dial** (an X will appear), or to skip the day, turn the **Dial** to the preferred day, then press the **Dial** to select. ***Note:*** *Pressing the* ***Dial*** *repeatedly toggles the selection ON and OFF.*

6. Continue to define the remaining days of the two-week schedule in this manner.
   Note: *The asterisk next to W1 or W2 indicates the current week of the two-week watering cycle and is not pertinent to the programming procedure.*



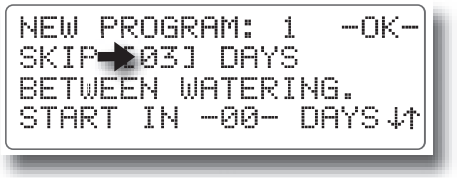
7. When the two-week schedule is set, select OK, or press the **NEXT** ▽ key to display the START TIME setup screen.



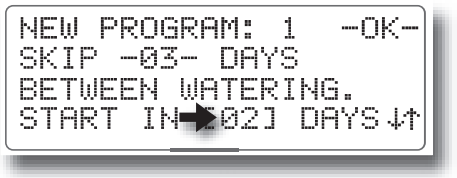
Setting a Skip-Day Watering Schedule

Note: *The* ***Skip Days*** *scheduling option will not be available for the selected program unless it is initially assigned to the program within the* ***Program Setup*** *menu>****Type*** *options. See page 20 for* ***Skip Day*** *information and setup procedures.*

1. Turn the **Dial** to choose the SKIP DAYS value. Press the **Dial** to select, then turn the **Dial** to display the number of days between active watering days (0–30). Press the **Dial** to enter.
   Note: *To water every day, select 0. To water every-other-day, select 1, etc.*



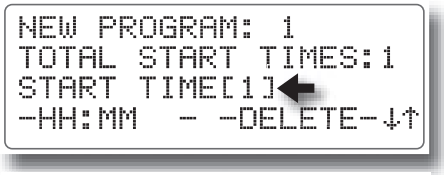
2. Turn the **Dial** to choose the START delay value. Press the **Dial** to select, then turn the **Dial** to display the number of days before starting the skip day cycle (**0–30**). Press the **Dial** to enter.
   Note: *To start the watering day cycle today select 0; to start tomorrow select 1, etc.*



3. When the SKIP DAY setup values are set, select OK, or press the **NEXT** ▽ key to display the START TIME setup screen.

Setting Program Start Times

1. Each program can have up to 8 start time assignments. START TIME 1 is selected by default.



2. Turn the **Dial** to choose HH:MM. The start time will default to 12:00AM with the hour digits selected (blinking).

3. Turn the **Dial** to set the start time hour, then press the **Dial** to enter. The minutes digits will begin blinking. Set the start time minutes and AM/PM designator in the same manner.

4. START TIME 2 is prompted as START TIME 1 is entered. Continue to assign up to 8 start times for this program as preferred.

5. When finished, choose and select OK, or press the **NEXT** ▽ key to display the STATION RUN TIME setup screen.

Note: *To clear the displayed start time, choose and select the DELETE option.*

Assigning the Station Run Time

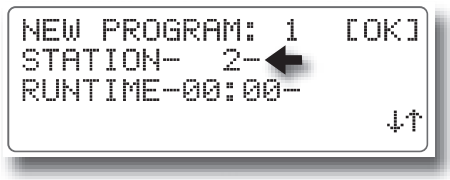
Note: *If the CYCLE AND SOAK option was selected for the program, continue at* ***Setting a Cycle and Soak Station Run Time*** *on the next page.*

1. STATION 1 is selected by default. To change the station number, press the **Dial** to select. Turn the **Dial** to display the preferred station number, then press the **Dial** to enter the selection.

2. Turn the **Dial** to choose the station run time value, then press the **Dial** to select. The hours digit is selected and will begin blinking.

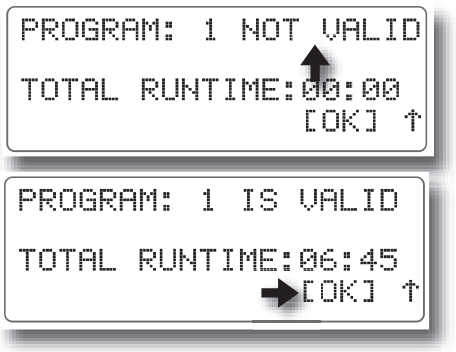
3. Turn the **Dial** to display the preferred run time hours (0–23), then press the **Dial** to enter. The minutes digits will be selected. Turn the **Dial** to select the run time minutes (0–59), then press the **Dial** to enter.

4. The next station number in sequence will be prompted. Continue to assign additional stations to this program as preferred.



5. Press the **NEXT** ▽ key to display the PROGRAM summary screen.

   Note: *If the program is not valid, press the* ***BACK*** △ *key to recall, correct, and/or adjust the various program setup parameters as necessary. When the summary screen indicates that the program is valid, choose and select OK.*



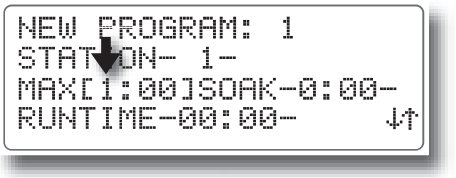
Setting a Cycle and Soak Station Run Time

Note: *The Cycle and Soak scheduling option will not be available for the selected program unless it is initially assigned to the program within the PROGRAM SETUP> TYPE menu. See page 20 for the Cycle and Soak setup procedure.*

1. Station 1 is selected by default. To change the station number, press the **Dial** to select. Turn the **Dial** to display the preferred station number, then press the **Dial** to select.

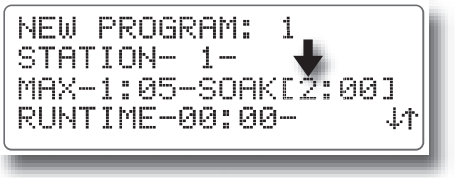
   ⚠ **Important: Any station assigned to the program with a 0:00 MAX or SOAK time value will not operate during the program watering cycle.**

2. Turn the **Dial** to choose the MAX run time value, then press the **Dial** to select. The hour digit is selected and will begin blinking. Turn the **Dial** to display the run time (0–9 hours), then press the **Dial** to select.

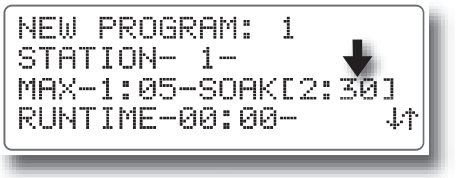


3. The minutes digits will be selected (blinking). Turn the **Dial** to select the run time minutes (0–59), then press the **Dial** to enter.

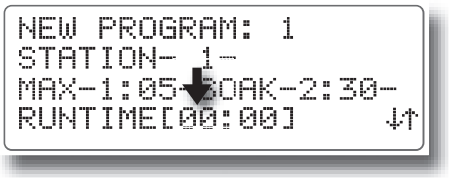
4. Turn the **Dial** to choose the SOAK time value, then press the **Dial** to select. The hour digit is selected and will begin blinking. Turn the **Dial** to display the soak time (**0–9** hours), then press the **Dial** to select.



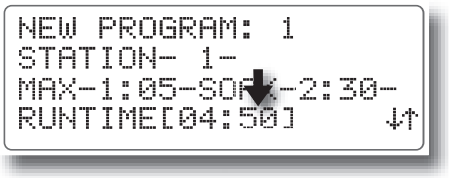
5. The minutes digits will be selected. Turn the **Dial** to select the RUN TIME minutes (0–59), then press the **Dial** to enter.



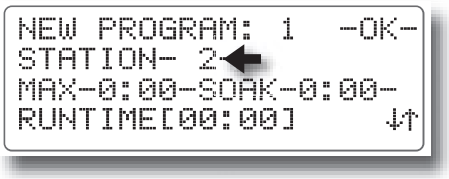
6. Turn the **Dial** to choose the RUN TIME value, then press the **Dial** to select. The hours digits are selected and will begin blinking. Turn the **Dial** to display the run time (**0–23** hours), then press the **Dial** to enter. The minutes digits will be selected.



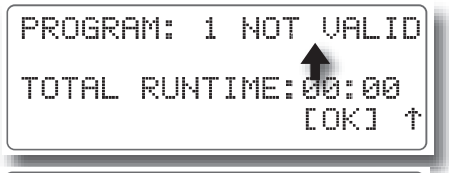
7. Turn the **Dial** to select the RUN TIME minutes (**0–59**), then press the **Dial** to enter the selection.



8. The next station number in sequence will be prompted. Continue to assign additional stations to this program as preferred. When finished, choose and select OK, or press the **NEXT** ▽ key to display the PROGRAM summary screen.



Note: *The Program summary screen enables you to quickly verify the status and total run time of the program. If the program is not valid, press the* **BACK** △ *key to recall, correct and/or adjust the various program setup parameters as necessary.*



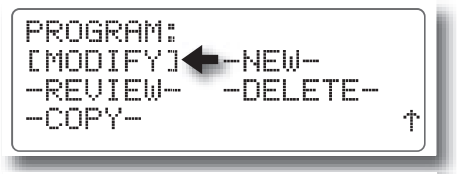
9. When finished, choose and select OK to complete the setup requirements for the selected program.

Modifying a Program

The Modify Program feature provides a convenient way to access and adjust any parameter of an established program including:

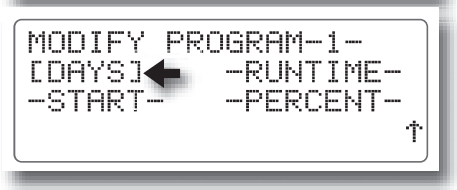
- **Days –** Two-Week and Skip Days schedules
- **Runtime –** Station run time assignment
- **Start –** Start time assignments
- **Percent –** Run Time adjustment by percentage for all assigned stations.

1. Press the **PROGRAM** key to display the PROGRAM menu. The MODIFY menu item is chosen by default. Press the **Dial** to select.



2. The program number is chosen by default. To change the program number assignment, press the **Dial** to select, then turn the **Dial** to display the preferred number. Press the **Dial** to enter the selection.

3. Turn the **Dial** to choose a portion of the program to be modified. Press the **Dial** to display the initial modification screen.



Note: *The PROGRAM setup options defined for DAYS, STATION RUN TIMES and START TIMES are utilized for the modification procedures. To assist in the modification process, refer to the corresponding PROGRAM SETUP procedures, beginning on page 36*

Adjusting Program Percent Value

To account for changes in season or weather, the total operating duration for any established program cycle time can be easily increased or decreased by a percentage factor from 0%–300%, in 1% increments. The run time for each station assigned to the program will be modified by the percentage change.

⚠ **IMPORTANT: Increasing the program cycle duration can result in a conflict with other scheduled watering programs and/or the defined Water Window duration. The recommended method of increasing run time by percentage is to make small, incremental changes while monitoring the results over a period of time.**

1. From the MODIFY PROGRAM menu screen, turn the **Dial** to choose PERCENT, then press the **Dial** to select.

2. Turn the **Dial** to choose the PERCENT value. Press the **Dial** to select, then turn the **Dial** to display the preferred percent value (0–300). Press the **Dial** to enter the selection.

3. Repeat procedure for each program as needed.

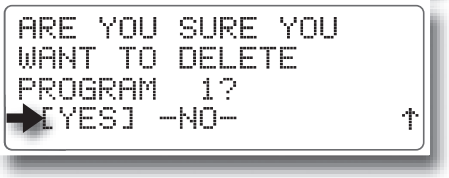
Deleting a Program

The Delete Program feature provides a convenient method of accessing and clearing all established operating parameters from a specified program.

1. Press the **PROGRAM** key to display the PROGRAM menu. Turn the **Dial** to choose the DELETE option, then press the **Dial** to select.

2. Turn the **Dial** to choose the PROGRAM number. Press the **Dial** to select, then turn the **Dial** to display the PROGRAM number to delete. Press the **Dial** to enter the selection.

3. A decision screen will be prompted with the YES option chosen. To complete the Delete function, press the **Dial** to enter YES. To abort the Delete function and return to the previous screen, choose and select the NO option.



Copying a Program or Runtime

The Copy function provides a convenient method of transferring all program setup parameters* from one program to another, or to apply a specific station run time to multiple stations. When setting up multiple programs with similar attributes, the copy functions will not only reduce the setup time by eliminating redundant tasks, but will help ensure consistency throughout the overall watering program setup structure.

**Note:* *Program attributes include: watering day schedule, station run time, cycle and soak time, start times and percent adjust factor.*

To Copy a Program:

1. Press the **PROGRAM** key to display the PROGRAM menu. Turn the **Dial** to choose the COPY option, then press the **Dial** to select.

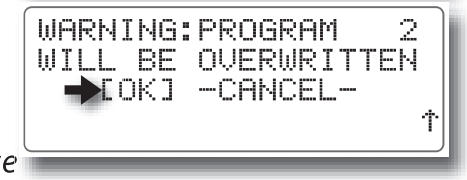
2. Turn the **Dial** to choose the **Copy Program** option, then press the **Dial** to select.

3. Press the **Dial** to choose the COPY PROGRAM number. Press to select, then turn the **Dial** to display the PROGRAM number to be copied from. Press the **Dial** to enter the selection.

4. Turn the **Dial** to choose the TO PROGRAM number. Press to select, then turn the **Dial** to display the recipient program number. Press the **Dial** to enter the selection.

5. Turn the **Dial** to choose OK, then press the **Dial** to enter the selection.

***Note:** A decision screen will be prompted with the OK option chosen by default.*
To complete the Copy function, press the Dial to begin the Copy function. To abort the Copy function and return to the previous screen, choose and select the CANCEL option.



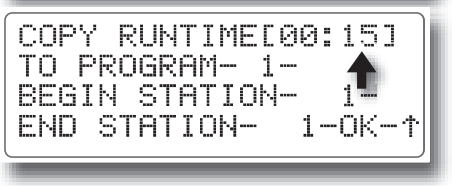
6. Upon completion of the copy function, the initial COPY FUNCTION screen will be displayed. Repeat the procedure for additional programs as preferred.

To Copy a Run Time:

1. Press the **PROGRAM** key to display the PROGRAM menu. Turn the **Dial** to choose the COPY option, then press the **Dial** to select.

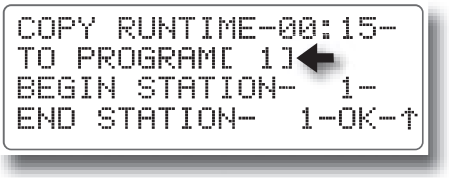
2. Turn the **Dial** to choose the COPY RUNTIME option, then press the **Dial** to select.

3. The COPY RUN TIME screen is displayed with the run time value chosen. Press the **Dial** to select, then turn the **Dial** to display the preferred run time hours (0–23). Repeat to select the run time minutes (0–59).

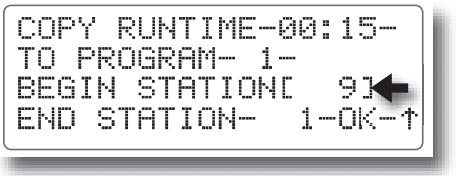


4. Turn the **Dial** to choose TO PROGRAM. Press the **Dial** to select, then turn the **Dial** to display the recipient program number. Press the **Dial** to enter the selection.

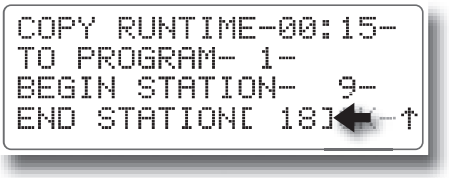
   Note: *All station numbers, inclusive from the BEGIN and END station numbers entered, will receive the specified run time assignment.*



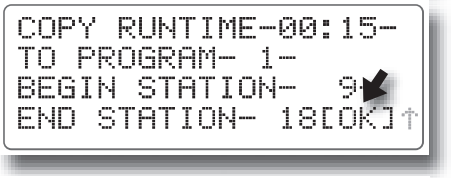
5. Turn the **Dial** to choose BEGIN STATION. Press the **Dial** to select, then turn the **Dial** to display the preferred beginning station number. Press the **Dial** to enter the selection.



6. Turn the **Dial** to choose END STATION. Press the **Dial** to select, then turn the **Dial** to display the preferred station number. Press the **Dial** to enter the selection.



7. Turn the **Dial** to choose OK, then press **Dial** to begin the Copy function.



8. Upon completion of the copy function, the initial COPY FUNCTION screen will be displayed. Repeat the procedure for additional programs as preferred.

Review Mode

The Review mode feature provides a convenient method of accessing all current controller program structure information, as well as historical records of prior irrigation activity, flow rates and ET values and wireless communications activity.

The REVIEW menu options include direct **Program** setup parameters, historical data logs for **Irrigation** activity, **Alarm** events, **Flow** rates, **ET** values, iCentral **Communication** protocol data and **S/W** (controller configuration).

Note: *All information displayed on the Review screens is provided for reference and evaluation only. No changes or deletions to programming, operating, configuration or Alarm events can be made while the controller is in the Review mode.*

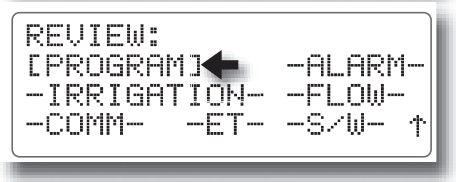
Program Review

The Program review screens, accessible from both the PROGRAM and REVIEW menus, access the following information for each irrigation program:

- **Total program run time duration**
- **Program run time Adjust % factor**
- **Active watering day schedule**
- **Total assigned start times**
- **Total assigned station numbers**
- **Individual station run time assignment**
- **Cycle and Soak duration time (when applicable)**

1. Press the **REVIEW** key to display the REVIEW menu. The PROGRAM option is chosen by default.

2. Press the **Dial** to select. The REVIEW PROGRAM screen is displayed with the PROGRAM number chosen. Press the **Dial** to select, then turn the **Dial** to display the preferred program number. Press the **Dial** to enter the selection.



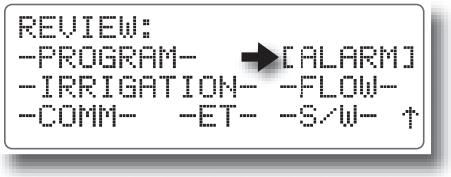
3. Press the **NEXT** and **Back** keys to navigate through the sequence of PROGRAM REVIEW screens.

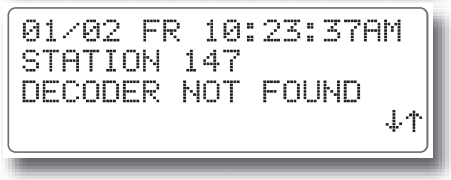
   Note: *The PROGRAM number option is provided on the top line of each review screen to access information for any program as preferred.*

Alarm Review

The alarm event archive will retain a maximum of 220 records. All alarm events are stored in chronological first-in, first-out order. When the archive reaches capacity, the oldest event record drops off as a new record enters.

1. Press the **REVIEW** key to display the REVIEW menu. The PROGRAM option is chosen by default. Turn the **Dial** to choose ALARM, then press the **Dial** to select.
2. The alarm archive screen will be displayed with a summary the last Alarm event. Press the **NEXT** and **BACK** keys to navigate through the sequence of review screens.

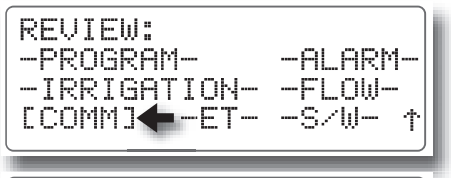




Communication Review Screens

Note: *COMM review information (listed on four consecutive screens) provides comprehensive technical data pertaining to wireless communications configuration and activity.*

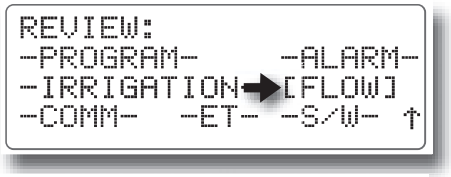
1. Press the **REVIEW** key to display the REVIEW menu. The PROGRAM option is chosen by default. Turn the **Dial** to choose COMM, then press the **Dial** to select.
2. Press the **NEXT** key to access the remaining review screen sequence.

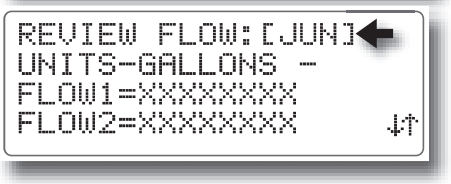


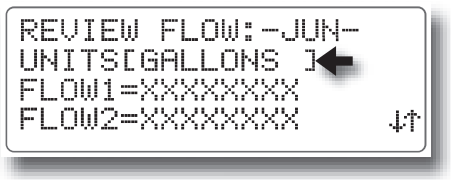
Flow Review

The Flow data archive retains up to 12 months of data records and compiled for review by month. The first of two review screens provides the selections for month and display units, with the total flow represented for each of two flow sensors. The second screen displays the sum total for both flow sensors.

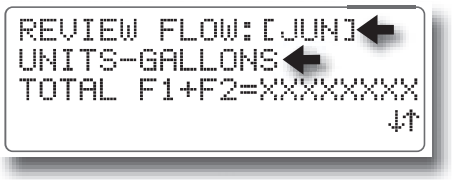
1. Press the **REVIEW** key to display the REVIEW menu. The PROGRAM option is chosen by default. Turn the **Dial** to choose FLOW, then press the **Dial** to enter the selection.
2. The initial REVIEW FLOW screen is displayed with flow data for the current month. To change the month, press the **Dial** to select, then turn the **Dial** to display the preferred month. Press the **Dial** to enter the selection.
3. To use alternate display UNITS, turn the **Dial** to choose UNITS. Press the **Dial** to select, then turn the **Dial** to display the preference. Press the **Dial** to enter the selection.







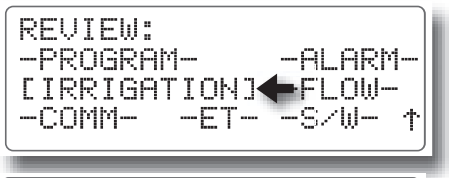
4. Press the **NEXT** key access the second review screen displaying the flow data total for both sensors (if applicable). The same preference options for MONTH and UNITS are provided.



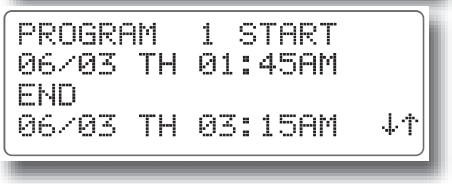
Irrigation Review

A record of the last 25 automatic irrigation programs are stored in chronological order with the latest event displayed first. When the archive reaches capacity, the earliest event record is deleted as a new event is recorded.

1. Press the **REVIEW** key to display the REVIEW menu. The PROGRAM option is chosen by default. Turn the **Dial** to choose IRRIGATION, then press the **Dial** to select.

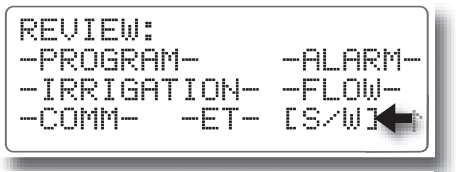


2. A summary of the most recent operation is displayed. Press the **NEXT** and **BACK** keys to navigate through the review screens.

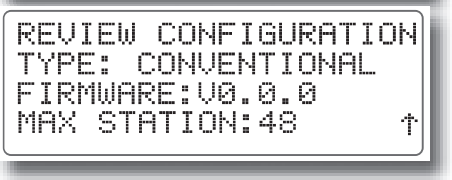


Configuration Review

1. Press the **REVIEW** key. Turn the **Dial** to choose S/W, then press the **Dial** to select.



A summary of the current configuration is provided.

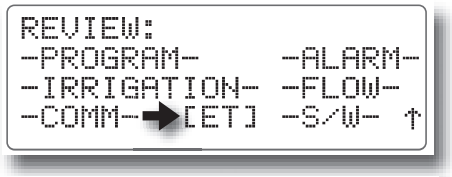


ET Review

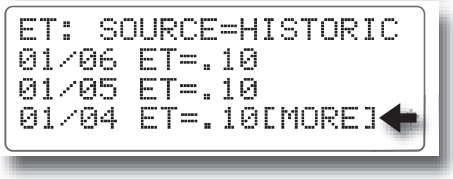
All ET data provided to the controller via the Internet or a Weather Center II weather station is retained for a rolling 14-day period.

The ET data received via the Internet (HISTORIC) is displayed in inches and sent to the controller at midnight of the current day. ET data received from the weather station (WXSTATION) is displayed as a number of pulses accumulated by the weather station since midnight.

1. Press the **REVIEW** key to display the REVIEW menu. The PROGRAM option is chosen by default. Turn the **Dial** to choose ET, then press the **Dial** to select.



2. Press the **Dial** to advance or press the **BACK** key to retract the review screen sequence.



Manual Watering Operations

The Eagle Plus features a full complement of manual control options enabling the irrigation system to be operated whenever and however supplemental watering is preferred.

The manual control options enable you to operate the system by:

- STATION – Operate an individual station for a specified run time.
- PROGRAM – Operate specified watering program(s).
- MULTI-STATION – Operate up to six stations simultaneously for a specified run time.
- TEST – Operate a specified group of stations in numeric sequence for a specified run time.

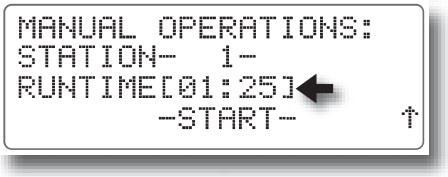
Note: *When stations or programs are selected for manual operation, the controller determines if there is an association with the Master Valve and/or Pump output. If an association exists with any selected station or program, the Master Valve and/or Pump output will be activated during the manual operation. In Multi-Station manual mode, the Master Valve and/or Pump output can be selected independently as preferred.*

Manual Station Operation

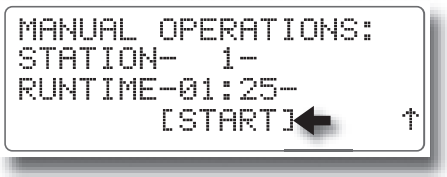
1. Press the **MANUAL** key to display the MANUAL OPERATIONS menu screen. The STATION option is selected by default.

2. Press the **Dial** to select. The STATION number option is chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preferred number. Press the **Dial** to select.

3. Turn the **Dial** to choose the RUNTIME value. Press the **Dial** to select, then turn the **Dial** to display the hour digits (00–23). Press the **Dial** to select, then turn the **Dial** to display the minutes digits (00–59). Press the **Dial** to enter the selection.

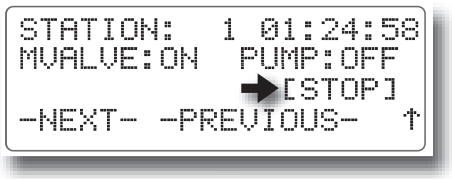


4. Turn the **Dial** to choose START, then press the **Dial** to begin the manual operation. The MANUAL OPERATIONS status screen will be displayed.



5. Three manual control options are provided on the status screen:
   - STOP - Toggles station operation OFF and ON.
   - NEXT - Turns off the current station, resets the run time, and turns on the next station in numeric sequence.
   - PREVIOUS - Turns off the current station and turns on the previous station in numeric sequence.

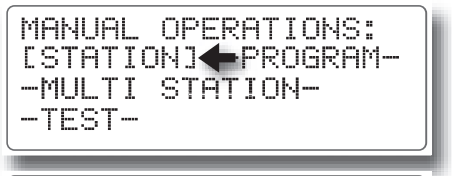
   Turn the **Dial** to choose the control option, then press the **Dial** to select.



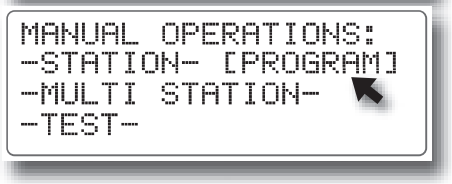
6. When finished, press the **HOME** key to return to the HOME screen.

Manual Program Operation

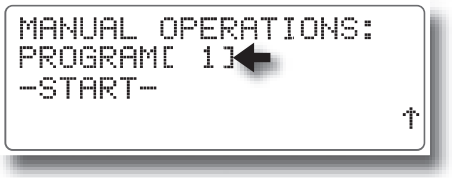
1. Press the **MANUAL** key to display the MANUAL OPERATIONS menu screen. The STATION option is selected by default.



2. Turn the **Dial** right one step to choose PROGRAM. Press the **Dial** to select. The next MANUAL OPERATIONS screen in sequence will be displayed



3. The PROGRAM number option is chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preferred number. Press the **Dial** to select.



4. Turn the **Dial** to choose START, then press the **Dial** to begin the manual operation. The MANUAL OPERATIONS status screen will be displayed.

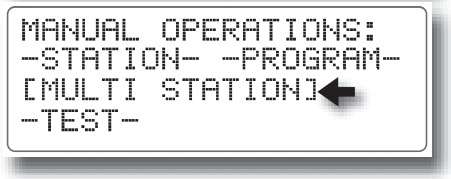
Note: *Selecting STOP displays a decision screen. Manual operation will not be terminated unless the YES option is selected. Selecting YES will terminate any additional programs in the queue. Selecting NO steps back to the status screen.*

5. When finished, press the **HOME** key to return to the HOME screen.

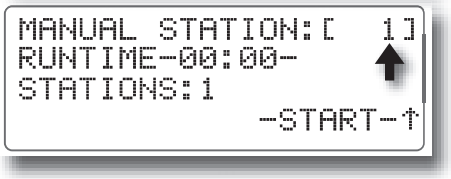
Manual Multi-Station Operation

1. Press the **MANUAL** key to display the MANUAL OPERATIONS menu screen. The STATION option is selected by default.

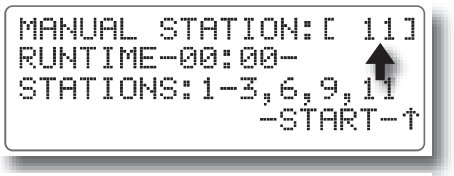
2. Turn the **Dial** right two steps to choose MULTI-STATION. Press the **Dial** to select. The next screen in sequence will be displayed.



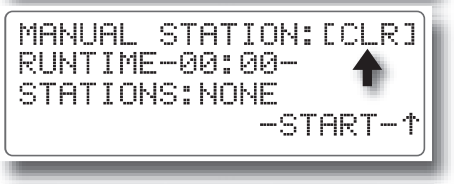
3. The MANUAL STATION number is chosen by default. Press the **Dial** to select, then turn the **Dial** to display a STATION number, MVor PMP to be included in the operation. Press the **Dial** to enter the selection.



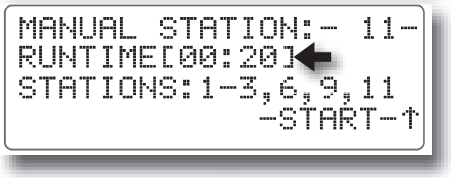
4. Repeat this procedure to include up to five additional outputs. The selections are displayed as they are entered.



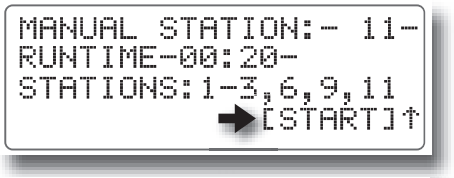
Note: *To clear the current station list, select CLR (located between PMP and 1) , then press the* ***Dial*** *to refresh the screen.*



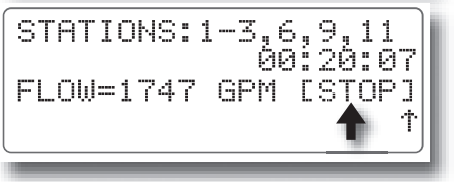
5. Turn the **Dial** to choose the RUNTIME value. Press the **Dial** to select, then turn the **Dial** to display the hour digits (00–23). Press the **Dial** to select, then turn the **Dial** to display the minutes digits (00–59). Press the **Dial** to enter the selection.



6. Turn the **Dial** to choose START, then press the **Dial** to begin the manual operation. The status screen will be displayed indicating the station list and the remaining run time. To terminate the operation, press the **Dial** to select STOP.



Note: *If flow sensing is operational, the indicated total flow will be displayed in the status screen.*



7. When finished, press the **HOME** key to return to the HOME screen.

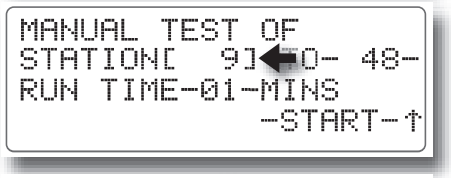
Manual Test Functions

The manual Test function enables a group of stations to be selected and operated in numeric order for a specified run time.

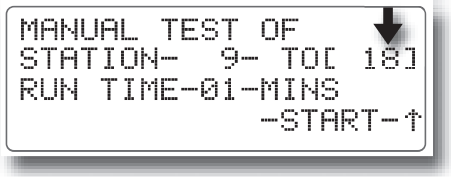
1. Press the **MANUAL** key to display the MANUAL OPERATIONS menu screen. The STATION option is selected by default.

2. Turn the **Dial** right three steps to choose TEST. Press the **Dial** to select. The next screen in sequence will be displayed.

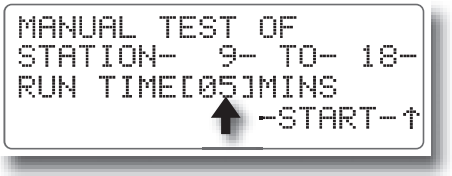
3. The beginning station number of the test group is chosen by default. Press the **Dial** to select, then turn the **Dial** to display the preferred station number. Press the **Dial** to enter the selection.



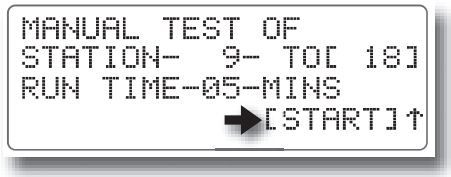
4. Turn the **Dial** to choose the group ending station number*. Press the **Dial** to select, then turn the **Dial** to display the preferred station number. Press the **Dial** to enter the selection.
   Note: *The ending station number will be limited to the controller station count configuration.*



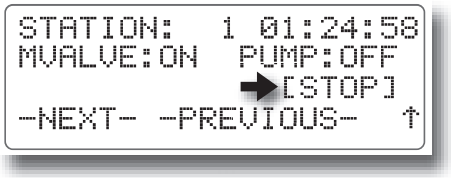
5. Turn the **Dial** to choose the RUN TIME value. Press the **Dial** to select, then turn the **Dial** to display the preferred run time duration from 01–59 minutes. Press the **Dial** to enter the selection.



6. Turn the **Dial** to choose START, then press the **Dial** to begin the manual operation.



7. Three manual control options are provided on the status screen:
   - STOP - Toggles station operation OFF and ON.
   - NEXT - Turns off the current station, resets the run time, and turns on the next station in numeric sequence.
   - PREVIOUS - Turns off the current station and turns on the previous station in numeric sequence.



   Turn the **Dial** to choose the control option, then press the **Dial** to select.
8. When finished, press the **HOME** key to return to the HOME screen.

Alarms Feature

The Alarms feature provides important, timely information regarding a condition or event that requires user attention. Whenever one or more alarm conditions occur, the Alarm LED indicator illuminates and is accompanied by a brief description of the root cause. An optional "chirp" tone can be enabled that will sound once every six seconds until the alarm notices have been cleared. Clearing alarm notices is important since a pending alarm condition may affect future automatic irrigation.

⚠ IMPORTANT: Depending on the cause of the alarm, clearing the alarm notification does not necessarily resolve or eliminate the root cause.

All alarm events are archived in a read-only buffer as they occur. The archive stores up to 220 Alarm events and cannot be emptied. Alarms are compiled in chronological order with the most recent event displayed first. Once the buffer is full, the oldest event drops off as a new one enters. The Alarm archive is accessed from REVIEW menu screen.

About Field Wire and Flow Alarms

Field Wire Fault Detection: The Eagle Plus can detect a short in the field wire and instantly turn off that station. The controller will automatically advance from the faulty station to the next programmed station during a watering cycle.

The display will report the fault condition any time a field wire fault occurs. Additionally, the Alarm LED indicator will illuminate and the audible alert (when enabled) will sound until all Alarms are cleared.

Flow Detection: When operating in conjunction with one or two system flow sensors, the controller will provide the following watchdog functions:

- Upon detection of **catastrophic high-flow**, the controller will trigger an alarm and respond automatically as follows:
  - Shut down all active stations.
  - Shut down a normally-open master valve.
  - Prohibit all program cycle starts until the alarm is cleared.
- Upon detection of **unscheduled flow**, the controller will trigger an alarm and respond automatically as follows:
  - Shut down a normally-open master valve.
  - Prohibit all program cycle starts until the alarm is cleared.
- Upon detection of flow outside the established **upper or lower flow limits**, the controller will trigger an alarm and respond automatically as follows:
  - Shut down the defective station and prohibit its operation until the alarm is cleared.
  - Advance to the next station in the program sequence.

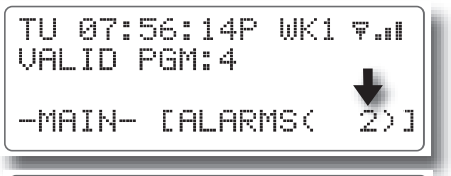
Clearing Alarms

Clearing an alarm notice will remove it from the HOME screen, turn off the alarm LED indicator and silence the audible alert tone. A record of the alarm event will be stored in alarm archive until automatically deleted.

Note: *The procedure for clearing alarms is slightly different if more than 10 alarm conditions are indicated. Use the following procedures to clear alarms as applicable.*

To clear 10 Alarms or less:

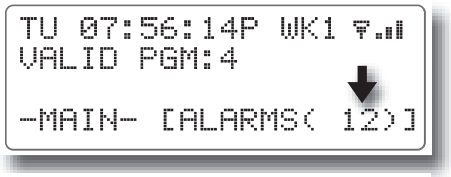
1. From the Home screen, turn the **Dial** to choose ALARMS, then press the **Dial** to select.



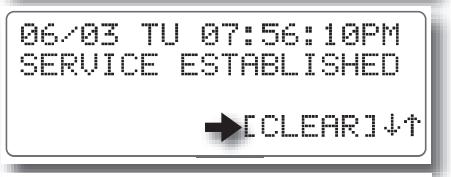
2. The first Alarm condition is displayed. Press the **Dial** to clear the Alarm. The next Alarm condition will be displayed. Press the **Dial** to clear each remaining Alarm.

To clear more than 10 Alarms:

1. From the Home screen, turn the **Dial** to choose ALARMS, then press the **Dial** to select.



2. The first Alarm condition is displayed. Press the **Dial** to clear the Alarm.



3. The next screen provides the option to clear one or all remaining Alarms. To clear all remaining Alarms, turn the **Dial** to choose CLEAR ALL ALARMS, then press the **Dial** to clear the Alarms.

Analyzing Alarms

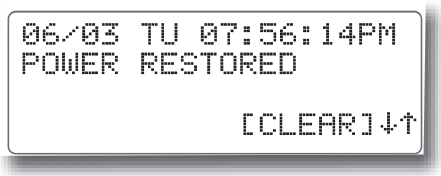
The table below represents a variety of alarm notices that may be encountered for various controller input and output hardware configurations.

◆ Generic	◆ Flow Sensor	◆ Two-Wire Decoder
1 – Power Restored	1 – Main Line Flow	1 – Two-Wire Board Failure
2 – Configuration Error	2 – Station Flow (over)	2 – Two-Wire Field Wire Overcurrent Detected
3 – Configuration Change	3 – Station Flow (under)	3 – Station (#) Decoder Not Found
4 – MV Sensor Board Failure	4 – Unscheduled Flow	4 – Station (#) Open Circuit At Solenoid
5 – Program (#) Start Time Falls Outside Water Window	**◆ Rain/Weather Sensor**	5 – Station (#) Short Circuit at Solenoid
6 – Electrical Short	1 – Rain Sensor: Wet	6 – Station (#) Decoder Comm Error
7 – Wireless Service Disruption	2 – Hourly Rain Limit Exceeded	7 – Two-Wire Decoder Programming Failure
8 – Output Board: (#) Failure	3 – Daily Rain Limit Exceeded	8 – Two-Wire Decoder Failure
	4 – Weather Station Out of Range	

To assist in quickly locating a particular condition, the alarms are categorized by controller hardware configuration. Use the listed number and description to locate the specific condition and accompanying relevant information from the following examples.

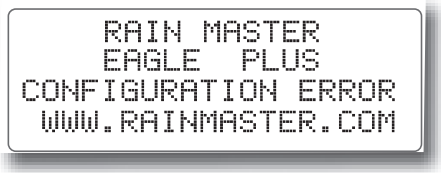
◆ Generic

1 – Power Restored



This Alarm occurs whenever power to the controller has been lost and restored, and is provided for reference only.

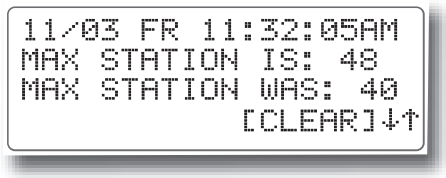
2 – Configuration Error



This alarm notice occurs if the controller has failed to detect if the controller is configured for conventional output or a two-wire decoder system.

- The controller will make multiple attempts to detect the output configuration.
- If a valid configuration is not detected, the controller will remain inoperable.
- Contact Rain Master technical service at 1-800-777-1477.

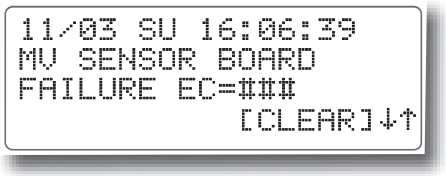
3 – Configuration Change



This alarm occurs each time a controller configuration change is detected including:

- A change in the station count is detected such as adding/removing an output board.

•4 – Master Valve, Pump or Sensor Error



This Alarm indicates the Master Valve board has either failed or has data in it that is out or range or non-existent.

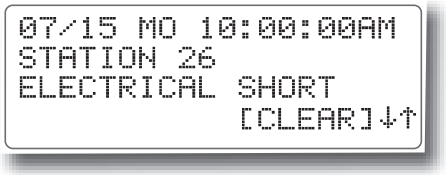
Note: *See Appendix C - Error Code Reference Chart on page 64 for additional EC information. Contact Rain Master technical service at 1-800-777-1477.*

5 – Program Start Time Falls Outside Water Window

This Alarm indicates that a start time for a specified program will fall outside the established limits of the Water Window.

- The controller will not start a program outside of Water Window and will terminate programs when the end of the Water Window is reached.

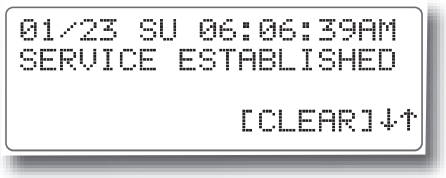
6 – Electrical Short



This Alarm indicates a short circuit or excessive current draw has been detected on a specific station output.

- The station will be turned off and will not operate in any subsequent program watering cycles until the alarm is cleared.
- The next programmed station in sequence will start.

7 – Wireless Service Disruption

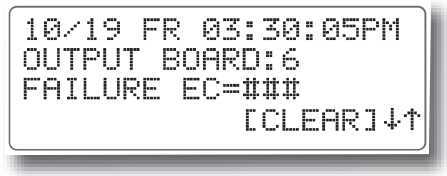


This alarm occurs whenever wireless service is established or re-established with the network carrier.

- A counter is associated with this Alarm that determines how many times this event must occur during the current day before the alarm is sent. The default value is 1, with a maximum value of 100 (established in the iCentral).

  Note: *If the value is set to 100, this Alarm will never be sent to iCentral again.*

8 – Output Board Failure



This Alarm indicates the controller has detected an output board failure while attempting to activate one or more station outputs on the board.

- The offending output board number is indicated.
  Note: *A two- or three-digit Failure EC code number is provided for use by customer service personnel only.*

◆ Flow Sensor Alarms

1 – Main Line Flow

This alarm indicates the main line flow has exceeded the established upper flow limit.

Once the controller detects this alarm:

- All currently operating stations will be shut down.
- No irrigation programs/stations will irrigate until this alarm is cleared. All non-irrigation programs shall remain operational.
- Shuts down a Normally-Open Master Valve.

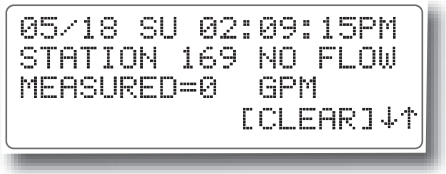
2 –Station High-Flow

This alarm indicates that a station flow has exceeded the established upper flow limit.

Once the controller detects this condition:

- The station will be turned off and restricted from running in any subsequent program watering cycles until the alarm is cleared.
- The next station in sequence assigned to the program will operate.

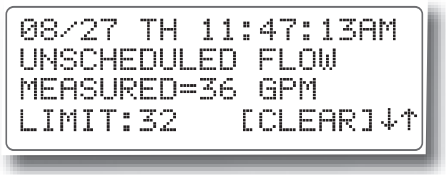
3 – Station No-Flow



This alarm indicates a station flow that is less than the established flow range.
Once the controller detects this condition:

- The station will be turned off.
- The next station (if any) of this program will operated.
- The station will be restricted from running in any subsequent program watering cycles until the alarm is cleared.

4 – Unscheduled Flow



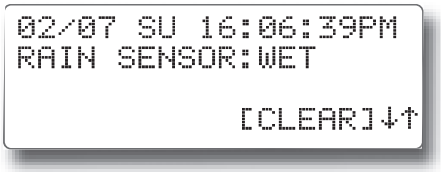
This alarm indicates that flow in the main line has been detected at an unscheduled time.

Once the controller detects this event:

- All operating programs are terminated.
- No scheduled programs will start until this alarm is cleared.
- The controller will not generate a another alarm for this event until the current Alarm is cleared.
- Shuts down a Normally-Open Master Valve.

◆ Rain Sensor or Weather Station Alarms

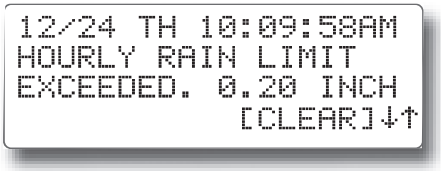
1 – Rain Sensor Status Change



This alarm occurs when the rain sensor status has changed from Dry to Wet, or Wet to Dry.

- When a WET condition is detected during a program watering cycle, the program will continue running, but all field outputs associated with the program will be turned off.
- The controller will continue running all scheduled watering programs, but no field outputs will be energized while the WET condition is detected.
- If the sensor status changes to DRY while the program is running, station output will be reinstated enabling any current station operation to resume for the duration of the remaining run time.

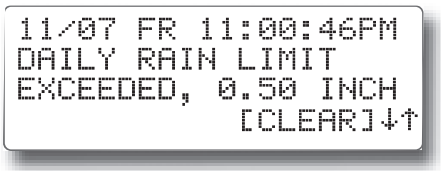
2 – Hourly Rain Limit Exceeded



This alarm occurs when the weather station determines that the established *hourly* rainfall limit has been exceeded.

- All watering programs will be suspended until the Rain Hold mode has been released.
- The controller will not generate another alarm for this event until the current alarm is cleared.

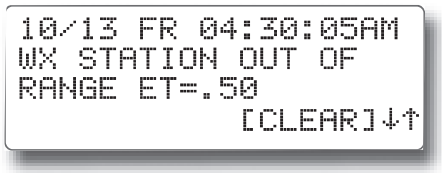
3 – Daily Rain Limit Exceeded



This alarm occurs when the weather station determines that the established *daily* rainfall limit has been exceeded.

- All watering programs will be suspended until the Rain Hold mode has been released.
- The controller will not generate another alarm for this event until the current alarm is cleared.

4 – Weather Station Out of Range

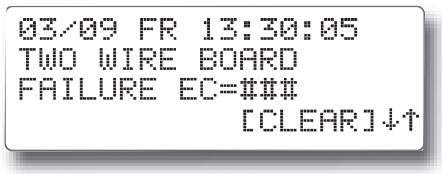


This alarm indicates the Weather Station is reporting the maximum ET rate has been exceeded and attention is required.

- This **Alarm** condition will not be reported more than once per day.
- The maximum value reported from a weather station is 0.50 maximum.
- The **Alarm** event occurs if the weather station reads more than the maximum 50 rate of pulses per 24-hour period.
- The historic ET value for the current month will be used for ET computation in lieu of the indicated value.

◆ Two-Wire Decoder System Alarms

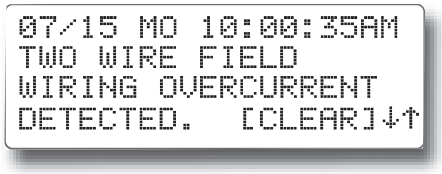
1 – Two-Wire Board Failure



This alarm indicates an error has occurred pertaining to the Two-Wire Decoder output board.

Note: *See Appendix C - Error Code Reference Chart on page 64 for additional EC information. Contact Rain Master technical service at 1-800-777-1477.*

2 – Two-Wire Field Wiring Over-current Detected

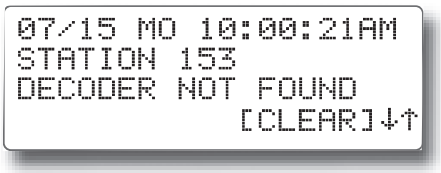


This alarm indicates higher than normal current load is detected on the decoder communication/power two-wire cable.

- All stations will be turned off.
- All subsequent watering programs will be canceled.

Note: *Wait two minutes before clearing alarm and retrying the two-wire system.*

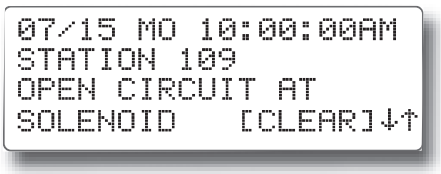
3 – Station (#) Decoder Not Found



This alarm event occurs if the controller attempts to operate a decoder station number that either does not exist or is not recognized by the controller.

- This alarm occurs exclusively during Test mode operations.

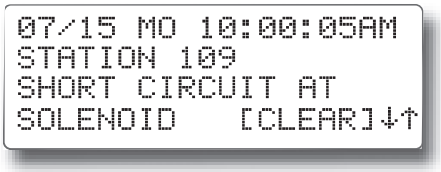
4 – Station (#) Open Circuit at Solenoid



This alarm indicates an open-circuit condition exists on the specified decoder station solenoid connection.

- The station will be turned off, and the next station in sequence will start.
- The controller will not attempt to operate the station until the alarm is cleared.

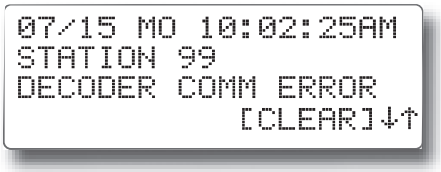
5 – Station (#) Short Circuit at Solenoid



This alarm indicates a short-circuit condition exists on the specified decoder station solenoid connection.

- The station will be turned off, and the next station in sequence will start.
- The controller will not attempt to operate the station until the alarm is cleared.

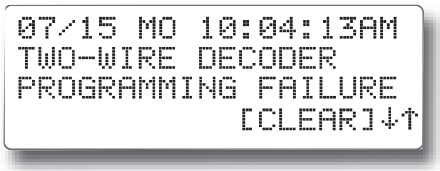
6 – Station (#) Decoder Comm Error



This alarm indicates the controller cannot communicate successfully with the specified decoder station.

- The alarm will be reported each time the controller attempts to operate the station.
- This alarm condition is not indicated during Test mode operations.

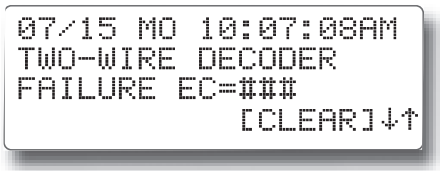
7 – Station (#) Decoder Programming Failure



This alarm is recorded during the decoder programming process indicating an error occurred, preventing the decoder from being successfully programmed.

- The alarm will be reported each time programming the decoder is attempted.

8 – Station (#) Decoder Failure



This alarm indicates the two-wire decoder system is inoperable.

- The alarm will be reported each time programming the decoder is attempted.

Note: *See Appendix C - Error Code Reference Chart on page 64 for additional EC information. Contact Rain Master technical service at 1-800-777-1477.*

Appendix A - General Specifications

Cabinet Dimensions:

- Wall Mount: 11″ W x 16″ H x 5.625″ D (27,9cm W x 40,6cm H x 14,29cm D)
- Pedestal Mount:
  PSB: 16.5″ W x 38″ H x 17.25″ D (41,9cm W x 96,5cm H x 43,8cm D)
  SPED: 16″ W x 34″ H x 16″ D (40,6cm W x 86,4cm H x 40,6cm D)

Temperature Range:

- Operating: +14°F to +140°F (-10°C to +60°C)
- Storage: -22°F to +149°F (-30°C to +65°C).

Power Specifications:

- Internal Transformer, Class 2, UL Listed, CSA Certified (or equivalent)
  Input: 120 VAC ± 10%, 50/60 Hz
  Output: 24 VAC ± 10%, 50/60 Hz
- Maximum Load Per Station: 0.5A @ 24 VAC @ 77° (25°C)
- Maximum Load Per Master Valve: 0.5A @ 24 VAC @ 77°F (25°C)
- Maximum Load Per Pump Output: 0.5A @ 24 VAC @ 77°F (25°C)
- Total Maximum Load: 1.5A @ 24 VAC.

Output Surge Protection (excluding 2-wire decoder models):
6KV common, 1KV normal.

Controller Memory:

The Eagle Plus utilizes NVRAM (Non-volatile Random Access Memory) technology to protect all user-defined program and setup data from loss in the event of a power failure. Time and date settings will be maintained without power for approximately 30 days.

Appendix B - Flow Sensor Specifications

The Eagle Plus controller supports the complete line of Irritrol flow sensor models listed in the following tables.

PVC Sensor Body Material

Sensor Model #	FS-150	FS-200	FS-300	FS-400
Pipe Size	1½″	2″	3″	4″
Operating Range	5-100 GPM	10-200 GPM	20-300 GPM	40-500 GPM
Max. Water Press.*	100 psi	100 psi	100 psi	100 psi
K-Value	457	776	2268	3752
Offset Value	0	104	483	834
Connection Type	Slip	Slip	Slip	Slip

*Maximum water pressure @ 68° F (20°C).

Bronze Sensor Body Material

Sensor Model #	FS-8100	FS-8125	FS-8150	FS-8200	FS-8250
Pipe Size	1″	1¼″	1½″	2″	2½″
Operating Range	2-40 GPM	3-60 GPM	4-80 GPM	10-100 GPM	16-160 GPM
Max. Water Press.	400 psi	400 psi	400 psi	200 psi	200 psi
K-Value	109	209	291	750	1021
Offset Value	27	32	24	0	370
Connection Type	NPT Female	NPT Female	NPT Female	NPT Female*	NPT Female

*Includes copper male adapter.

Note: *In addition to the standard models listed above, an impeller-type flow sensor adapter, Model # FS-INSERT-B, is available to accommodate pipe sizes from 3 to 40″ (7.6 to 102cm). Requires pipe saddle with 2″ female NPT inlet.*

Appendix C -Error Code Reference Chart

The chart below provides a cross reference of EC error code numbers, included in various alarm screens, to the root cause of the alarm. This information is primarily used for system troubleshooting to help Rain Master service personnel quickly identify and resolve most controller operating issues that may be encountered.

2-Wire Base Error Codes

EC #	Cause
2	OVER CURRENT
4	I2C ERROR
5	ILLEGAL COMMAND
6	COMMAND REJECTED
8	MORE DATA READY
11	FRAME ERROR
12	TWO WIRE MODE FAULT
15	UNIT BUSY
16	REMOTE LOGIN
223	CHKSUM CALC ERROR
224	ADDRESS ERROR
230	UNIT EXISTS
231	COMM ERROR

2-Wire Bridge Error Codes

EC #	Cause
9	SLOW POWERUP
10	OVER CURRENT
13	CHECKSUM
14	NO RESPONSE

MV Sensor Board Error Codes

EC #	Cause
40	SHORT
41	ET
42	READ ET
43	RAIN
44	TRIAC
45	FLOW1
46	FLOW2
47	MV/PUMP

2-Wire Decoder Error Codes

EC #	Cause
3	NO RESPONSE
7	CHECKSUM ERROR
64	OVER CURRENT
65	SHORT CIRCUIT
66	OPEN CIRCUIT
67	I2C ERROR
68	ILLEGAL COMMAND
69	COMMAND REJECTED
70	PARTIAL READING
71	FRAMING ERROR
72	LIMIT EXCEEDED
73	PORTS EXCEEDED
74	LOW STARTUP VOLTAGE
75	DATA READY
76	BELOW LOWER LIMIT
77	DATA OVERFLOW
78	NO AC VOLTAGE
220	QTY SENT ERROR
221	QTY RECEIVED ERROR
222	CHKSUM CALC ERROR
232	FOUND
233	NOT FOUND
234	PROG ERROR

Output Board Error Codes

EC #	Cause
4	COMMUNICATION ERROR
255	LOST COMMUNICATION

iCentral Error Codes

EC #	Cause
100	COMMUNICATION ERROR

Appendix D - FCC Rules - Electromagnetic Compatibility

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a FCC Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the irrigation controller with respect to the receiver.
- Move the irrigation controller away from the receiver.
- Plug the irrigation controller into a different outlet so the irrigation controller and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

Notes:

Notes:

Irritrol®

www.irritrol.com • www.rainmaster.com

Form Number 373-0550 Rev. C

Nicolas Huff, PE, Bureau Manager | Bureau of Street-Use & Mapping
nicolas.huff@sfdpw.org | T. 628.271.2000 | 49 South Van Ness Ave. 3rd Floor, San Francisco, CA 94103

April 10, 2024

Angela Calvillo, Clerk of the Board
Board of Supervisors
City Hall, Room 244
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

Dear Ms. Calvillo:
Attached please find supporting documents for the 1395 22nd Street resolution for the Board of Supervisors consideration. This resolution would grant revocable permission to RP Pennsylvania, LLC, to occupy and maintain a portion of 22nd Street between Missouri Street and Texas Street fronting 1395 22nd Street and 790 Pennsylvania Avenue, (Assessors' Parcel Block; No. 4167, Lot No. 013) with a public stair and scenic overlook. The resolution would also make findings of consistency with the eight priority policies of Planning Code Section 101.1.

Pursuant to Section 786 of the Public Works Code, RP Pennsylvania, LLC requested a Major Encroachment Permit in a letter dated June 20, 2017. The Transportation Advisory Staff Committee (TASC), at its meeting of March 22, 2018, recommended approval of the proposed encroachments. The Planning Department, by letter dated November 9, 2017, declared that the proposed encroachments are in conformity with the General Plan, as described in the body of the report.

The following is a list of accompanying supporting documents:

- Letter from RP Pennsylvania, LLC, dated June 20, 2017.
- Draft copy of the 1395 22nd Street Major Encroachment Resolution
- Transportation Advisory Staff Committee (TASC) meeting minute dated March 22, 2018.
- Planning Department General Plan Referral dated November 9, 2017
- SFPW Order no. 187438, hearing notification.
- SFPW hearing recommendation.
- SFPW Order No. 187659 hearing results approval recommendation of the proposed Major Encroachment.
- Street Encroachment Agreement and Declaration of maintenance Covenants.
- Proposed civil plans for the Major Encroachment Permit.
- Proposed rendering and structure within the right-of-way
- Operation & maintenance Manual
- Certificate of Liability Insurance

The following person may be contacted regarding this matter: Mr. Berhane Gaime of BSM at (628)-271-2023 or via email Berhane.Gaime@sfdpw.org

Sincerely,

Carla Short
Director of Public Works

Attachments: As Noted

Introduction Form

(by a Member of the Board of Supervisors or the Mayor)

I hereby submit the following item for introduction (select only one):

- ☐ 1. For reference to Committee (Ordinance, Resolution, Motion or Charter Amendment)
- ☐ 2. Request for next printed agenda (For Adoption Without Committee Reference)
  (Routine, non-controversial and/or commendatory matters only)
- ☐ 3. Request for Hearing on a subject matter at Committee
- ☐ 4. Request for Letter beginning with "Supervisor _____ inquiries…"
- ☐ 5. City Attorney Request
- ☐ 6. Call File No. _____ from Committee.
- ☐ 7. Budget and Legislative Analyst Request (attached written Motion)
- ■ 8. Substitute Legislation File No. 240386
- ☐ 9. Reactivate File No. _____
- ☐ 10. Topic submitted for Mayoral Appearance before the Board on _____

The proposed legislation should be forwarded to the following (please check all appropriate boxes):

☐ Small Business Commission ☐ Youth Commission ☐ Ethics Commission

☐ Planning Commission ☐ Building Inspection Commission ☐ Human Resources Department

General Plan Referral sent to the Planning Department (proposed legislation subject to Charter 4.105 & Admin 2A.53):

☐ Yes ☐ No

(Note: For Imperative Agenda items (a Resolution not on the printed agenda), use the Imperative Agenda Form.)

Sponsor(s):

Supervisor Walton

Subject:

Street Encroachment Permit – Public Stair and Scenic Overlook on 22nd Street

Long Title or text listed:

Resolution granting revocable permission to RP Pennsylvania, LLC, to occupy and maintain a portion of 22nd Street between Missouri Street and Texas Street fronting 1395 22nd Street and 790 Pennsylvania Avenue, (Assessor's Parcel Block No. 4167, Lot No. 013) with a public stair and scenic overlook; adopting environmental findings under the California Environmental Quality Act; and making findings of consistency with the General Plan and the eight priority policies of Planning Code Section 101.1

Signature of Sponsoring Supervisor: /s/ Shamann Walton