Addendum No:	02	**Issue Date:**	03/21/2024
Project:	SBCUSD Jefferson Hunt Elementary School San Bernardino City Unified School District	**To Drawings + Specifications dated**	04/11/2024

Prepared By: PBK Architects, Inc.
8163 Rochester Ave
#100
Rancho Cucamonga, CA 91730

PBK Project No: 230432

NOTICE TO BIDDERS

A. Receipt of this Addendum shall be acknowledged on the Proposal Form.

B. This Addendum forms part of the Contract documents for the above referenced project and shall beincorporated integrally therewith.

C. Each bidder shall make necessary adjustments and submit his proposal with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the following supplemental data differ from those of the original Contract Documents, this Addendum shall govern.

SPECIFICATIONS

Item No. 02.01: **Not applicable.**

DRAWINGS

Item No. 02.02: **Sheet PD1.1:** See clouded areas.

Item No. 02.03: **Sheet P1.1:** See clouded areas.

Item No. 02.04: **Sheet P2.2:** See clouded areas.

Item No. 02.05: **Sheet P2.4:** See clouded areas.

Item No. 02.06: **Sheet P2.5:** See clouded areas.

Item No. 02.07: **Sheet P2.6:** See clouded areas.

Item No. 02.08: **Sheet L1.00:** New Sheet – additive bid alternate.

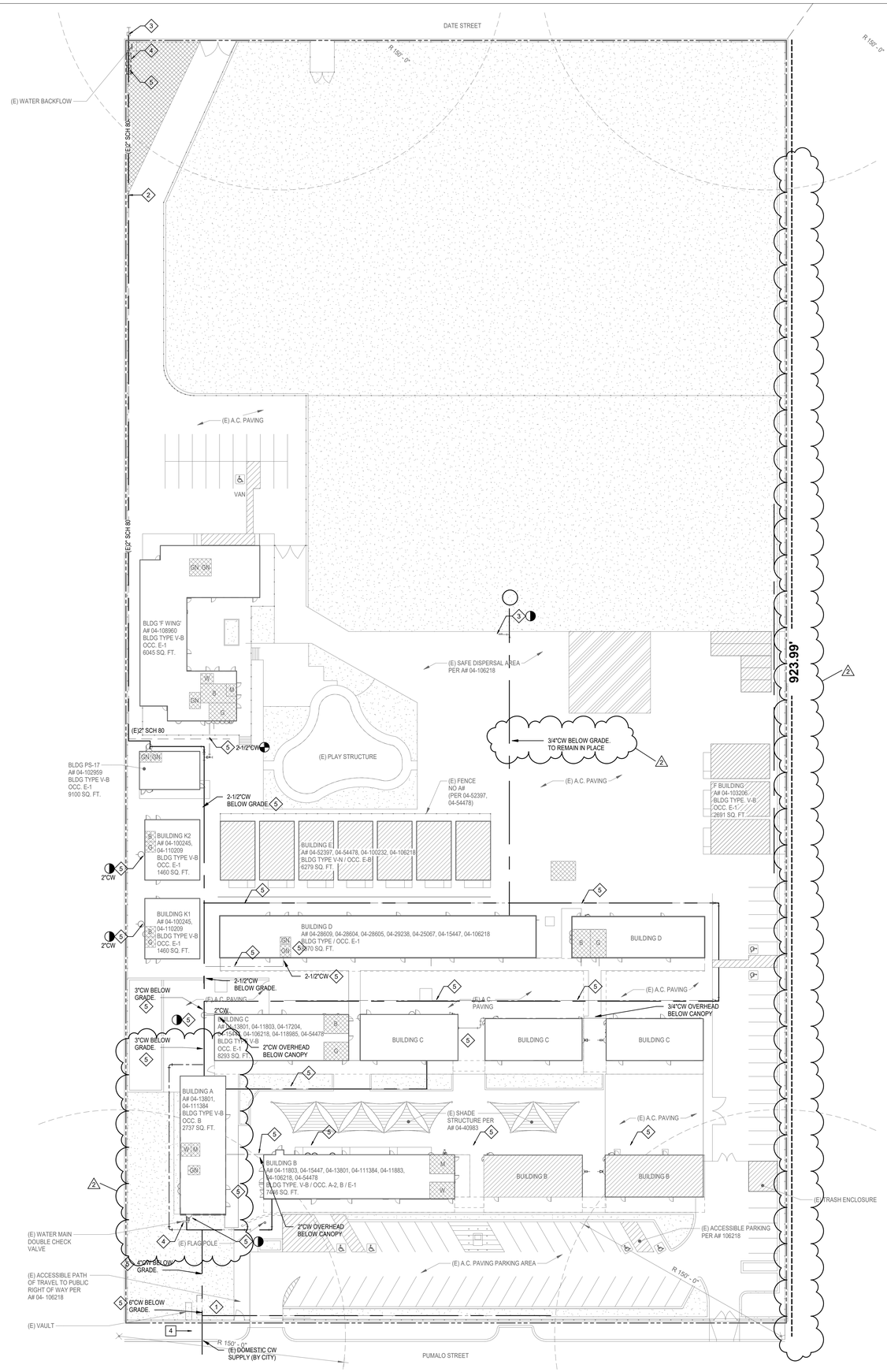
Item No. 02.09: **Sheet L1.01:** New Sheet – additive bid alternate.

Item No. 02.10: **Sheet L1.02:** New Sheet – additive bid alternate.

End of Addendum No. 02

PD1.1 - PLUMBING SITE PLAN DEMO

0" 1"



1 PLUMBING SITE PLAN - DEMO

GENERAL NOTES

1. SCOPE OF WORK INCLUDES SITE WATER LINE, SUPPLY LATERAL TO THE BUILDING AND OVERHEAD PIPING REPLACEMENT.
2. FIELD VERIFY EXACT LOCATION OF EXISTING WATER PIPING, FIXTURES, WATER LATERAL, VALVES & YARD BOXES.
3. REMOVE EXISTING DOMESTIC WATER PIPING BELOW GRADE ON SITE AND REPLACE WITH UNDERGROUND PIPE MATERIAL IN ACCORDANCE WITH 2022 CALIFORNIA PLUMBING CODE.
4. REMOVE AND REPLACE EXISTING PIPING OVERHEAD AT BUILDING STRUCTURE, WHERE NOTED. SEE FLOOR PLAN FOR EXTENT OF REPLACEMENT.
5. NO IN WALL PIPING IS REPLACED; EXTEND AND CONNECT NEW PIPING OVERHEAD TO THE EXISTING LATERAL IN WALL TURN.
6. PROVIDE MUELLER VALVE WITH QUARTER TURN.
7. PROVIDE ISOLATION TO EACH BUILDING STRUCTURE LATERAL AND AT EACH GROUP OF FIXTURES AND FOR EACH CLASSROOM WITHIN THE STRUCTURE.

DEMOLITION KEY NOTES

1. EXISTING BACKFLOW PREVENTER TO REMAIN.
2. EXISTING 2" COLD WATER SCHEDULE 80 PIPING TO REMAIN.
3. EXISTING DRINKING FOUNTAIN TO REMAIN.
4. EXISTING DOUBLE CHECK VALVE TO REMAIN.
5. ABANDON IN PLACE

NORTH
TRUE NORTH

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JEFFERSON HUNT ES - WATER LINE REPLACEMENT

PROJECT ADDRESS:
1342 E. Pumalo St.
San Bernardino, CA 92404

CONSTRUCTION DOCUMENT

SDA
A B C D E F K
KEY PLAN
NORTH: PLAN TRUE

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M38185
Exp.09-30-2024
MECHANICAL
STATE OF CALIFORNIA

Architect

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
10-10-23	230432

REVISIONS

No.	Description	Date
2	Revision 2	4-11-2024

CONSTRUCTION DOCUMENT

PLUMBING SITE PLAN DEMO

PD1.1

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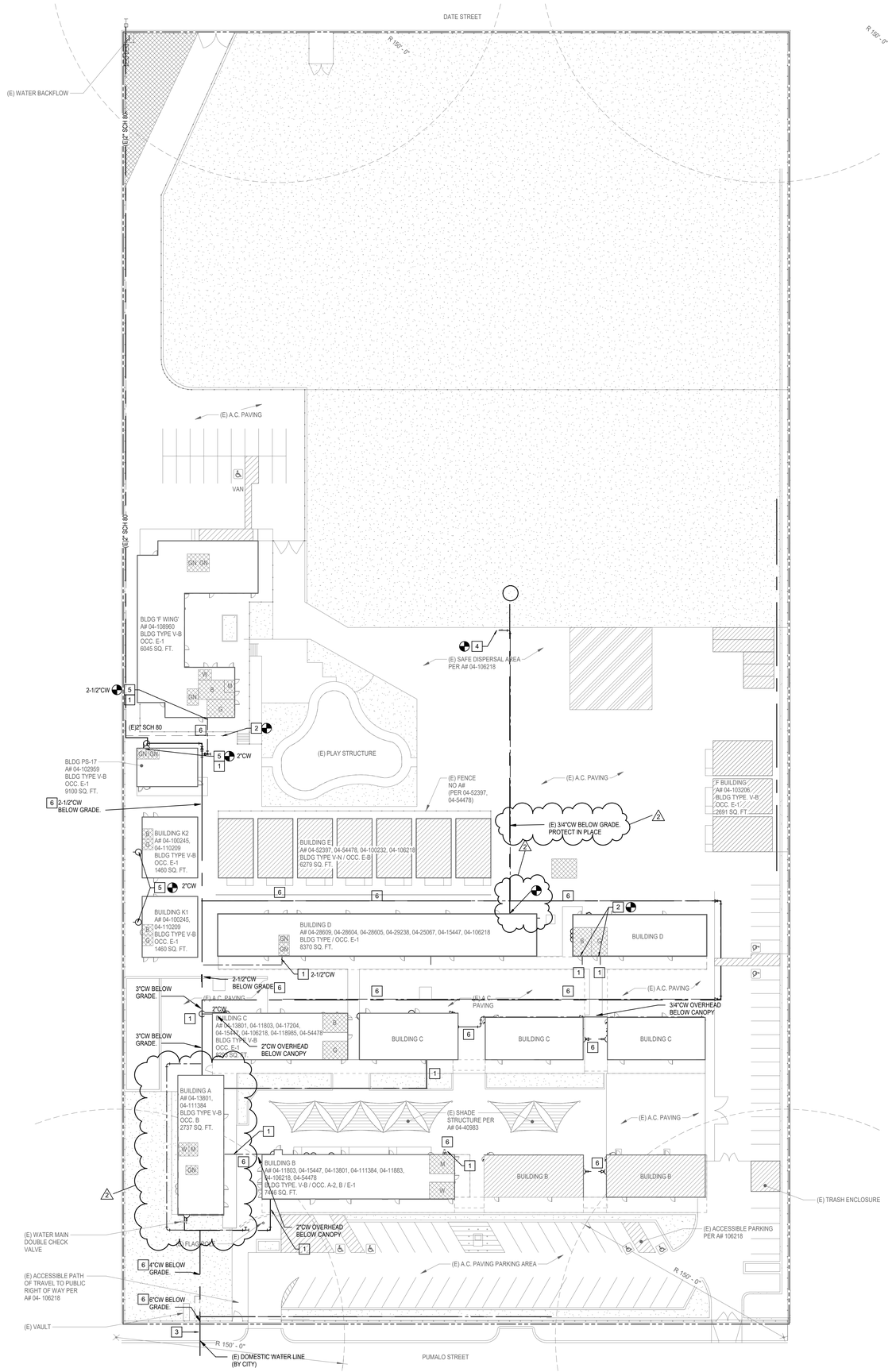
P1.1 - PLUMBING SITE PLAN NEW

0" 1"



NOTE:

PLUMBING CONTRACTOR TO PROVIDE NEW DOMESTIC UNDERGROUND WATER PIPING AS NOTED. PROVIDE LIKE FOR LIKE PIPE SIZES. FIELD VERIFY BEFORE START OF WORK.

NORTH
TRUE NORTH

GENERAL NOTES

1. SCOPE OF WORK INCLUDES SITE WATER LINE, SUPPLY LATERAL TO THE BUILDING AND OVERHEAD PIPING REPLACEMENT.

2. FIELD VERIFY EXACT LOCATION OF EXISTING WATER PIPING, FIXTURES, WATER LATERAL, VALVES & YARD BOXES.

3. REMOVE EXISTING DOMESTIC WATER PIPING BELOW GRADE ON SITE AND REPLACE WITH UNDERGROUND PIPE MATERIAL IN ACCORDANCE WITH 2022 CALIFORNIA PLUMBING CODE.

4. REMOVE AND REPLACE EXISTING PIPING OVERHEAD AT BUILDING STRUCTURE, WHERE NOTED. SEE FLOOR PLAN FOR EXTENT OF REPLACEMENT.

5. NO IN WALL PIPING IS REPLACED; EXTEND AND CONNECT NEW PIPING OVERHEAD TO THE EXISTING LATERAL IN-WALL TURN.

6. PROVIDE MUELLER VALVE WITH QUARTER TURN.

7. PROVIDE ISOLATION TO EACH BUILDING STRUCTURE LATERAL AND AT EACH GROUP OF FIXTURES AND FOR EACH CLASSROOM WITHIN THE STRUCTURE.

REMODEL KEY NOTES

1. PROVIDE SHUT-OFF VALVE IN CONCRETE YARD BOX AT BUILDING SUPPLY LATERAL; SEE DETAIL #1/P6.1.
2. EXTEND AND CONNECT 2" COLD WATER TO EXISTING IRRIGATION PIPING BELOW GRADE; PROVIDE WITH SHUT-OFF VALVE IN CONCRETE YARD BOX.
3. PROVIDE WATER METER TO REPLACE EXISTING METER; COORDINATE ALL WORK WITH EAST VALLEY WATER DISTRICT. PROVIDE 6" METER WITH 4" LATERAL.
4. MODIFY, EXTEND AND CONNECT 3/4" COLD WATER TO EXISTING DRINKING FOUNTAIN.
5. EXTEND AND CONNECT FULL-SIZE COLD WATER TO EXISTING COLD WATER LATERAL BELOW GRADE; PROVIDE WITH SHUT-OFF VALVE FOR ISOLATION.
6. PROVIDE NEW UNDERGROUND DOMESTIC WATER LINE (COORDINATE ALL UNDERGROUND UTILITIES BEFORE START OF WORK.)

1 PLUMBING SITE PLAN - NEW
1/32" = 1'-0"

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Consultant

REGISTERED PROFESSIONAL ENGINEER REX DAVID WANG No.M36165 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

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SAN BERNARDINO CITY USD

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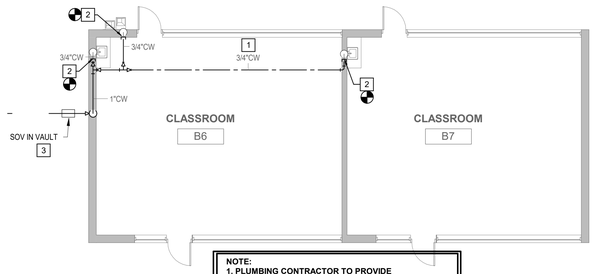
CONSTRUCTION DOCUMENT

PLUMBING SITE PLAN NEW

P1.1

P2.2 - PLUMBING FLOOR PLAN BLDG B

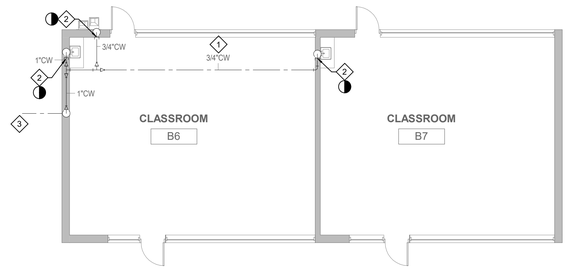
0" 1"



NOTE:
1. PLUMBING CONTRACTOR TO PROVIDE LIKE FOR LIKE PIPE SIZES FIELD VERIFY BEFORE START OF WORK.
2. EXISTING COLD WATER PIPING ABOVE THE CEILING TO BE REMOVED AND REPLACED WITH NEW PIPING IN SAME LOCATION. PROVIDE NEW PIPE SUPPORTS.

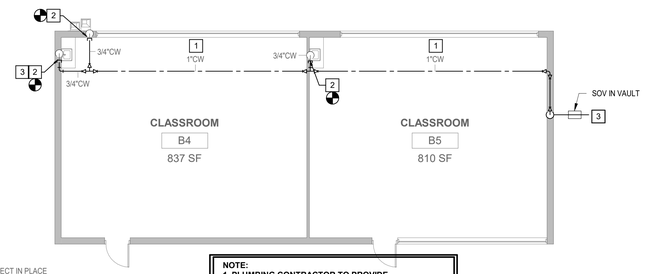
NORTH TRUE NORTH

6 PLUMBING FLOOR PLAN BLDG B EAST - NEW
1/8" = 1'-0"



NORTH TRUE NORTH

5 PLUMBING FLOOR PLAN BLDG B EAST - DEMO
1/8" = 1'-0"

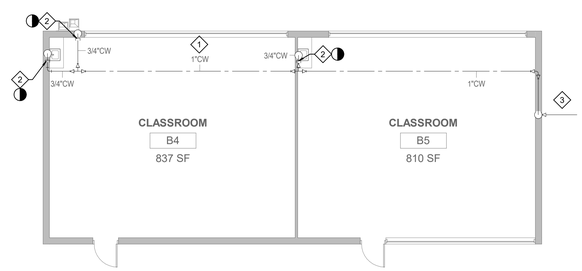


NOTE:
1. ALL EXISTING FIXTURES TO REMAIN; PROTECT IN PLACE.
2. ROUTING OF PLUMBING LINES TO BE LOCATED OVERHEAD AND ABOVE FINISHED CEILINGS. DEMOLITION MAY OCCUR(S) ABOVE FINISHED CEILINGS IN AREAS LABELLED NOT IN CONTRACT TO ALLOW ROUTING OF PLUMBING LINES.

NOTE:
1. PLUMBING CONTRACTOR TO PROVIDE LIKE FOR LIKE PIPE SIZES FIELD VERIFY BEFORE START OF WORK.
2. EXISTING COLD WATER PIPING ABOVE THE CEILING TO BE REMOVED AND REPLACED WITH NEW PIPING IN SAME LOCATION. PROVIDE NEW PIPE SUPPORTS.

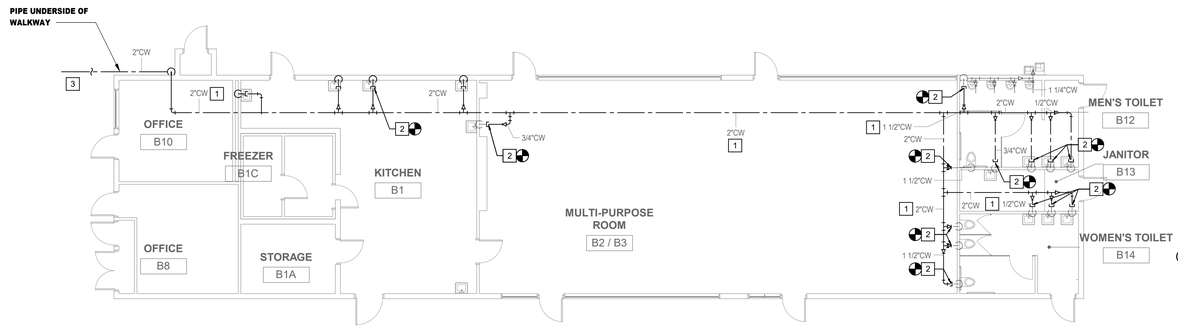
NORTH TRUE NORTH

4 PLUMBING FLOOR PLAN BLDG B CENTRAL - NEW
1/8" = 1'-0"



NORTH TRUE NORTH

3 PLUMBING FLOOR PLAN BLDG B CENTRAL - DEMO
1/8" = 1'-0"



NOTE:
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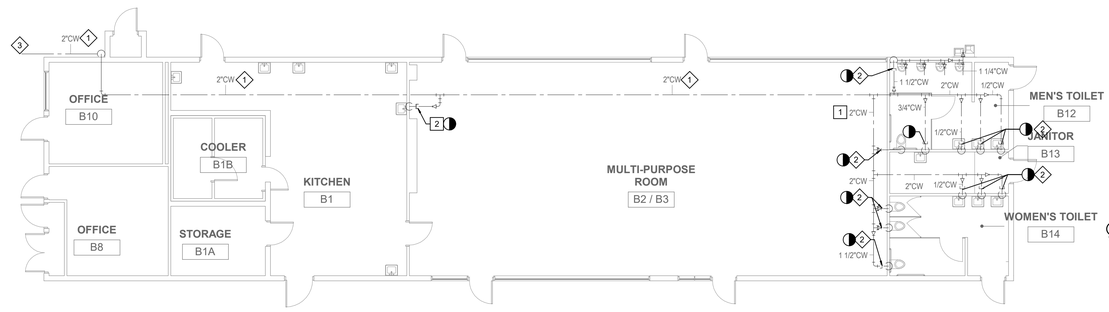
2. EXISTING COLD WATER PIPING ABOVE THE CEILING TO BE REMOVED AND REPLACED WITH NEW PIPING IN SAME LOCATION. PROVIDE NEW PIPE SUPPORTS.
3. PROVIDE BALL VALVES AT EACH RESTROOM.

NORTH TRUE NORTH

2 PLUMBING FLOOR PLAN BLDG B WEST - NEW
1/8" = 1'-0"



NOTE:
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3. PROVIDE BALL VALVES AT EACH RESTROOM.

NORTH TRUE NORTH

1 PLUMBING FLOOR PLAN BLDG B WEST - DEMO
1/8" = 1'-0"

GENERAL NOTES

1. MODIFY EXISTING PIPING SYSTEM ROUGH-IN, EXTEND AND CONNECT TO EXISTING DOMESTIC WATER.
2. PATCH TO MATCH FINISH.
3. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILT / RECORD DRAWINGS.
4. BEFORE COMMENDEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTION PRIOR TO BIDDING PROJECT.
6. THE PLUMBING CONTRACTOR SHALL RUN ALL SERVICE LINES, ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL FIXTURES AND EQUIPMENT. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL TRIMS AND COLD WATER STOPS AS REQUIRED.

DEMOLITION KEY NOTES

1. EXISTING PIPING ABOVE IN CEILING SPACE.
2. CAP EXISTING COLD WATER LINE ABOVE IN CEILING SPACE. PREPARE FOR RECONNECTION UNDER RENOVATION PHASE.
3. EXISTING COLD WATER LINE BELOW GRADE. REFER TO SITE PLAN FOR POINT OF ENTRY. SEE P1.1

KEY NOTES

1. PIPING ABOVE IN CEILING SPACE.
2. POINT OF CONNECTION TO EXISTING COLD WATER LINE ABOVE IN CEILING SPACE. PROVIDE LINE SIZE SHUT-OFF VALVE AS REQUIRED. PATCH TO MATCH EXISTING FINISH.
3. NEW COLD WATER LINE BELOW GRADE. REFER TO SITE PLAN FOR POINT OF ENTRY. SEE P1.1

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CONSTRUCTION DOCUMENT

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Consultant

REGISTERED PROFESSIONAL ENGINEER
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Exp.09-30-2024
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STATE OF CALIFORNIA

Architect

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
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REVISIONS

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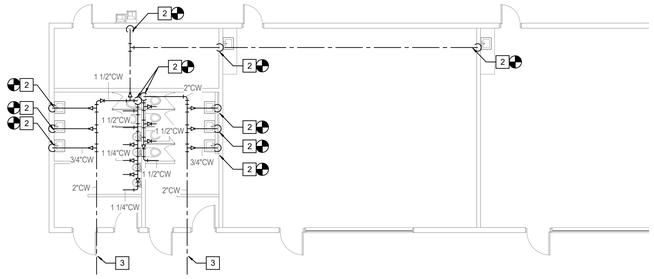
PLUMBING FLOOR PLAN BLDG B

P2.2

0" 1"



NOTE:
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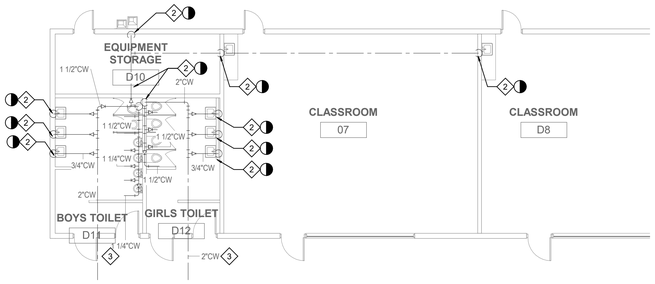
2. EXISTING COLD WATER PIPING ABOVE THE CEILING TO BE REMOVED AND REPLACED WITH NEW PIPING IN SAME LOCATION. PROVIDE NEW PIPE SUPPORTS.
3. PROVIDE BALL VALVES AT EACH RESTROOM.

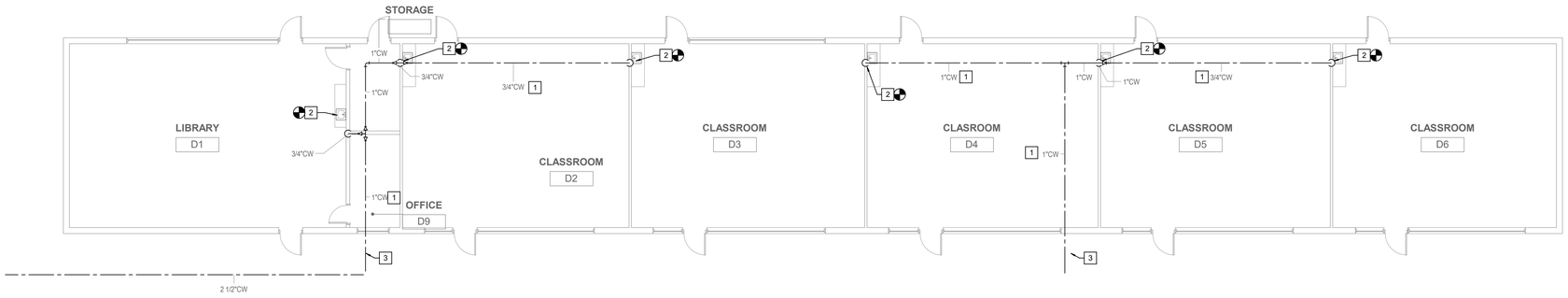
NORTH TRUE NORTH

4 PLUMBING FLOOR PLAN BLDG D EAST - NEW
1/8" = 1'-0"



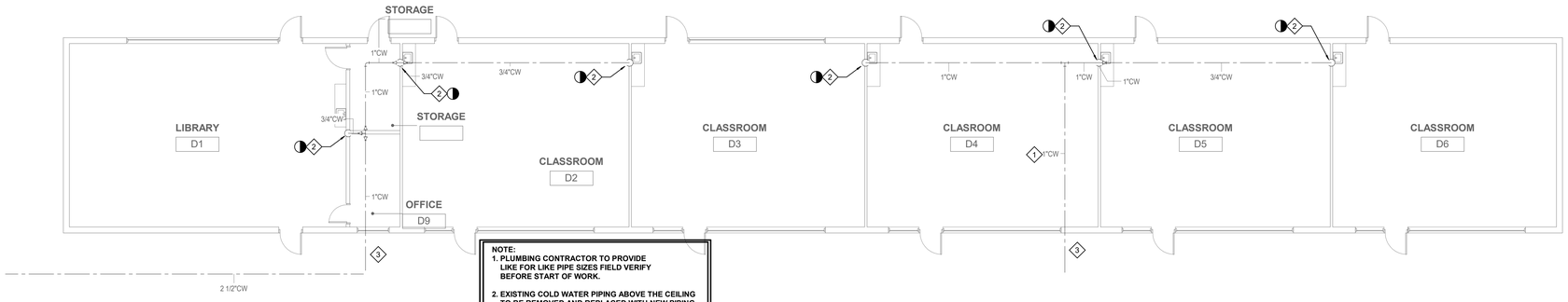
NORTH TRUE NORTH

3 PLUMBING FLOOR PLAN BLDG D EAST - DEMO
1/8" = 1'-0"



NORTH TRUE NORTH

2 PLUMBING FLOOR PLAN BLDG D - NEW
1/8" = 1'-0"



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NORTH TRUE NORTH

1 PLUMBING FLOOR PLAN BLDG D - DEMO
1/8" = 1'-0"

GENERAL NOTES

1. MODIFY EXISTING PIPING SYSTEM ROUGH-IN, EXTEND AND CONNECT TO EXISTING DOMESTIC WATER.
2. PATCH TO MATCH FINISH.
3. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILT / RECORD DRAWINGS.
4. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTION PRIOR TO BIDDING PROJECT.
6. THE PLUMBING CONTRACTOR SHALL RUN ALL SERVICE LINES, ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL FIXTURES AND EQUIPMENT. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL TRIMS AND COLD WATER STOPS AS REQUIRED.

DEMOLITION KEY NOTES

1. EXISTING PIPING ABOVE IN CEILING SPACE.
2. CAP EXISTING COLD WATER LINE ABOVE IN CEILING SPACE. PREPARE FOR RECONNECTION UNDER RENOVATION PHASE.
3. EXISTING COLD WATER LINE BELOW GRADE. REFER TO SITE PLAN FOR POINT OF ENTRY. SEE P1.1

KEY NOTES

1. PIPING ABOVE IN CEILING SPACE.
2. POINT OF CONNECTION TO EXISTING COLD WATER LINE ABOVE IN CEILING SPACE. PROVIDE LINE SIZE SHUT-OFF VALVE AS REQUIRED. PATCH TO MATCH EXISTING FINISH.
3. NEW COLD WATER LINE BELOW GRADE. REFER TO SITE PLAN FOR POINT OF ENTRY. SEE P1.1

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JEFFERSON HUNT ES - WATER LINE REPLACEMENT

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CONSTRUCTION DOCUMENT

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KEY PLAN NORTH: PLAN TRUE

Consultant

REGISTERED PROFESSIONAL ENGINEER REA DAVID WANG No.M36165 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

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SAN BERNARDINO CITY USD

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PLUMBING FLOOR PLAN BLDG D

P2.4

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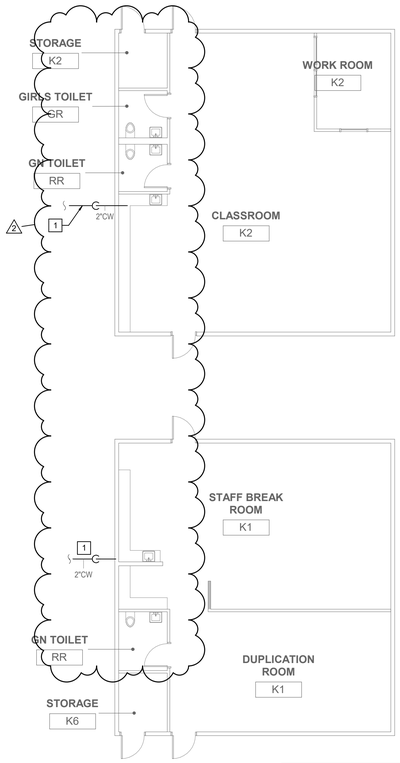
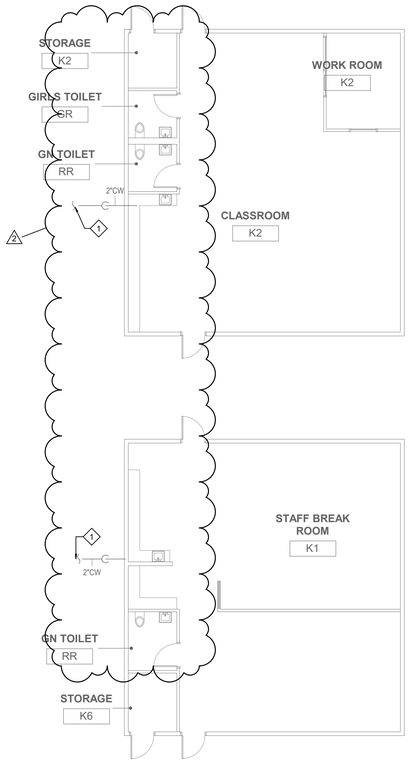


NOTE:
1. PLUMBING CONTRACTOR TO PROVIDE LIKE FOR LIKE PIPE SIZES FIELD VERIFY BEFORE START OF WORK.

NORTH TRUE NORTH

4 PLUMBING FLOOR PLAN BLDG K - NEW
1/8" = 1'-0"



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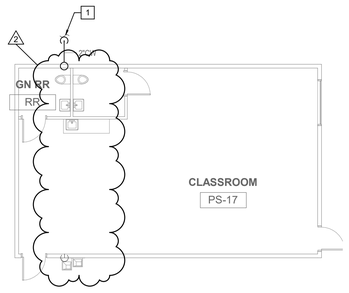
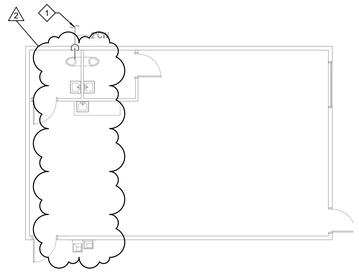
1/8" = 1'-0"



NOTE:
1. PLUMBING CONTRACTOR TO PROVIDE LIKE FOR LIKE PIPE SIZES FIELD VERIFY BEFORE START OF WORK.

NORTH TRUE NORTH

2 PLUMBING FLOOR PLAN BLDG F - NEW
1/8" = 1'-0"



NORTH TRUE NORTH

1 PLUMBING FLOOR PLAN BLDG F - DEMO
1/8" = 1'-0"

GENERAL NOTES

1. MODIFY EXISTING PIPING SYSTEM ROUGH-IN, EXTEND AND CONNECT TO EXISTING DOMESTIC WATER.
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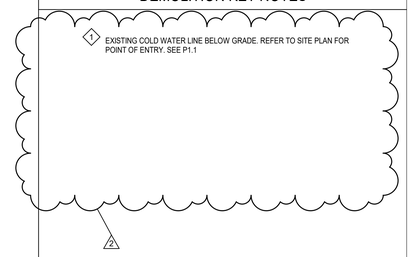
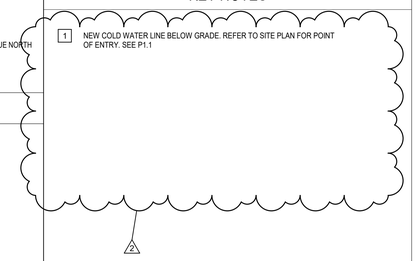
DEMOLITION KEY NOTES



KEY NOTES



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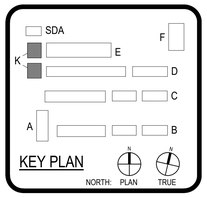

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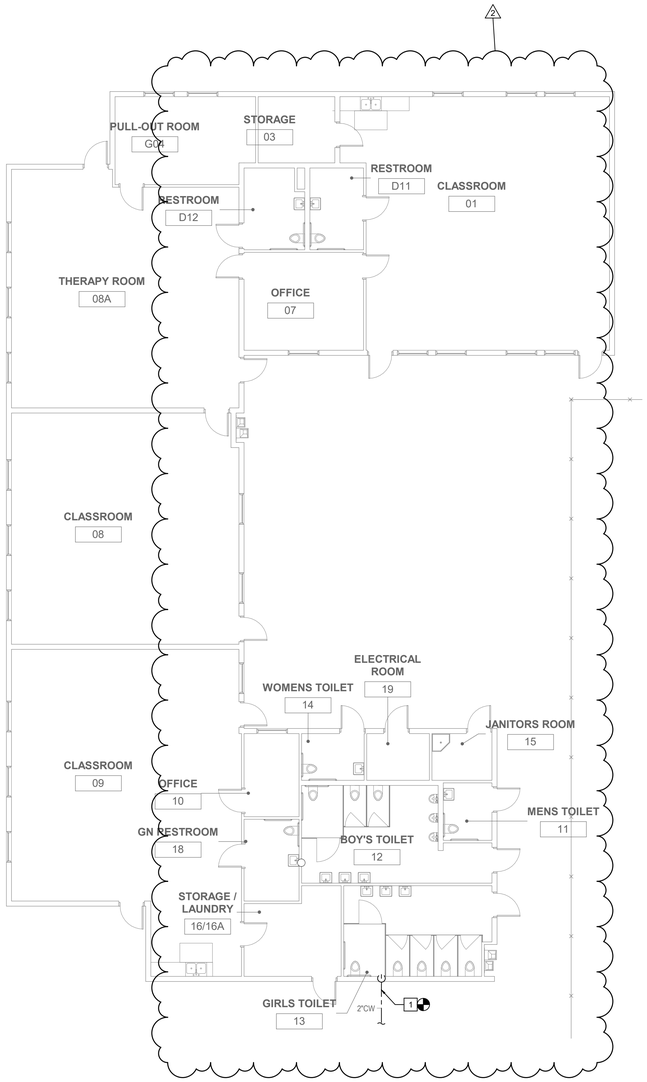
PLUMBING FLOOR PLAN BLDG F, K

P2.5

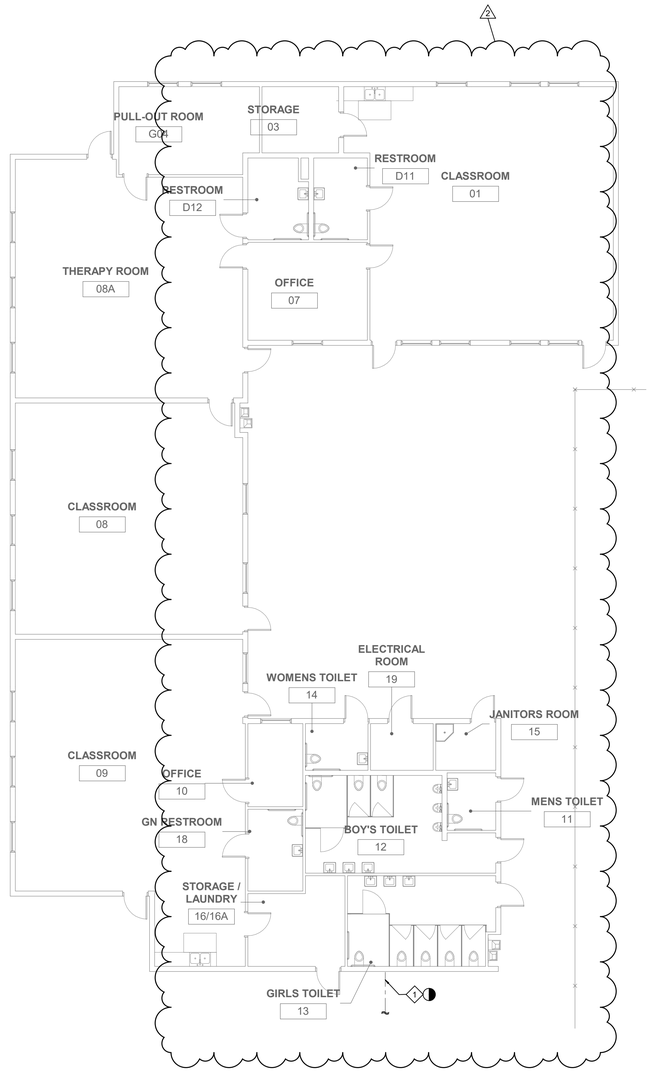
P2.6 - PLUMBING FLOOR PLAN BLDG SDA

0" 1"



NOTE:
1. PLUMBING CONTRACTOR TO PROVIDE LIKE FOR LIKE PIPE SIZES FIELD VERIFY BEFORE START OF WORK.

2 PLUMBING FLOOR PLAN BLDG SDA - NEW
1/8" = 1'-0"

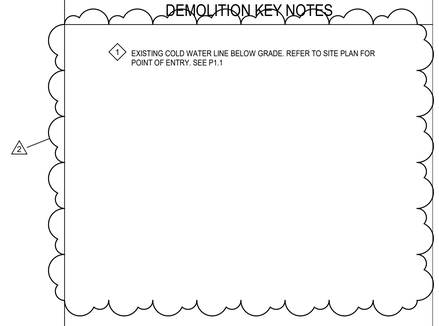


1 PLUMBING FLOOR PLAN BLDG SDA - DEMO
1/8" = 1'-0"

GENERAL NOTES

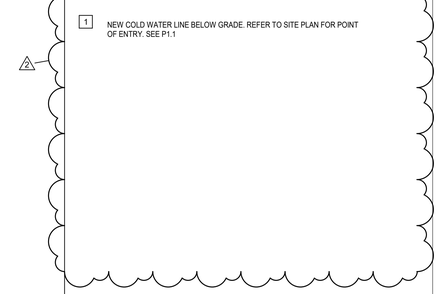
1. MODIFY EXISTING PIPING SYSTEM ROUGH-IN, EXTEND AND CONNECT TO EXISTING DOMESTIC WATER.
2. PATCH TO MATCH FINISH.
3. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILT / RECORD DRAWINGS.
4. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTION PRIOR TO BIDDING PROJECT.
6. THE PLUMBING CONTRACTOR SHALL RUN ALL SERVICE LINES, ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL FIXTURES AND EQUIPMENT. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL TRIMS AND COLD WATER STOPS AS REQUIRED.

DEMOLITION KEY NOTES



1 EXISTING COLD WATER LINE BELOW GRADE. REFER TO SITE PLAN FOR POINT OF ENTRY. SEE P1.1

KEY NOTES



1 NEW COLD WATER LINE BELOW GRADE. REFER TO SITE PLAN FOR POINT OF ENTRY. SEE P1.1

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JEFFERSON HUNT ES - WATER LINE REPLACEMENT

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CONSTRUCTION DOCUMENT

SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT · DREAMS NOW HAPPEN · EST. 1927

Consultant

REGISTERED PROFESSIONAL ENGINEER
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No.M38155
Exp.09-30-2024
STATE OF CALIFORNIA

Architect

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
10-10-23	230432

REVISIONS

No.	Description	Date
2	Revision 2	4-11-2024

CONSTRUCTION DOCUMENT

PLUMBING FLOOR PLAN BLDG SDA

P2.6

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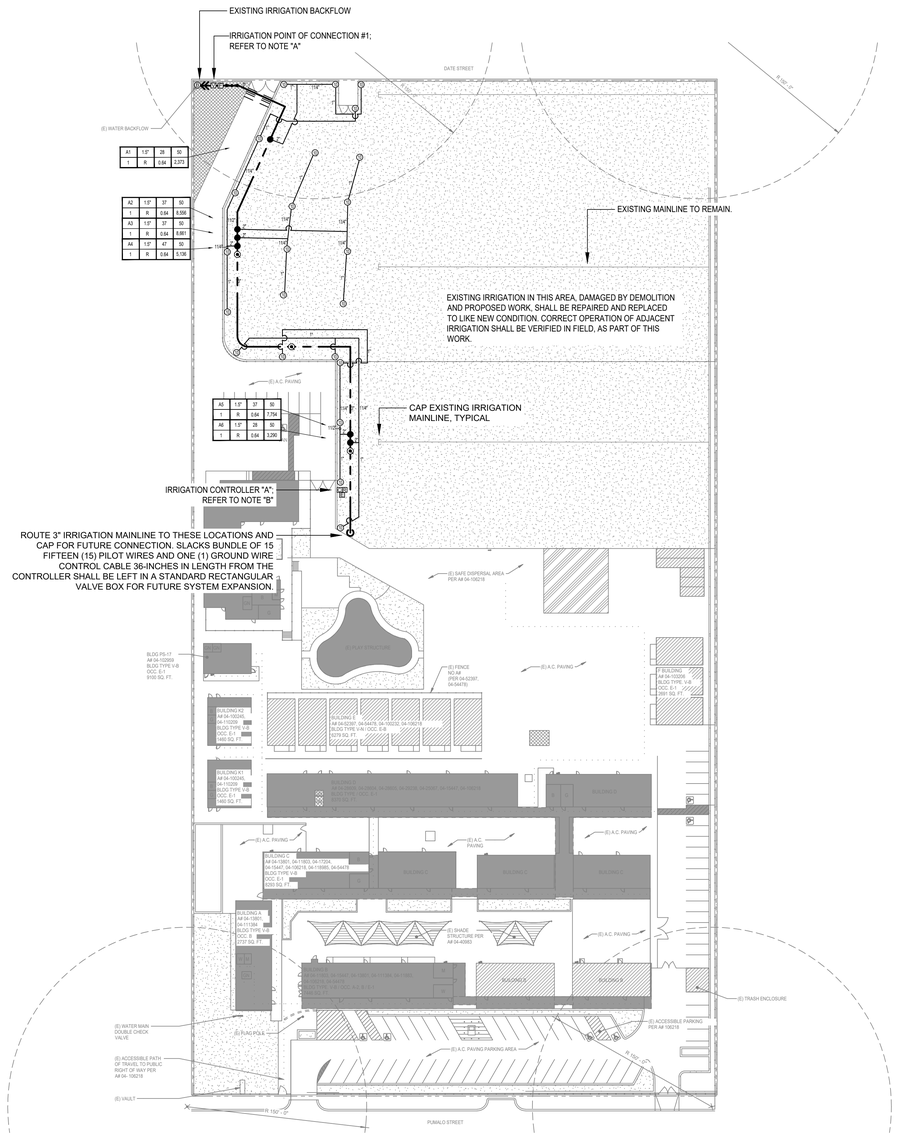
A1.00 - SITE PLAN

0" 1"



NOTE A:
POINT OF CONNECTION (POC) #1 SHALL BE AN EXISTING BACKFLOW. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION, WATER TYPE, METER SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. MEASUREMENT OF THE STATIC (NO WATER MOVING) WATER PRESSURE IS ACCEPTABLE FOR POTABLE WATER SYSTEMS WHERE NO PUMP HAS BEEN INDICATED ON THESE PLANS. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION AS SHOWN HEREIN, ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

REQUIERED WATER PRESSURE AT POC:	80	PSI (STATIC)
DESIGN WATER PRESSURE:	78	PSI
MAXIMUM SYSTEM DEMAND:	47	GPM

NOTE B:
CONTROLLER "A" SHALL BE OF THE BRAND, MODEL AND STATION SIZE AS INDICATED ON THE IRRIGATION MATERIALS LEGEND. THE CONTROLLER SHALL BE INSTALLED IN THE APPROXIMATE LOCATION SHOWN. THE CONTRACTOR SHALL COORDINATE THE REQUIRED ELECTRICAL POWER SUPPLY AT THIS LOCATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE. FINAL LOCATION OF CONTROLLER AND ELECTRICAL POINT OF CONNECTION SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE D:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE E:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

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TRUE NORTH

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1 IRRIGATION PLAN

FILE PATH: Z:\Projects\...
3/18/2024 3:51:44 PM

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F WING
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NORTH: PLAN TRUE

Consultant

Architect

LICENSED ARCHITECT
Tong Yao
No. C-31162
REN. 10-31-2025
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
03-20-24	230432

REVISIONS

No.	Description	Date

100% CD

IRRIGATION PLAN

L1.00

2 ADDITIVE BID ALTERNATE

0" 1"

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
9. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
10. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
11. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
12. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.
13. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. SWEENEY AND ASSOCIATES RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.
14. THE CONTRACTOR IS REQUIRED TO CONTACT DIGALERT OR 811 A MINIMUM OF TWO (2) DAYS PRIOR TO THE START OF ANY EXCAVATIONS ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG TO START A PROJECT TICKET. DIGALERT AND 811 IS A FREE SERVICE PROVIDED TO THE PROJECT. FAILURE TO CONTACT AND HAVE THE EXISTING UTILITIES IDENTIFIED, LOCATED AND MARKED SHALL MAKE THE CONTRACTOR SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES.

EXISTING IRRIGATION NOTES

A. CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE OWNER'S REPRESENTATIVE.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

C. ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO EXISTING CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK AND UPON COMPLETION OF WORK.

D. CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE SHOULD ANY DISCREPANCIES BE NOTED.

E. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION/REROUTING OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW CONSTRUCTION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING NO LESS THAN 100% OF HEAD RADIUS COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

F. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

G. CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO COMMENCING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO OWNER'S REPRESENTATIVE.

H. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH. 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH OWNER'S REPRESENTATIVE PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

I. EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXITING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

J. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE.

K. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING BACKFLOW DEVICE AND TESTING FOR PROPER OPERATION. SHOULD BACKFLOW DEVICE BE INOPERABLE OR NOT IN PLACE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAID BACKFLOW DEVICE. CONFIRM ANY DISCREPANCIES WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

IRRIGATION MATERIAL LEGEND

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION	FLOW RATE (GPM)	PSI	RADIUS	P.R. (TRI.)	DETAIL
90° 180° 360°	RAIN BIRD	8005-SS 5" POP-UP LARGE RADIUS TURF ROTOR WITH A S.S. STEM A #10 NOZZLE	9.3	50	61 FT	1.28 IN./HR. (Q) 0.64 IN./HR. (H) 0.32 IN./HR. (F)	A A A
	RAIN BIRD	200-PESB-PRS-D 2" NORMALLY CLOSED, PRESSURE REGULATING, PLASTIC MASTER CONTROL VALVE. WIRE MCV TO THE CONTROLLER USING A SEPARATE PILOT AND GROUND WIRE, ROUTE INSIDE CONDUIT WITH FLOW SENSOR WIRE. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					B
	RAIN BIRD	FS200P SERIES FLOW SENSOR WITH 2" PVC TEE. WIRE TO A SENSOR DECODER AND CONNECT TO CONTROLLER USING A SEPARATE TWO-WIRE CABLE DEDICATED TO MASTER VALVE AND FLOW SENSOR. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					C
	NIBCO	T-113 CLASS 125, BRONZE GATE VALVE WITH BRONZE CROSS HANDLE, FOR MAINLINE ISOLATION, LINE SIZE PER MAINLINE. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					D
	RAIN BIRD	44LRC 1" QUICK COUPLER VALVE WITH LOCKING VINYL COVER AND A LASCO G13S-218 SWING JOINT. INSTALL INSIDE A 10" ROUND VALVE BOX.					E
	BUCKNER SUPERIOR	950 DW BRASS REMOTE CONTROL VALVE, SIZE AS SHOWN (1" AND 1 1/2" SIZES). INSTALL THE RCV INSIDE A JUMBO RECTANGULAR VALVE BOX WITH BRASS FULL PORT ISOLATION BALL VALVE.					F N/A
	RAIN BIRD	ESPLXME2P PRO SERIES 12-STATION CONTROLLER. CONTROLLER SHALL BE INSTALL WITHIN LXMMSS STAINLESS STEEL CABINET OVER A LXMMSSPED PEDESTAL. INSTALL WITH IQ NCC 4G CELLULAR CARTRIDGE TO ALLOW FOR COMMUNICATION WITH RAIN BIRD'S WEB BASED IQ V4.0 CENTRAL CONTROL SOFTWARE AND "GLOBAL WEATHER" EVAPOTRANSPIRATION RATE DAILY WEATHER DATA SERVICE. CONTROLLER SHALL BE GROUNDED PER MANUFACTURER'S RECOMMENDATION.					G
	RAIN BIRD	WR2 WIRELESS RAIN SENSOR, MOUNT TO BUILDING WITH FULL SUN EXPOSURE (WITHIN 200' OF CONTROLLER LOCATION)					N/A
	N/A	120 VOLT ELECTRICAL POWER, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
NO SYMBOL	PAIGE ELECTRIC	THE CONTROLLER SHALL BE GROUNDED USING A #182000 5/8" X 8 FOOT COPPER CLAD GROUND ROD, A #182005 CAST BRONZE ROD CLAMP AND THE REQUIRED LENGTH OF #6AWG BARE, SINGLE STRAND COPPER GROUND WIRE. INSTALL INSIDE A 10" ROUND VALVE BOX.					H
	AS APPROVED	PVC PIPE 3/4" - 2" SCH. 40, SOLVENT WELD WITH SCH. 40 PVC FITTINGS, AS LATERAL LINES INSTALLED 12" BELOW FINISHED GRADE					I
	AS APPROVED	PVC PIPE 3" CL. 315, SOLVENT WELD WITH SCH. 80 PVC FITTINGS, AS MAINLINES INSTALLED 18" BELOW FINISHED GRADE					I
	AS APPROVED	2" AND SMALLER SHALL BE PVC PIPE SCH. 40, 3" AND LARGER SHALL BE PVC PIPE CL 315 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED PLACE BELOW ALL PAVING, HARDSCAPE ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.					J
NO SYMBOL	LASCO	ALL FITTINGS USED WITH SOLVENT WELD MAINLINE PIPE SHALL BE SCH. 80 PVC FITTINGS, GRAY IN COLOR, AND SIZED TO MATCH THE MAINLINE PIPE. ALL FITTINGS USED WITH SOLVENT WELD LATERAL LINE PIPE SHALL BE SCH. 40 PVC, WHITE IN COLOR, AND SIZED TO MATCH THE LATERAL LINE PIPE. ALL THREADED PVC NIPPLES SHALL BE SCH. 80 PVC PIPE, DARK GRAY IN COLOR, WITH MOLDED THREADS.					N/A
NO SYMBOL	AS APPROVED	ALL SOLVENT WELD CONNECTIONS FOR BOTH MAINLINE AND LATERAL LINE SHALL BE MADE USING THE TWO-STEP PROCESS OF PRIMER AND SOLVENT CEMENT. PRIMER SHALL BE LOW VOC "PURPLE PRIMER". MAINLINE SOLVENT CEMENT SHALL BE LOW VOC, "GRAY-HEAVY BODY" CEMENT. LATERAL LINE SOLVENT CEMENT SHALL BE LOW VOC, GRAY OR BLUE COLORED MEDIUM BODIED CEMENT. USE DAUBERS SIZED AT LEAST ONE-HALF THE SIZE OF THE LARGEST PIPE BEING JOINED. ALL SOLVENT CEMENTED JOINTS SHALL BE MADE PER THE PIPE AND FITTING MANUFACTURER'S RECOMMENDATIONS.					N/A
NO SYMBOL	AS APPROVED	ALL SOLVENT WELD MAINLINES ABOVE 2" IN SIZE SHALL HAVE CONCRETE THRUST BLOCKING INSTALLED AT ALL DIRECTIONAL CHANGES INCLUDING ELBOWS (45° AND 90°) AND TEES. MAINLINE PIPES UNDER 2" SIZE AND ALL LATERAL LINES DO NOT REQUIRE THRUST BLOCKING.					K
NO SYMBOL	PAIGE ELECTRIC	P7079D POLYETHYLENE INSULATED, SOLID COPPER CONDUCTOR IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED). PILOT WIRES SHALL BE RED IN COLOR, COMMON GROUND WIRE SHALL BE WHITE IN COLOR, SPARE WIRES SHALL BE YELLOW IN COLOR. THE CONTRACTOR SHALL ROUTE TWO (2) SPARE CONTROL WIRES (YELLOW) FROM THE CONTROLLER ALONG THE MAINLINE IN ALL DIRECTIONS AWAY FROM THE CONTROLLER. LOOP SPARE WIRES UP AND INTO EACH VALVE BOX ALONG THE MAINLINE, PROVIDING A 3 FOOT MINIMUM LOOP.					N/A
NO SYMBOL	AS APPROVED	11/4" SCH. 40 PVC, GRAY ELECTRICAL CONDUIT FOR FLOW SENSOR / MASTER VALVE WIRES, PROVIDE PULL BOX AT A MAXIMUM OF 200 FEET ON CENTER FOR A 3 FOOT WIRE LOOP OR ANY SPLICES. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					N/A
NO SYMBOL	3M	DBR/Y-6 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE CONNECTIONS (U.L. APPROVED)					L
NO SYMBOL	NDS (K.B.I.)	KSC-XXX-S SWING CHECK VALVE, LATERAL LINE SIZE, INSTALL ONE (1) ON THE DOWNSTREAM SIDE OF EACH RCV WHEN THE RCV IS LOWER THAN THE SPRINKLERS, BUBBLERS OR DRIP EMITTERS. INSTALL WITHIN SPRINKLER / BUBBLER / DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.					N/A
NO SYMBOL	NDS (K.B.I.)	KC-XXX-S SPRING CHECK VALVE. LATERAL LINE SIZE, INSTALL ONE (1) ON THE DOWNSTREAM SIDE OF EACH RCV WHEN THE RCV IS HIGHER THAN THE SPRINKLERS, BUBBLERS OR DRIP EMITTERS. INSTALL WITHIN SPRINKLER / BUBBLER / DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.					N/A
NO SYMBOL	CARSON	VALVE BOXES, SIZE PER EQUIPMENT LEGEND, WITH T-COVER LIDS AND CAPTIVE BOLT AND LOC-KIT. FOR AIR RELIEF VALVES AND DRIP FLUSH VALVES USE 6" ROUND MODEL 708, 10" ROUND SHALL BE MODEL 910, 12" STANDARD RECT. SHALL BE MODEL 1419, 12" JUMBO RECT. SHALL BE MODEL 1220, SUPER JUMBO SHALL BE MODEL 1324, AND SUPER JUMBO XL SHALL BE MODEL 1730. COVERS AND BOXES SHALL BE GREEN IN COLOR. FOR USE IN NON-VEHICULAR TRAFFIC SITUATIONS ONLY. DO NOT INSTALL IN CONCRETE OR ASPHALT. VALVE BOXES LOCATED IN TURF SHALL BE SET AT GRADE, NOT LESS THAN 12" OR MORE THAN 24" FROM EDGE OF PAVING. VALVE BOXES LOCATED IN SHRUB AREAS SHALL BE SET 2" ABOVE GRADE NEAR EDGE OF PLANTER.					N/A

IRRIGATION CONTROLLER RUN TIMES

Controller		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total / Avg.
A	ETo / Month (Inches):	2.00	2.70	3.80	4.60	5.70	6.90	7.90	7.40	5.90	4.20	2.60	2.00	55.70
	ETo / Day (Inches):	0.06	0.09	0.12	0.15	0.18	0.22	0.25	0.24	0.19	0.14	0.08	0.06	0.15
	Irrigation Days / Week:	1	1	1	1	2	2	2	2	2	1	1	1	

Plant / Irrig. Type	AKc	Pr Rate	IE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Turf	0.60	0.64	0.80	31.8	42.9	60.3	73.0	45.2	54.8	62.7	58.7	46.8	66.7	41.3	31.8	Min./Day/Zone
Rotors (Quarter)	Number of Zones:		2	63.5	85.7	120.7	146.1	90.5	109.6	125.4	117.5	93.7	133.4	82.6	63.5	Total Min./Day
Turf	0.60	0.64	0.80	31.8	42.9	60.3	73.0	45.2	54.8	62.7	58.7	46.8	66.7	41.3	31.8	Min./Day/Zone
Rotors (Half)	Number of Zones:		2	63.5	85.7	120.7	146.1	90.5	109.6	125.4	117.5	93.7	133.4	82.6	63.5	Total Min./Day
Turf	0.60	0.64	0.80	31.8	42.9	60.3	73.0	45.2	54.8	62.7	58.7	46.8	66.7	41.3	31.8	Min./Day/Zone
Rotors (Full)	Number of Zones:		2	63.5	85.7	120.7	146.1	90.5	109.6	125.4	117.5	93.7	133.4	82.6	63.5	Total Min./Day
	Total Number of Zones:		6	190.5	257.2	362.0	438.2	271.5	328.7	376.3	352.5	281.0	400.1	247.7	190.5	Total Min./Day
	Total Sequential Run Time:			3.2	4.3	6.0	7.3	4.5	5.5	6.3	5.9	4.7	6.7	4.1	3.2	Total Hrs./Day
Total Sequential Run Time (Overhead Irrigation Only):				3.2	4.3	6.0	7.3	4.5	5.5	6.3	5.9	4.7	6.7	4.1	3.2	Total Hrs./Day

Note: These schedules are intended only for compliance with local municipal codes and the water efficient landscape ordinance. These calculations represent the maximum reasonable run times and are used to ensure that all irrigation may be completed during the specific watering window allowed. These schedules do not include rainfall, site soil types, specific exposures (shade versus sun), actual irrigation days, or specific slope position. It is solely the responsibility of the irrigation contractor to program the controller as required to apply the correct amount of irrigation water for the landscape. All smart controllers shall be programmed using the specified ET or weather sensing equipment, satellite provided ET data, soil moisture sensors, and rain shut off devices as required. Contractor shall provide a controller schedule inside the controller cabinet prior to final turnover of the project to the owner.

WATER PRESSURE LOSS CALCULATIONS

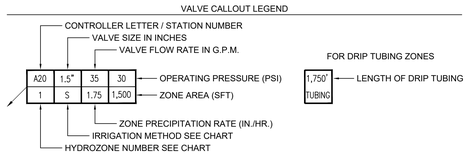
POINT OF CONNECTION NUMBER	1	WATER METER SIZE (In.)	N/A
POINT OF CONNECTION ELEV. (Ft.)	0	HYDRAULIC GRADE LINE (Ft.)	0
REMOTE CONTROL VALVE NUMBER	A4	STATIC PRESSURE (PSI)	0.0
R.C.V. DEMAND (GPM)	47.0	TOTAL DEMAND (GPM)	47.0

sweeney + associates IRRIGATION DESIGN AND CONSULTING

PRESSURE LOSS CALCULATION IS PROVIDED FOR THIS PROJECT BY **SWEENEY & ASSOCIATES, INC.** UNAUTHORIZED USE BY ANY OTHER PERSON, COMPANY OR PROJECT IS FORBIDDEN WITHOUT WRITTEN PERMISSION.

SIZE (In.)	DESCRIPTION	FLOW	#	LOSS	UNITS
2.00	BACKFLOW PREVENTER EXISTING	47	1	13.00	PSI
2.00	BACKFLOW FILTRATION EXISTING	47	2	0.50	PSI
2.00	BFD ASSEMBLY PIPING (BRASS W/ 4 ELLS)	47	3	1.43	PSI
2.00	MASTER CONTROL VALVE	47	4	2.90	PSI
2.00	FLOW SENSOR	47	5	1.00	PSI
3.00	MAINLINE ISOLATION VALVES (BALL TYPE)	47	6	0.50	PSI
3.00	265 FEET OF MAINLINE: SCH 40 PVC	47	7	0.66	PSI
1.50	REMOTE CONTROL VALVE ASSEMBLY	47	8	2.40	PSI
10%	LATERAL LINE LOSSES	47	9	5.00	PSI
20%	ADDITIONAL FITTING LOSS IN MAINLINE	N/A	10	0.13	PSI
0.00	ELEVATION CHANGE (TO HIGHEST AREA)	N/A	11	0.00	PSI
TOTAL SYSTEM PRESSURE LOSS		***SUM OF 1 THRU 11***	12	27.5	PSI
OPERATING PRESSURE REQUIRED		***INFORMATION FOR RCV***	13	50.0	PSI
TOTAL DESIGN PRESSURE REQUIRED		***SUM OF 12 THRU 13***	14	77.5	PSI
STATIC WATER PRESSURE		***FROM ABOVE***	15	0.0	PSI
RESIDUAL WATER PRESSURE		***SUBTRACT 14 FROM 15***	16	-77.5	PSI

VALVE CALLOUT LEGEND



HYDROZONE DESCRIPTION CHART			
NUMBER	DESCRIPTION OF THE HYDROZONE	WUCOLS	PLANT FACTOR
HZ 1	MODERATE WATER USE TURF	M	0.50

IRRIGATION METHOD DESCRIPTION CHART			
LETTERS	DESCRIPTION OF THE IRRIGATION	TYPE	IR. EFFICIENCY
R	ROTOR HEADS	SPRAY	0.75

sweeney + associates
IRRIGATION DESIGN AND CONSULTING
s+a
3000 Joe DiMaggio Blvd., Bldg. 1700, Suite 61
Round Rock, Tx 78665
e: info@sweeneyassoc.com | t: (512) 306-9350
w: www.sweeneyassoc.com | f: (512) 306-9035

PBK

ARCHITECT
PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

JEFFERSON HUNT ES - WATER LINE REPLACEMENT

PROJECT ADDRESS:
13421 E. Pumalo St.
San Bernardino, CA 92404

100% CD

F WING
PS-17
F
E
D
K
C
A
B
KEY PLAN
NORTH: PLAN TRUE

Consultant

Architect
LICENSED ARCHITECT
Yong Yao
No. C-31162
REN. 10-31-2025
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
03-08-24	230432

REVISIONS

No.	Description	Date

100% CD

IRRIGATION LEGEND

L1.01 2 ADDITIVE BID ALTERNATE

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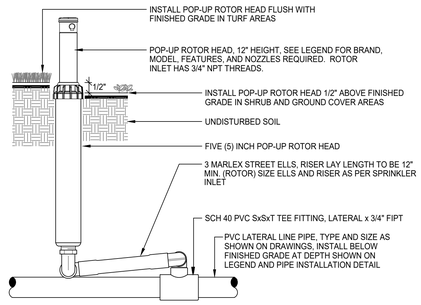
A1.00 - SITE PLAN

0" 1"



NOTE:
NO OVERHEAD IRRIGATION ALLOWED WITHIN 24" OF NON-PERMEABLE SURFACES.
INSTALL ROTOR HEADS PLUMB. ADJUST NOZZLE STREAM TO COVER THE LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS OR BUILDINGS.

SECTION VIEW - N.T.S.

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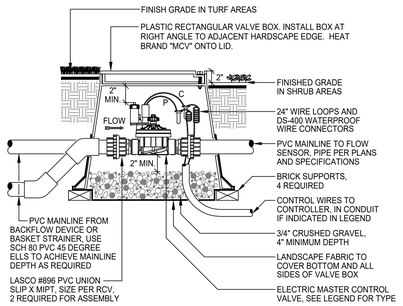
A POP-UP ROTOR HEAD



NOTE:
USE STANDARD OPENINGS PROVIDED IN VALVE BOX FOR PIPE, DO NOT CUT BOX.

SECTION VIEW - N.T.S.

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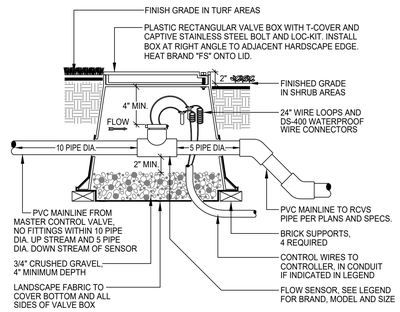
B MASTER CONTROL VALVE



NOTE:
USE STANDARD OPENINGS PROVIDED IN VALVE BOX FOR PIPE, DO NOT CUT BOX.
USE SCH 80 PVC 45 DEGREE ELLS TO ACHIEVE MAINLINE DEPTH AS REQUIRED.

SECTION VIEW - N.T.S.

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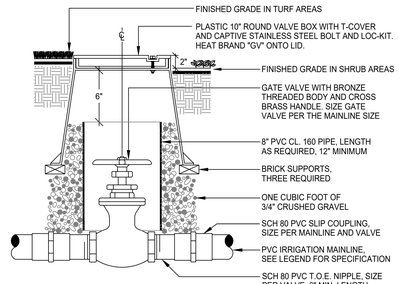
C FLOW SENSOR



SECTION VIEW - N.T.S.

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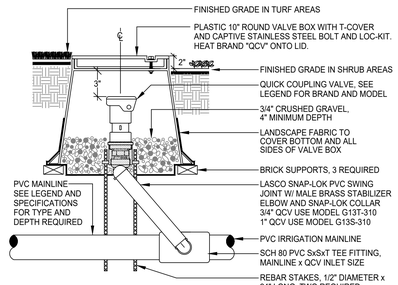
D GATE VALVE



NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.

SECTION VIEW - N.T.S.

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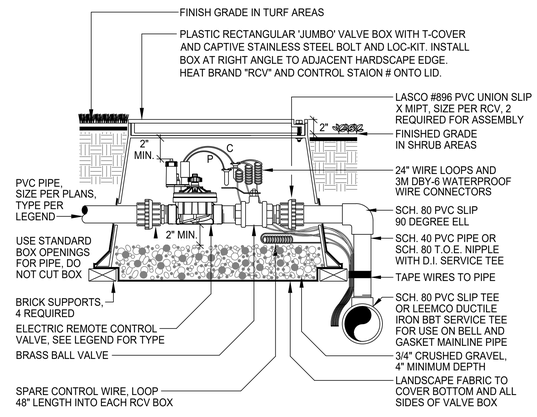
E QUICK COUPLER VALVE PVC



NOTE:
CONTRACTOR IS REQUIRED TO CONTACT 811 OR DIGALERT A MINIMUM OF TWO (2) DAYS PRIOR TO ANY EXCAVATION ON THE PROJECT. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG.

SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED WITHIN, EXCEPT WHEN USING BELL AND GASKET PIPING WHERE MAINLINE SLEEVES SHALL BE 2.5 TIMES THE SIZE OF THE PIPE.

SLEEVES SHALL EXTEND 12" PAST THE EDGE OF PAVING INTO THE PLANTER.

SECTION VIEW - N.T.S.

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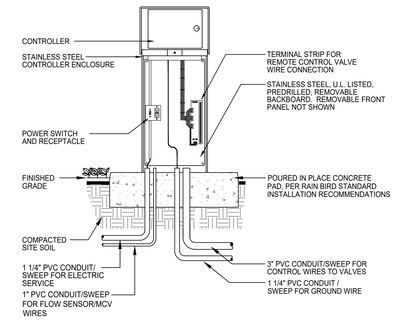
F REMOTE CONTROL VALVE (DECODER)



PLAN VIEW - N.T.S.

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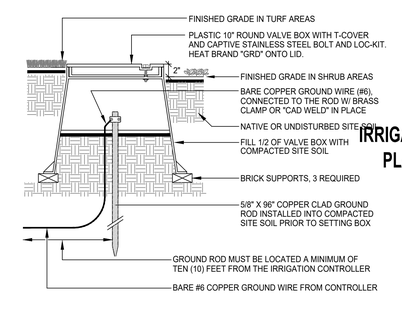
G CONTROLLER ASSEMBLY



NOTE:
CONTRACTOR IS REQUIRED TO CONTACT 811 OR DIGALERT A MINIMUM OF TWO (2) DAYS PRIOR TO ANY EXCAVATION ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG.

EACH CONTROLLER SHALL HAVE A MINIMUM OF ONE (1) GROUND ROD INSTALLED.

GROUND ROD SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET AWAY FROM THE IRRIGATION CONTROLLER OR ANY CONTROL WIRE PATH.

SECTION VIEW - N.T.S.

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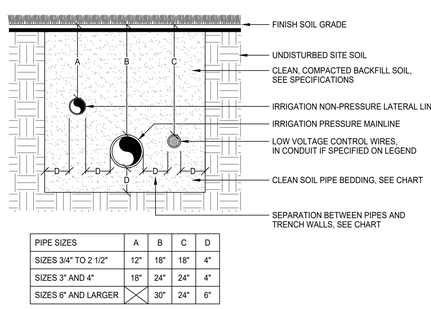
H GROUNDING REDUCTION



PIPE SIZES	A	B	C	D
SIZES 3/4" TO 2 1/2"	12"	18"	18"	4"
SIZES 3" AND 4"	18"	24"	24"	4"
SIZES 6" AND LARGER	X	30"	24"	6"

NOTE:
CONTRACTOR IS REQUIRED TO CONTACT 811 OR DIGALERT A MINIMUM OF TWO (2) DAYS PRIOR TO ANY EXCAVATION ON THE PROJECT. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG.

SECTION VIEW - N.T.S.

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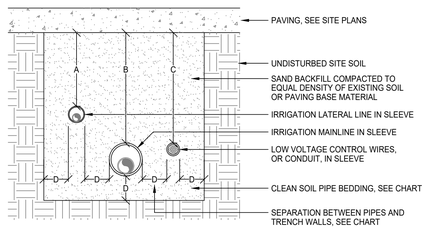
I PIPE INSTALLATION



PIPE SIZES	A	B	C	D
UNDER PEDESTRIAN PAVING	12"	24"	24"	4"
UNDER VEHICULAR PAVING	24"	36"	36"	6"

NOTE:
CONTRACTOR IS REQUIRED TO CONTACT 811 OR DIGALERT A MINIMUM OF TWO (2) DAYS PRIOR TO ANY EXCAVATION ON THE PROJECT. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG.

SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED WITHIN, EXCEPT WHEN USING BELL AND GASKET PIPING WHERE MAINLINE SLEEVES SHALL BE 2.5 TIMES THE SIZE OF THE PIPE.

SLEEVES SHALL EXTEND 12" PAST THE EDGE OF PAVING INTO THE PLANTER.

SECTION VIEW - N.T.S.

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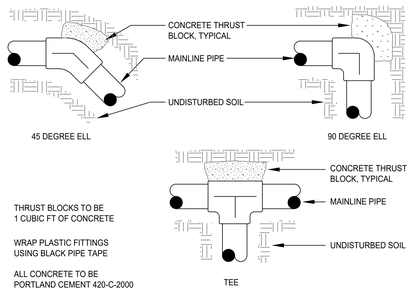
J SLEEVE INSTALLATION



PLAN VIEW - N.T.S.

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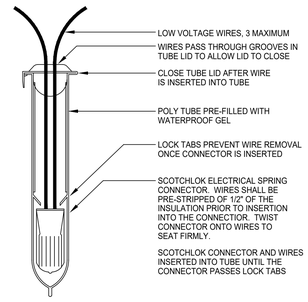
K MAINLINE THRUST BLOCKS



NOTE:
WIRE CONNECTOR SHALL BE A 3M DBR/Y-6 DIRECT BURY SPLICE KIT (U.L. APPROVED).

KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL.

DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2 - 3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

SECTION VIEW - N.T.S.

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L WIRE CONNECTORS

PBK
ARCHITECT PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

JEFFERSON HUNT ES - WATER LINE REPLACEMENT

PROJECT ADDRESS:
1342 E. Pumalo St.
San Bernardino, CA 92404

100% CD

IRRIGATION PLAN

F WING
PS-17
F
E
D
K
C
A
B
KEY PLAN
NORTH: PLAN TRUE

Consultant

Architect
LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2025
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
03-08-24	230432

REVISIONS

No.	Description	Date

100% CD

IRRIGATION DETAILS

L1.01 2
ADDITIVE BID ALTERNATE

sweeney + associates
IRRIGATION DESIGN AND CONSULTING
s+a
3000 Joe DiMaggio Blvd., Bldg. 1700, Suite 61
Round Rock, Tx 78665
e: info@sweeneyassoc.com | t: (512) 306-9350
w: www.sweeneyassoc.com | f: (512) 306-9035

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