LONG BEACH COMMUNITY COLLEGE DISTRICT
CONTRACTS MANAGEMENT DEPARTMENT
4901 EAST CARSON STREET
LONG BEACH, CA 90808
Ph. (562) 938-4947 | Fax: (562) 938-4544

BID C1872C WATER CONSERVATION & LANDSCAPE PROJECT AT THE LIBERAL ARTS CAMPUS

ADDENDUM NO. 4

May 22, 2018

This Addendum forms a part of the Contract Documents and modifies the original bid documents. Acknowledge receipt of the Addendum on Section 1.2 of the Bid Proposal. Failure to do so may result in the bid being deemed non-responsive.

Note: It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum.

ADDENDUM NO. 4 CONTENTS

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I. CHANGES TO NOTICE CALLING FOR BIDS

1. The Latest Time/Date for Submission of Bid Proposals is hereby changed from May 22, 2018 to **June 19, 2018 at 2:00PM**.
2. Item #11 Pre-Bid Inquiries – The date for submission of Pre-Bid Inquiries is hereby changed from May 14, 2018 to **June 5, 2018 at 10:00AM**.

II. CHANGES TO PLANS

1. Plans L1.1; L1.2; L2.1; L2.2; L2.3; L3.1; L3.2; L4.1; L4.2: L5.1 and L 6.1 have been updated with increased amount of tree demolition, addition of new trees, and all associated irrigation.
2. Union fittings added to all valve boxes.
3. Increased work boundary to include the east side of Building Z.
4. Commscope certified contractor to provide and install CAT-6 data wiring from IDF rooms to irrigation controllers. Commscope certified contractor also to provide and install all data wiring in ¾ inch conduits.

III. ATTACHMENTS

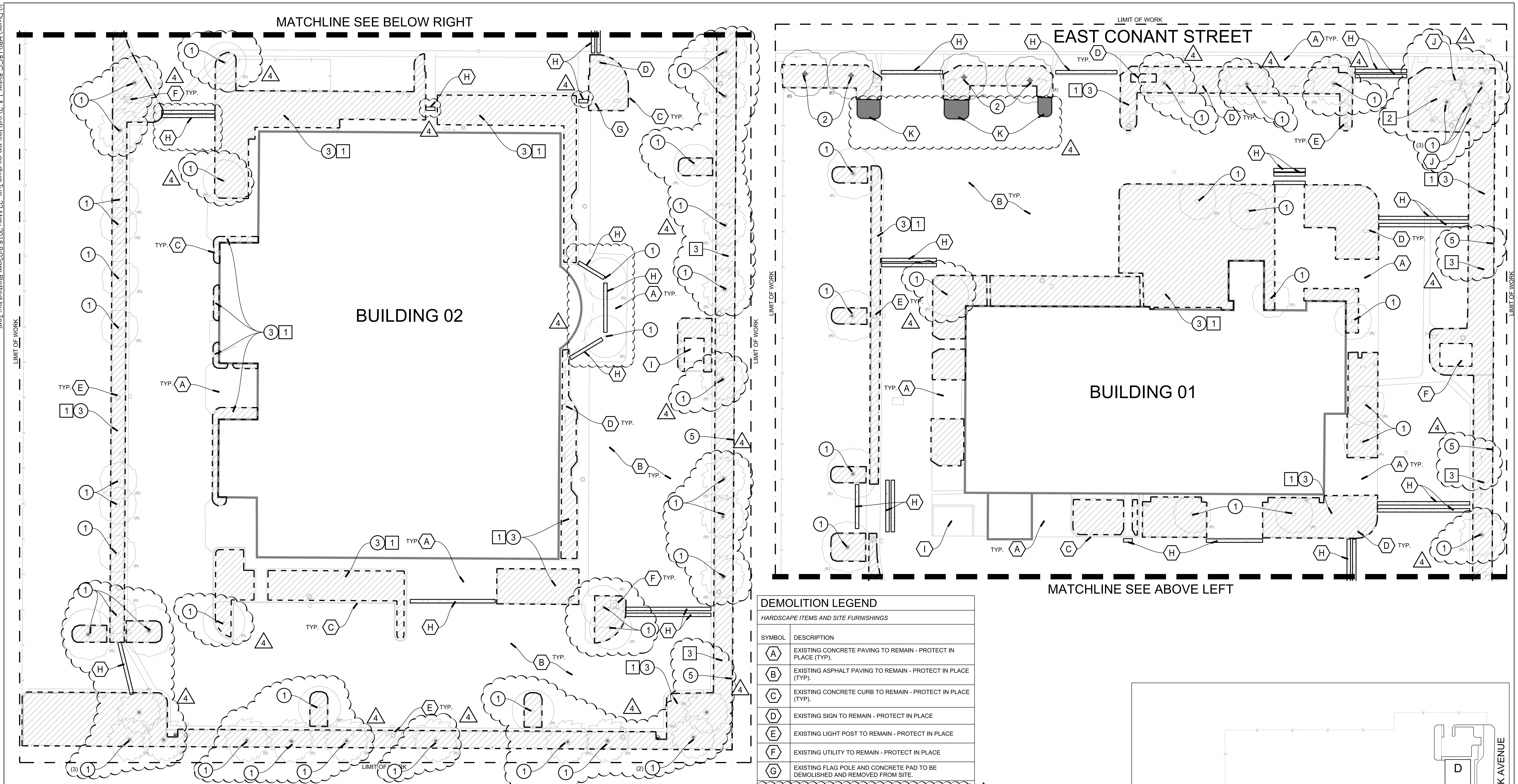
1. SK-02 added to include removal of the horn located on the east side of Building Z.

*****END OF ADDENDUM NO. 4*****

LONG BEACH COMMUNITY COLLEGE DISTRICT

Alan Moloney, Deputy Director
Purchasing & Contracts

5-22-18
Date



DEMOLITION NOTES

A. REMOVE ITEMS NOT REQUIRED FOR FILL OR RE-USE FROM THE PROJECT SITE AND DISPOSE OF IN ACCORDANCE WITH LOCAL CODES. DO NOT BURN RUBBISH OR DEBRIS ON SITE. RECYCLE MATERIALS WHENEVER POSSIBLE.

B. ANY DAMAGE TO EXISTING PLANT MATERIAL, IRRIGATION SYSTEM OR HARDSCAPE ELEMENTS THAT ARE TO REMAIN (I.E. CURBS, WALKS, WALLS, ADJACENT PROPERTY, ETC.) SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

C. CONTRACTOR SHALL LIST ALL EXISTING TREES TO REMAIN THAT HAVE HAD WORK PERFORMED WITHIN 6' OF TRUNK ON PLANT MATERIAL GUARANTEE. PROTECT TREES IN PLACE: DO NOT COMPACT SOIL UNDER DRIP LINE, DO NOT PARK VEHICLES WITHIN DRIP LINE, DO NOT STORE MATERIALS WITHIN DRIP LINE, OR OTHERWISE HARM TREES WHICH ARE TO REMAIN.

D. ALL SURFACES WHERE GROUNDCOVER HAS BEEN REMOVED SHALL BE GRUBBED AND BROUGHT TO A CONSISTENT GRADE HAVING NO IRREGULARITIES, TO THE SATISFACTION OF THE OWNER.

E. VERIFY LOCATIONS OF ALL UNDERGROUND UTILITY LINES, PIPES, VAULTS, OR BOXES PRIOR TO ANY EXCAVATION. NOTIFY OWNER IMMEDIATELY AND REPAIR ANY SUCH ITEMS IF DAMAGED. REPAIRS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

F. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF FIELD CONDITIONS SHOULD VARY FROM THOSE SHOWN ON PLAN.

G. LOCATIONS OF EXISTING SITE ELEMENTS (E.G. SIGNS, LIGHTS, VENTS, HYDRANTS, TRANSFORMERS, ETC.) ARE APPROXIMATE. NOTIFY THE OWNER IMMEDIATELY IF THE LOCATION OF THESE ITEMS INTERFERES WITH THE PROPER EXECUTION OF WORK.

H. VISIT THE SITE PRIOR TO SUBMITTING BID.

I. ALL TREES THAT ARE TO BE REMOVED SHALL HAVE ROOTS GROUND TO 24" MINIMUM BELOW PROPOSED FINISH GRADE.

J. PROVIDE CLEAN SAWCUT EDGE AT EXISTING PAVING TO REMAIN WHEN EXISTING CONCRETE PAVING IS DEMOLISHED AND REMOVED. REFER TO HARDSCAPE PLAN AND DETAILS FOR JOINING OF NEW AND EXISTING PAVING.

K. WHEN DEMOLISHING CONCRETE PAVING ADJACENT TO EXISTING VERTICAL SURFACES, I.E. BUILDING, WALLS, STEPS, ETC. PERFORM THE FOLLOWING PROCEDURES:

1. REMOVE EXISTING JOINT CAULKING, CONCRETE SLURRY, AND OTHER DELETERIOUS MATERIALS.
2. AFTER INSTALLING NEW PAVING, REPAIR VERTICAL EDGES TO MATCH ADJACENT SECTIONS OF NON-EFFECTED VERTICAL SURFACES.

EXISTING TREE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME
	PHOENIX DACTYLIFERA	DATE PALM
	LAGERSTOEMIA	CRAPE MYRTLE
	STREET TREE	
	PINUS SPP.	PINE TREE
	EUCALYPTUS SPP.	
	FICUS NITIDA	INDIAN LAUREL FIG
	METROSIDEROS EXCELSA	NEW ZEALAND CHRISTMAS TREE
	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE

TREES MARKED WITH AN (R) ARE TO BE REMOVED.
TREES MARKED WITH AN (E) ARE EXISTING TO REMAIN.

DEMOLITION LEGEND

HARDSCAPE ITEMS AND SITE FURNISHINGS

SYMBOL	DESCRIPTION
A	EXISTING CONCRETE PAVING TO REMAIN - PROTECT IN PLACE (TYP).
B	EXISTING ASPHALT PAVING TO REMAIN - PROTECT IN PLACE (TYP).
C	EXISTING CONCRETE CURB TO REMAIN - PROTECT IN PLACE (TYP).
D	EXISTING SIGN TO REMAIN - PROTECT IN PLACE
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F	EXISTING UTILITY TO REMAIN - PROTECT IN PLACE
G	EXISTING FLAG POLE AND CONCRETE PAD TO BE DEMOLISHED AND REMOVED FROM SITE.
H	CONTRACTOR TO BORE SLEEVES AT LOCATION SHOWN APPROXIMATELY 18" BELOW GRADE. (4)
I	EXISTING TRASH ENCLOSURE TO REMAIN - PROTECT IN PLACE
J	EXISTING BACKFLOW. PROVIDE ALLOWANCE FOR MODIFICATION AS NEEDED PER GRADING.
K	EXISTING SUB-SURFACE CONCRETE PAVING TO BE DEMOLISHED UP TO A 12" DEPTH. (APPROX. 9'X12' EACH LOCATION.) (4)

PLANTING ITEMS

SYMBOL	DESCRIPTION
(R) 1	DEMOLISH AND REMOVE EXISTING TREE FROM SITE. CONTRACTOR TO TAG ALL TREES TO BE REMOVED FOR REVIEW AND APPROVAL BY OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO DEMOLITION. GRIND TREE STUMPS TO A MINIMUM DEPTH OF 24" BELOW FINISH GRADE AND REMOVE EXISTING ROOTS LARGER THAN 1" IN DIAMETER
(E) 2	EXISTING TREE TO BE PROTECTED IN PLACE. EXERCISE CAUTION WHEN WORKING WITHIN THE DRIP LINE OF EXISTING TREES. DO NOT DAMAGE EXISTING ROOTS LARGER THAN 1" IN DIAMETER. CONTRACTOR TO TRIM TREES TO REJUVENATE GROWTH. (4)
3	DEMOLISH AND REMOVE FROM SITE EXISTING TURF, SHRUBS, AND GROUNDCOVER IN AREA INDICATED BY HATCH. REMOVE WEEDS, ROOTS AND STONES, ETC. PREPARE SOIL FOR NEW PLANTING INSTALLATION PER SPECIFICATIONS.
4	EXISTING TURF, SHRUBS, AND GROUNDCOVER TO REMAIN - PROTECT IN PLACE. ANY DAMAGE TO EXISTING LANDSCAPE WHICH RESULTS FROM CONSTRUCTION SHALL BE REPAIRED AND / OR REPLACED.
5	EXISTING VINE ON WALL TO BE PROTECTED IN PLACE. CONTRACTOR TO TRIM TOP OF VINE LIGHTLY. (4)

NOTE: DAMAGE TO EXISTING IRRIGATION EQUIPMENT WHICH RESULTS FROM DEMOLITION OF PLANT MATERIAL AS INDICATED ON THESE PLANS TO BE REPAIRED AND/OR REPLACED TO A LIKE-NEW CONDITION, PROVIDING 100% COVERAGE WITH NO OVERSPRAY. THIS REQUIREMENT DOES NOT APPLY IF DAMAGED AREAS ARE WITHIN THE SCOPE OF THE PROPOSED IRRIGATION DEMOLITION AS NOTED IN 'DEMOLITION LEGEND: IRRIGATION ITEMS' ON THIS SHEET

IRRIGATION ITEMS

SYMBOL	DESCRIPTION
1	(EXISTING) IRRIGATION SYSTEM WITHIN PLANTER AREA(S) SURROUNDED BY HEAVY DASHED LINE TO BE DEMOLISHED AND REMOVED. (4)

GRADING ITEMS

SYMBOL	DESCRIPTION
2	STRAIGHT GRADE FROM BACK OF CURB TO BACK OF WALK. SEE SECTION C, L6.1 FOR PROPOSED CUT. APPLICABLE AT EAST ENTRANCE OFF CONANT STREET.
3	GRADE SLOPE ALONG EAST EDGE UP FROM 1-1/2" BELOW TOP OF CURB TO EXISTING VINE ROOTS.

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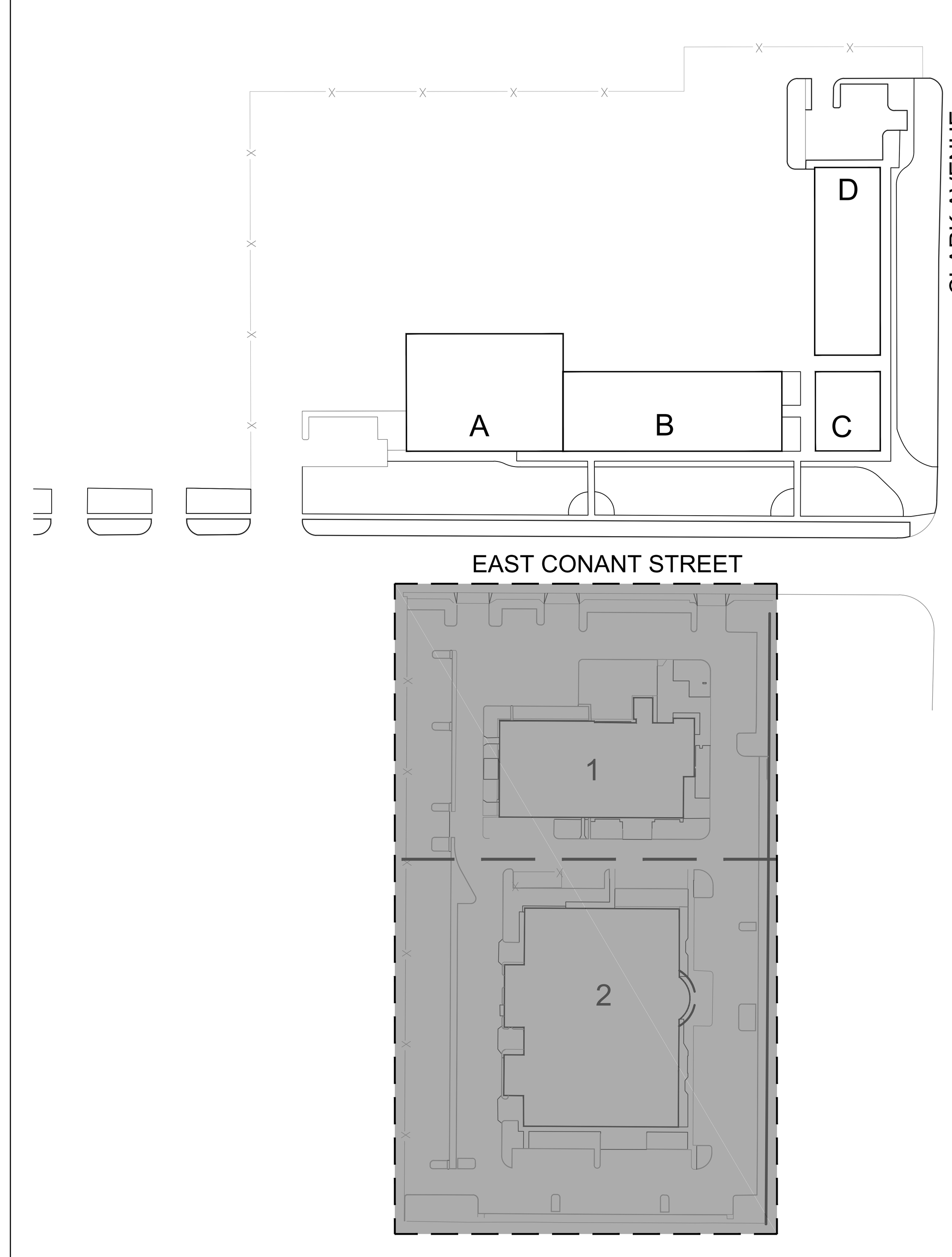

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CONSULTANTS

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SUITE 200
IRVINE • CA 92618
949.387.1323
RIDGELA.COM

SEALS / APPROVALS

REGISTERED LANDSCAPE ARCHITECT JAMES J. RIDGE LIC. #2809 (Signature) 05/17/18 (Date) 05/31/19 (Exp. Date) STATE OF CALIFORNIA

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LIBERAL ARTS CAMPUS

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DRAWN BY MR
CHECKED BY TC

SHEET TITLE
LANDSCAPE DEMOLITION PLAN

SHEET NUMBER
L1.1

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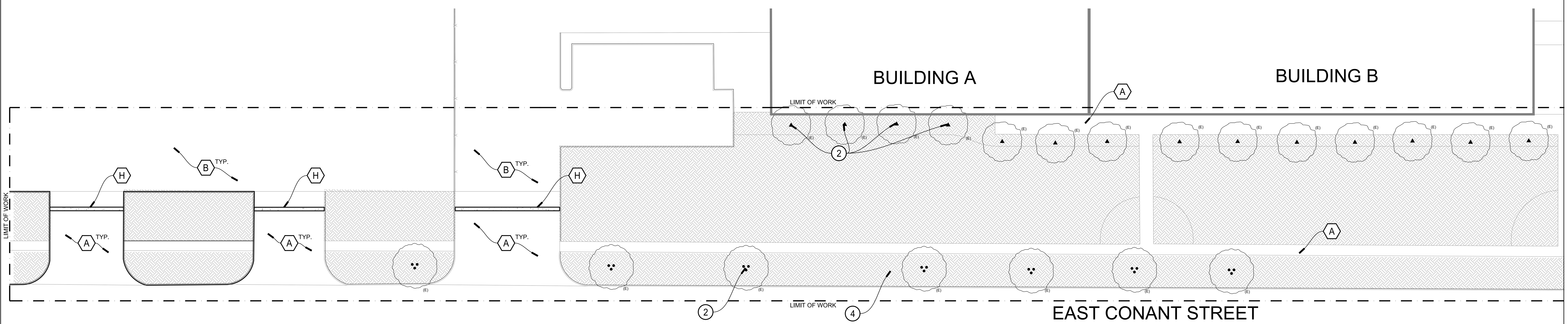

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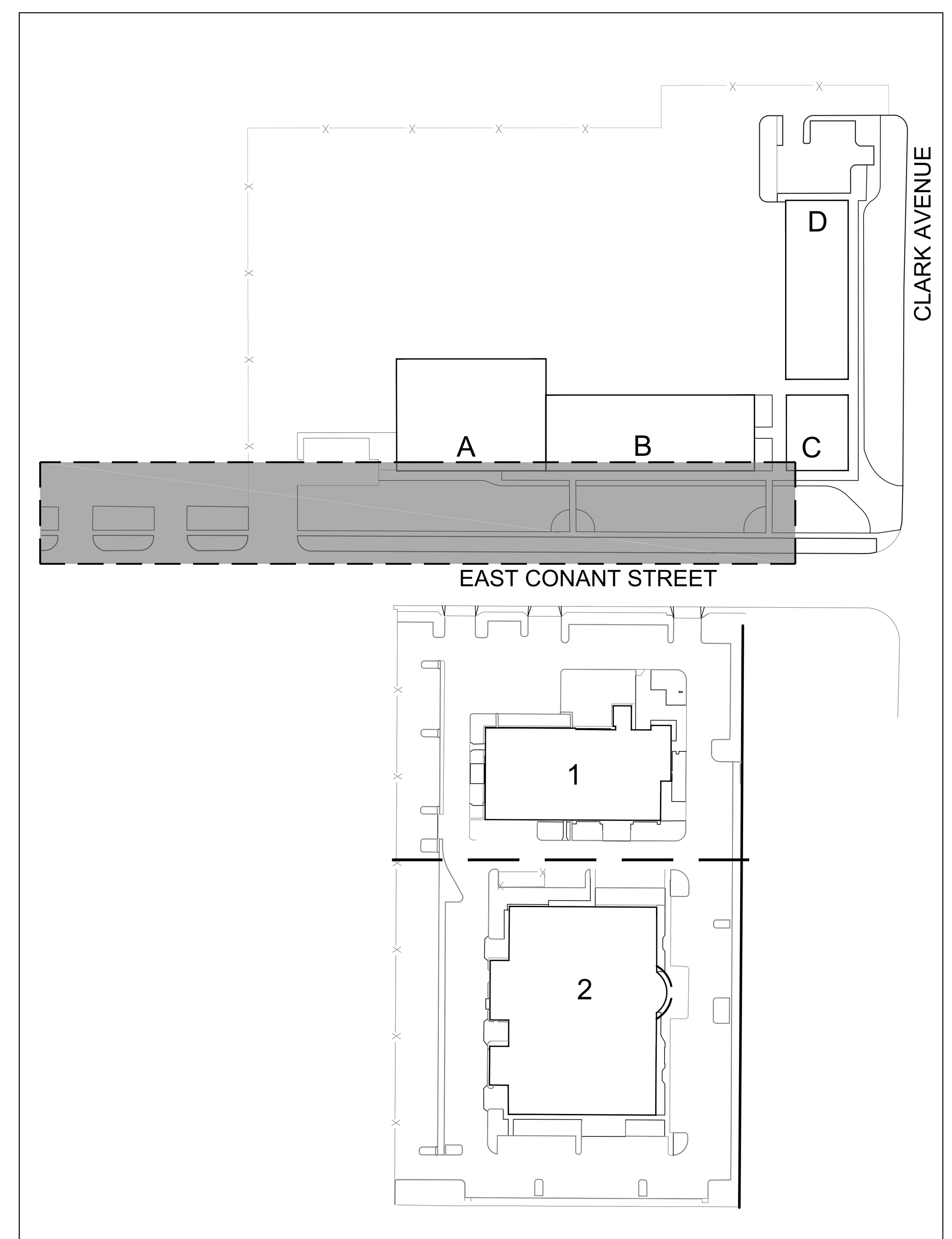

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DATE 05/17/2018

DRAWN BY MR

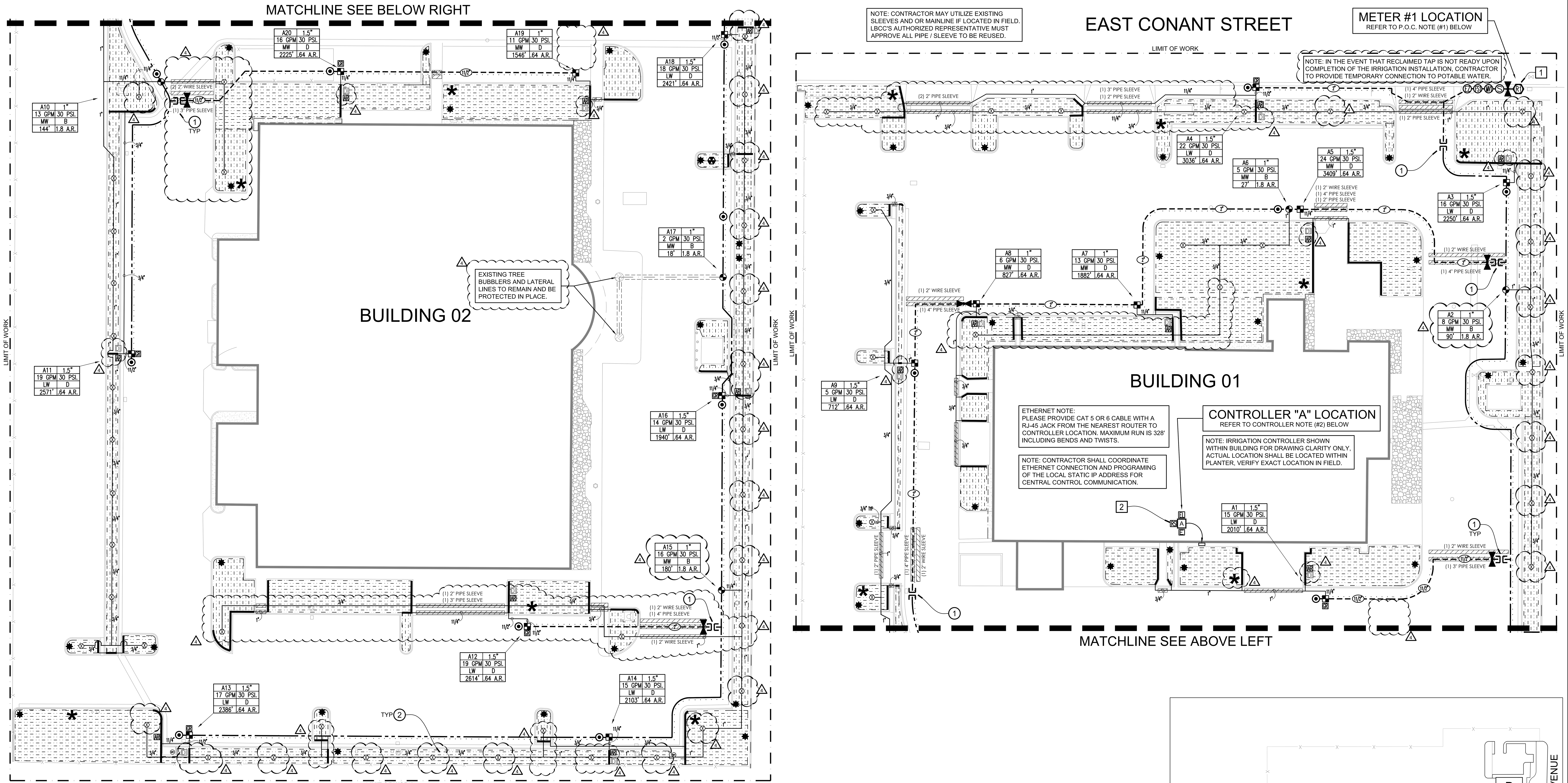
CHECKED BY TC

SHEET TITLE

LANDSCAPE DEMOLITION PLAN

SHEET NUMBER

L1.2



IRRIGATION PIPE AND EQUIPMENT LOCATION NOTES

1. ALL IRRIGATION EQUIPMENT, SPRINKLERS AND PIPE THAT ARE SHOWN IN PAVING IS FOR DRAWING CLARITY ONLY. ALL EQUIPMENT SHALL BE INSTALLED WITHIN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE.
2. MAINLINE AND VALVE LOCATIONS SHOWN ON THIS DRAWING ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE ALL IRRIGATION APPURTENANCE LOCATION FOR REVIEW AND APPROVAL. FINAL LOCATION AND EXACT POSITIONING OF ALL IRRIGATION APPURTENANCE SHALL BE DETERMINED BY THE COLLEGE'S AUTHORIZED REPRESENTATIVE. MINOR MODIFICATIONS OF ALL IRRIGATION APPURTENANCE AS REQUESTED BY THE COLLEGE SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. FAILURE TO OBTAIN COLLEGE'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE COLLEGE DIRECTED REVISION AT NO CHARGE.

IRRIGATION VALVE CALLOUT

CONTROLLER LETTER / VALVE NUMBER →	A2	1.5"	← VALVE SIZE
GALLONS PER MINUTE G.P.M. →	16 GPM	30 PSI.	← OPERATING PRESSURE (P.S.I.)
HYDROZONE PLANT FACTOR →	LW	D	← IRRIGATION TYPE & (IE) EFFICIENCY - SEE VALVE HYDROZONE LEGEND (BELOW)
LANDSCAPE HYDROZONE AREA SQUARE FOOTAGE →	2000'	.64 A.R.	APPLICATION RATE IN INCHES PER HOUR

HYDROZONE LEGEND

Plant Factor (Water Use) - from WUCOLS
Selected based on type of plants in hydrozones:

VLW = 0.1 - Very Low Water Use Plants
LW = 0.1 - 0.3 - Low Water Use Plants
MW = 0.4 - 0.6 - Moderate Water Use Plants
HW = 0.7 - 0.9 - High Water Use Plants

IE - Irrigation Efficiency

S = Spray .71
M = Micro Spray .73
R = Rotor .73
B = Bubbler .77
D = Drip .81

IRRIGATION NOTE CALLOUT

(1) IRRIGATION CONSTRUCTION CALLOUT NUMBER.

[1] P.O.C. AND CONTROLLER CALLOUT NUMBER.

IRRIGATION CONSTRUCTION NOTES

(1) **MAINLINE CONNECTION NOTE:**
CONTRACTOR SHALL CONNECT PROPOSED NEW IRRIGATION MAINLINE TO THE EXISTING IRRIGATION SYSTEM LOCATED IN THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY ACTUAL EXISTING IRRIGATION MAINLINE LOCATION IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. CONTRACTOR SHALL REFER TO IRRIGATION AS-BUILTS, IF AVAILABLE, FOR EXISTING IRRIGATION SYSTEM LAYOUT. CONTRACTOR SHALL VERIFY ALL IRRIGATION CONNECTION AND DISCONNECTION POINTS IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

(2) **TRENCHING IN VICINITY OF EXISTING TREES**
WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED, THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

(3) **STUB-OUT NOTE:**
CONTRACTOR SHALL PROVIDE IRRIGATION MAINLINE STUB-OUT WITH NEW 2-WIRE DECODER CONTROL WIRES AT THIS APPROXIMATE LOCATION FOR FUTURE ADJACENT IRRIGATION IMPROVEMENTS CONNECTION. CONTRACTOR SHALL INSTALL SAID STUB-OUT AND WIRES WITHIN A RECTANGULAR PLASTIC VALVE BOX. CONTRACTOR SHALL VERIFY EXACT STUB-OUT LOCATION IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

(4) **TRENCHING IN TURF**
CONTRACTOR TO REPAIR OR REPLACE ALL TURF IN KIND DAMAGED DURING CONSTRUCTION.

P.O.C. / METER #1 NOTES

[1] **P.O.C. NOTE #1:**
POINT OF CONNECTION #1 SHALL BE A NEW 1-1/2" RECYCLED WATER IRRIGATION METER WITH A 2" SERVICE LINE. VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. 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. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO THE COLLEGE.

RECYCLED WATER METER INFORMATION	
ADDRESS: 4901 EAST CARSON STREET LONG BEACH, CA. 90808	WATER PURVEYOR: CITY OF LONG BEACH PH.# 562-570-2328
METER SIZE	1-1/2"
STATIC PRESSURE	(HIGH 78 PSI.) (LOW 52 PSI.)
SYSTEM DESIGN PRESSURE	49 PSI.
MAXIMUM SYSTEM DEMAND	24 GPM
LANDSCAPE AREA SERVED	32,380 SQ. FT.

CONTROLLER "A" NOTES

[2] **CONTROLLER NOTE #2:**
EXISTING CONTROLLER "A" LOCATED AT THIS APPROXIMATE LOCATION SHALL BE REPLACED WITH A NEW ("ET" SMART) WEATHER BASED CONTROLLER, INSTALLED WITHIN STAINLESS STEEL ENCLOSURE WITH RELATED EQUIPMENT, SEE LEGEND FOR SIZE AND TYPE. ALL EXISTING AND NEW PROPOSED CONTROL VALVES SHALL BE CONNECTED TO THE NEW CONTROLLER AND VERIFY PROPER OPERATION. VALVE NUMBERS SHOWN SHALL BE ADJUSTED AS REQUIRED TO UTILIZE THE AVAILABLE OPEN CONTROLLER STATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING OF IRRIGATION CONTROL WIRES TO NEW CONTROLLER AND MAKING ALL NECESSARY CONNECTIONS. CONTRACTOR SHALL PROVIDE SLEEVING BELOW ALL PAVING BETWEEN EXISTING PLANTER AREAS AND BELOW EXISTING WALKS, AS REQUIRED TO ROUTE CONTROL WIRES TO CONTROLLER. VERIFY ALL SITE CONDITIONS AND LAYOUT IN FIELD PRIOR TO BIDDING AND COMMENCING WORK.

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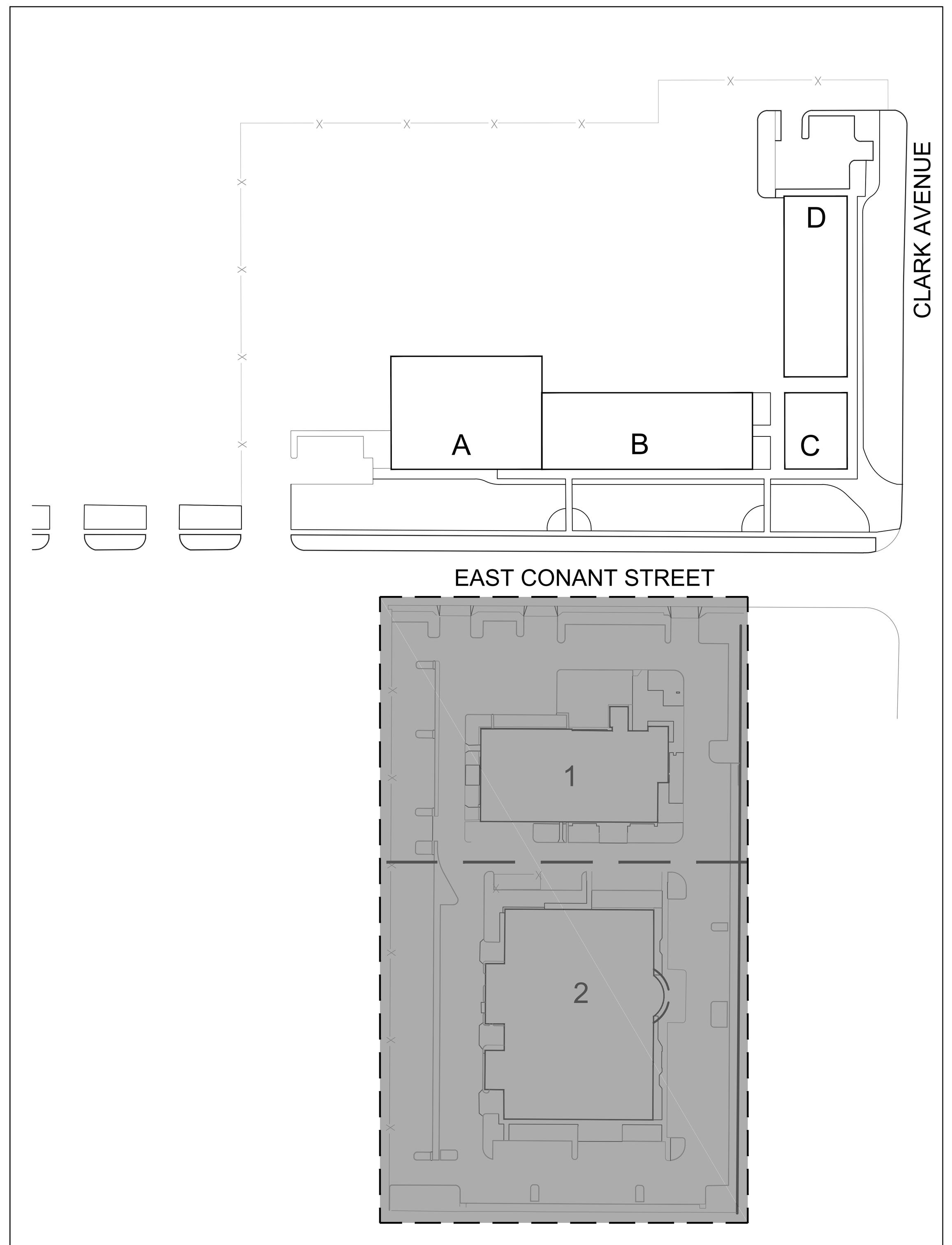

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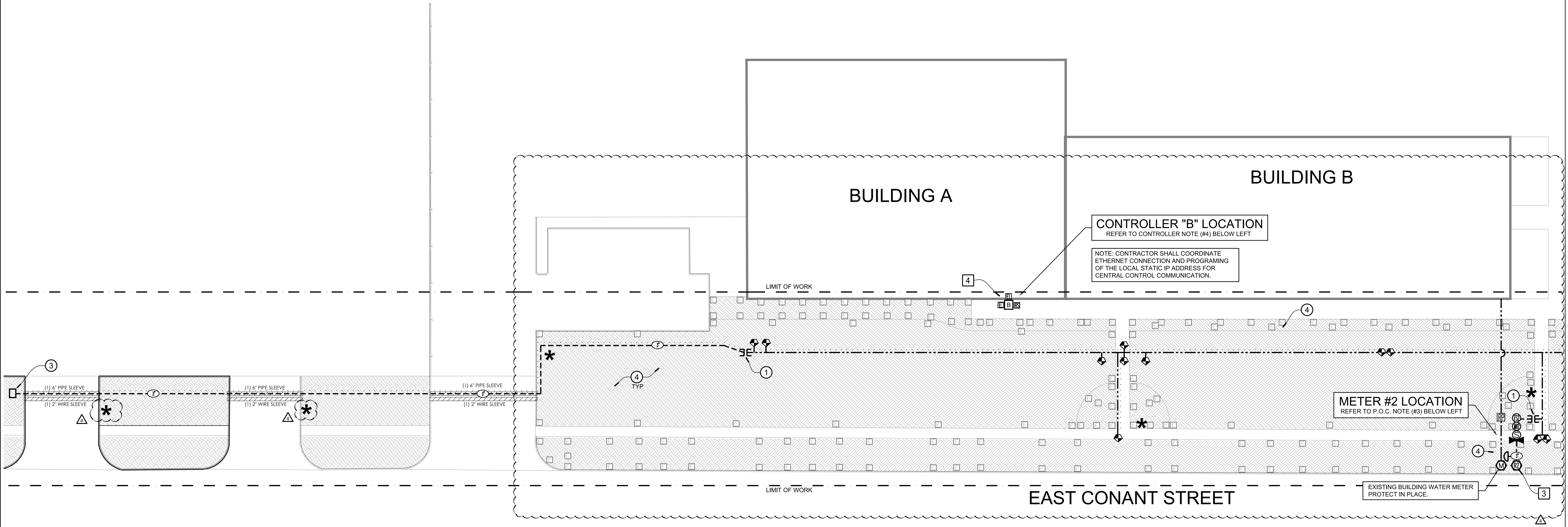
IRRIGATION PLAN

SHEET NUMBER

L2.1



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HW = 0.7 - 0.9 - High Water Use Plants

IE - Irrigation Efficiency

S = Spray .71
M = Micro Spray .73
R = Rotor .73
B = Bubbler .77
D = Drip .81

IRRIGATION NOTE CALLOUT

(1) IRRIGATION CONSTRUCTION CALLOUT NUMBER.

[1] P.O.C. AND CONTROLLER CALLOUT NUMBER.

IRRIGATION CONSTRUCTION NOTES

(1) **MAINLINE CONNECTION NOTE:**
CONTRACTOR SHALL CONNECT PROPOSED NEW IRRIGATION MAINLINE TO THE EXISTING IRRIGATION SYSTEM LOCATED IN THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY ACTUAL EXISTING IRRIGATION MAINLINE LOCATION IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. CONTRACTOR SHALL REFER TO IRRIGATION AS-BUILTS, IF AVAILABLE, FOR EXISTING IRRIGATION SYSTEM LAYOUT. CONTRACTOR SHALL VERIFY ALL IRRIGATION CONNECTION AND DISCONNECTION POINTS IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

(2) **TRENCHING IN VICINITY OF EXISTING TREES**
WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED, THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

(3) **STUB-OUT NOTE:**
CONTRACTOR SHALL PROVIDE IRRIGATION MAINLINE STUB-OUT WITH NEW 2-WIRE DECODER CONTROL WIRES AT THIS APPROXIMATE LOCATION FOR FUTURE ADJACENT IRRIGATION IMPROVEMENTS CONNECTION. CONTRACTOR SHALL INSTALL SAID STUB-OUT AND WIRES WITHIN A RECTANGULAR PLASTIC VALVE BOX. CONTRACTOR SHALL VERIFY EXACT STUB-OUT LOCATION IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

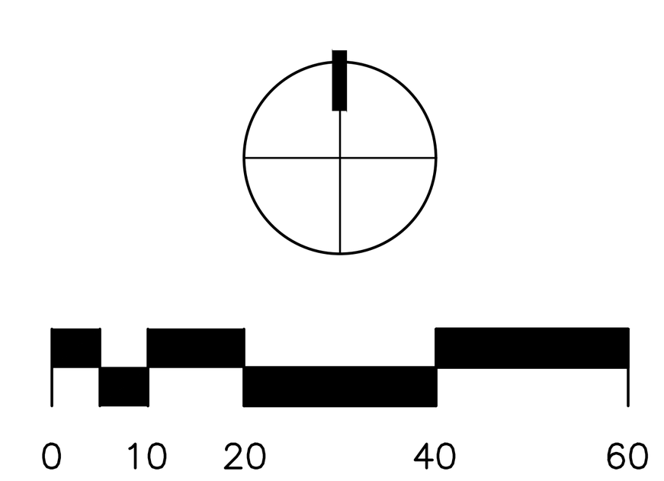
(4) **TRENCHING IN TURF**
CONTRACTOR TO REPAIR OR REPLACE ALL TURF IN KIND DAMAGED DURING CONSTRUCTION.

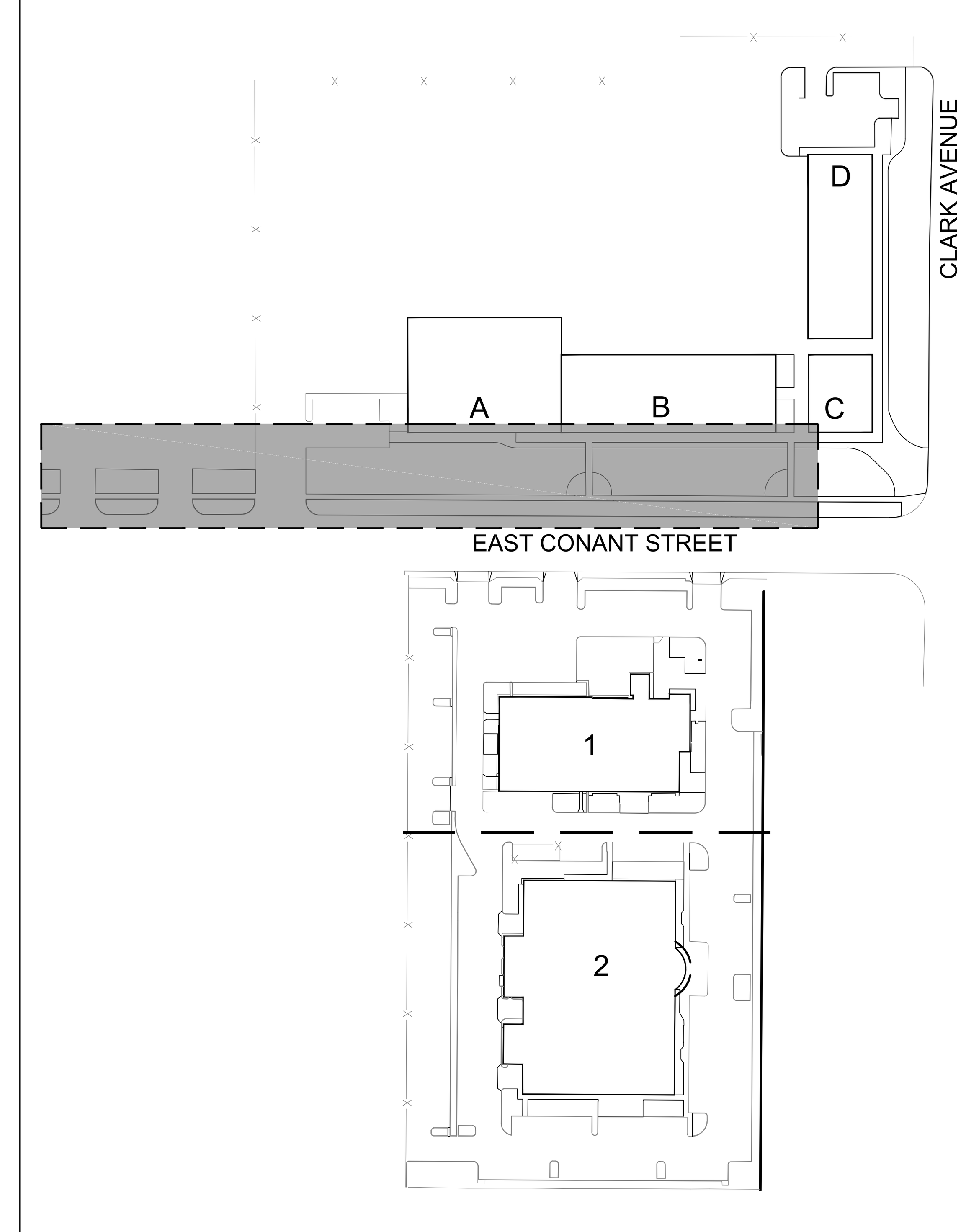
P.O.C. / METER #2 NOTES

[3] **P.O.C. NOTE #3:**
POINT OF CONNECTION SHALL BE DOWNSTREAM OF EXISTING 2" IRRIGATION METER CONVERTED TO RECYCLED WATER. VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. 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. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO THE COLLEGE.

EXISTING CONTROLLER "B" NOTES

[4] **CONTROLLER NOTE #2:**
EXISTING CONTROLLER "B" LOCATED AT THIS APPROXIMATE LOCATION SHALL BE REPLACED WITH A NEW ("ET" SMART) WEATHER BASED CONTROLLER, INSTALLED WITHIN STAINLESS STEEL ENCLOSURE WITH RELATED EQUIPMENT, SEE LEGEND FOR SIZE AND TYPE. ALL EXISTING AND NEW PROPOSED CONTROL VALVES SHALL BE CONNECTED TO THE NEW CONTROLLER AND VERIFY PROPER OPERATION. VALVE NUMBERS SHOWN SHALL BE ADJUSTED AS REQUIRED TO UTILIZE THE AVAILABLE OPEN CONTROLLER STATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING OF IRRIGATION CONTROL WIRES TO NEW CONTROLLER AND MAKING ALL NECESSARY CONNECTIONS. CONTRACTOR SHALL PROVIDE SLEEVING BELOW ALL PAVING BETWEEN EXISTING PLANTER AREAS AND BELOW EXISTING WALKS, AS REQUIRED TO ROUTE CONTROL WIRES TO CONTROLLER. VERIFY ALL SITE CONDITIONS AND LAYOUT IN FIELD PRIOR TO BIDDING AND COMMENCING WORK.





KEYMAP

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SEALS / APPROVALS

REGISTERED LANDSCAPE ARCHITECT
JAMES J. RIDGE
LIC. #2809
(Signature)
05/17/18
(Date)
05/31/19
(Exp. Date)
STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
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PROJECT TITLE

BUILDINGS 1 & 2 Z
4901 EAST CARSON STREET
LONG BEACH, CA. 90808
T: (562) 938-4111
F: (562) 938-3912

LONG BEACH CITY COLLEGE
LONG BEACH CITY COLLEGE
LIBERAL ARTS CAMPUS

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DRAWN BY MR

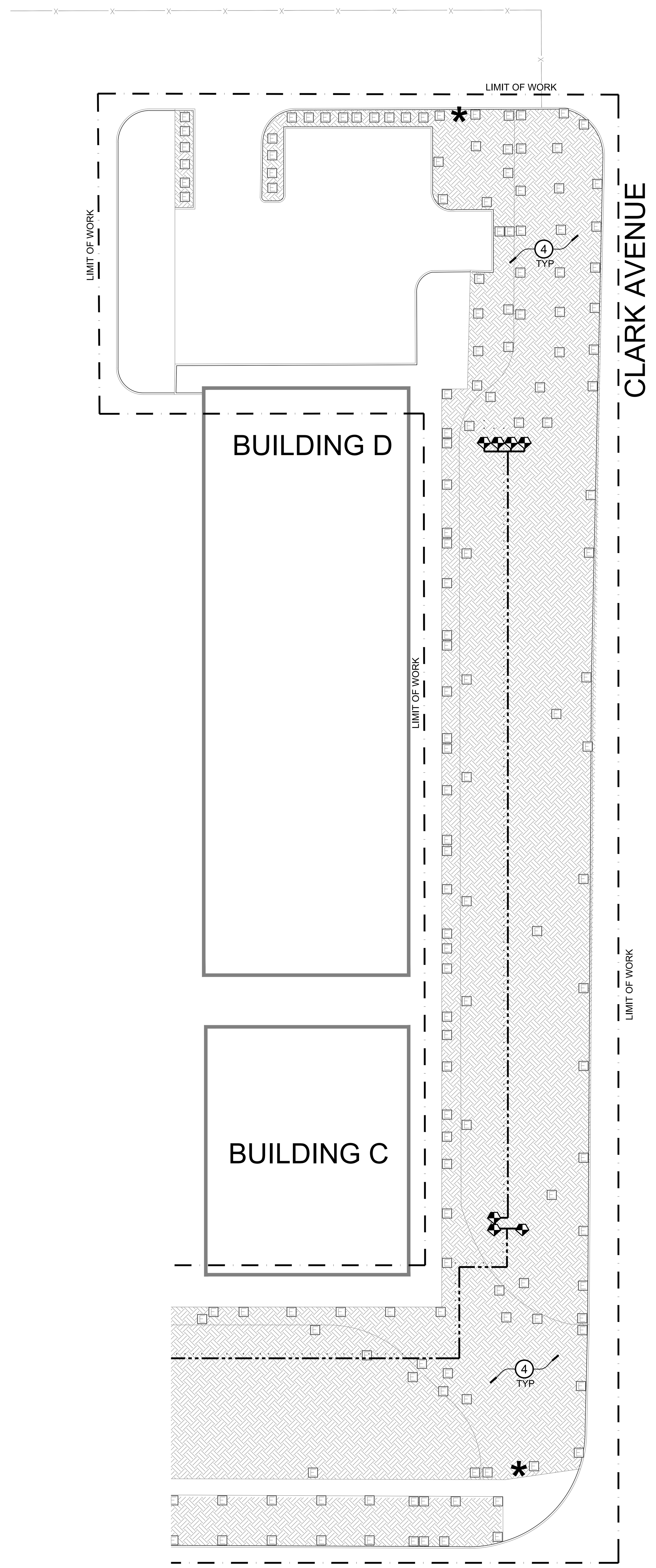
CHECKED BY TC

SHEET TITLE

IRRIGATION PLAN

SHEET NUMBER

L2.2



IRRIGATION PIPE AND EQUIPMENT LOCATION NOTES

1. ALL IRRIGATION EQUIPMENT, SPRINKLERS AND PIPE THAT ARE SHOWN IN PAVING IS FOR DRAWING CLARITY ONLY. ALL EQUIPMENT SHALL BE INSTALLED WITHIN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE.
2. MAINLINE AND VALVE LOCATIONS SHOWN ON THIS DRAWING ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE ALL IRRIGATION APPURTENANCE LOCATION FOR REVIEW AND APPROVAL. FINAL LOCATION AND EXACT POSITIONING OF ALL IRRIGATION APPURTENANCE SHALL BE DETERMINED BY THE COLLEGE'S AUTHORIZED REPRESENTATIVE. MINOR MODIFICATIONS OF ALL IRRIGATION APPURTENANCE AS REQUESTED BY THE COLLEGE SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. FAILURE TO OBTAIN COLLEGE'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE COLLEGE DIRECTED REVISION AT NO CHARGE.

IRRIGATION VALVE CALLOUT

CONTROLLER LETTER / VALVE NUMBER →	A2	1.5"	← VALVE SIZE
GALLONS PER MINUTE G.P.M. →	16 GPM	30 PSI.	← OPERATING PRESSURE (P.S.I.)
HYDROZONE PLANT FACTOR →	LW	D	← IRRIGATION TYPE & (IE) EFFICIENCY - SEE VALVE HYDROZONE LEGEND (BELOW)
LANDSCAPE HYDROZONE AREA SQUARE FOOTAGE →	2000'	.64 A.R.	← APPLICATION RATE IN INCHES PER HOUR

HYDROZONE LEGEND

Plant Factor (Water Use) - from WUCOLS
Selected based on type of plants in hydrozones:

VLW = 0.1 - Very Low Water Use Plants
LW = 0.1 - 0.3 - Low Water Use Plants
MW = 0.4 - 0.6 - Moderate Water Use Plants
HW = 0.7 - 0.9 - High Water Use Plants

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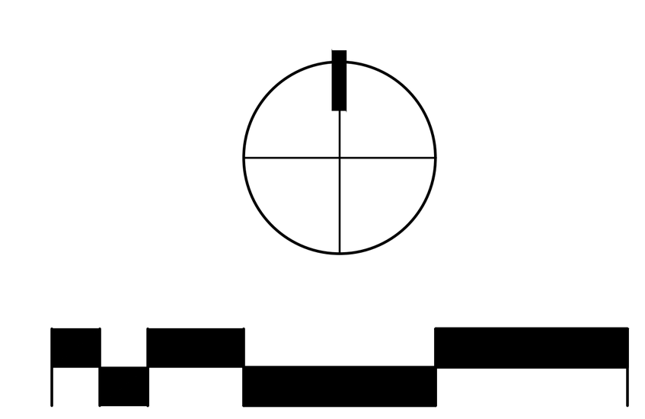

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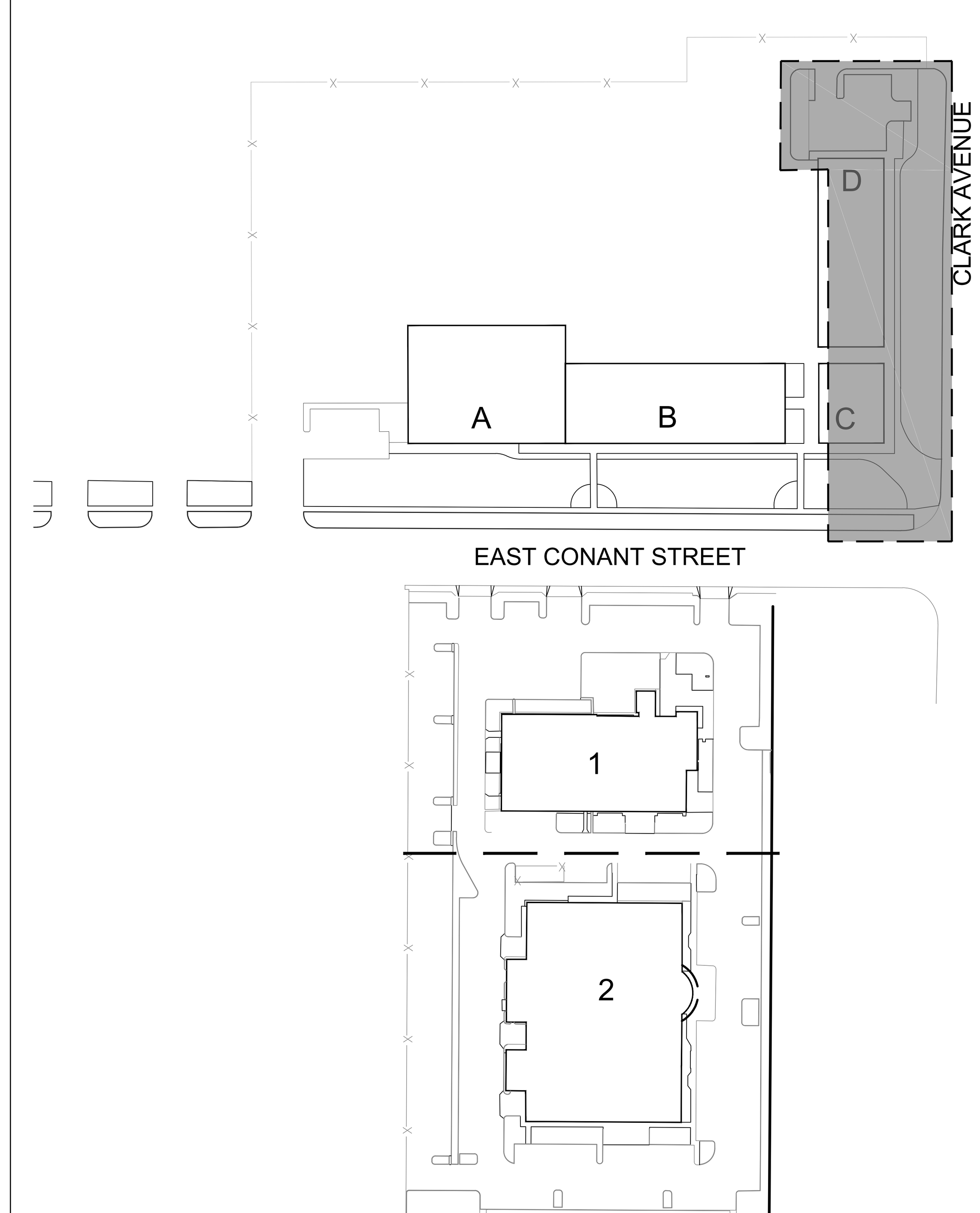

KEYMAP

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DRAWN BY MR

CHECKED BY TC

SHEET TITLE

IRRIGATION PLAN

SHEET NUMBER

△4

L2.3

FOR REFERENCE ONLY:
AB1881 WATER BUDGET CALCULATIONS SHOWN FOR REVISED LANDSCAPE AREA ONLY.
(CALCULATIONS SHOW THIS PROJECT TO BE IN COMPLIANCE WITH STATE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE "MWELO")

AB 1881 "MWELO" WATER BUDGET CALCULATIONS

Maximum Applied Water Allowance (MAWA)

The project's Maximum Applied Water Allowance shall be calculated using this equation:

MAWA = (ETo) x (0.62) x [(0.45 x LA) + (0.55 x SLA)]

Eto *(Historical Evapotranspiration for Area)* = 49.5
ETAF *(Evapotranspiration Adjustment Factor - LA)* = 0.45
ETAF *(Evapotranspiration Adjustment Factor - SLA)* = 0.55
LA *(Total Landscaped Area including SLA)* = 32,380 ft2
SLA *(Special Landscaped Area)* = 0 ft2
0.62 *(Conversion Factor)*

	Eto		ETAF		LA or SLA (ft^2)		Conversion	MAWA (Gallons Per Year)
MAWA for LA =	49.50	x	0.45	x	32,380	x	0.62	447,184
MAWA for SLA =	49.50	x	0.55	x	0	x	0.62	0
Totals =					32,380			447,184

Maximum Applied Water Allowance (MAWA) = 447,184 Gal/yr 597.8 CCF/yr

Estimated Total Water Use (ETWU)

The project's Estimated Total Water Use shall be calculated using this equation:

ETWU = (Eto) (0.62) [(PF x HA) / IE + SLA]
ETWU = Estimated Total Water Use per year (gallons)
Eto = Referance Evapotranspiration (inches) 49.5 (inches per year)
PF = *Plant Factor from WUCOLS (see section 491)*
HA = Hydrozone Area [high, medium and low water use areas] (square feet)
SLA = *Special Landscape Area (square feet)*
0.62 = *Conversion Factor*
IE = *Irrigation Efficiency*

		Eto		Conversion		PF		HA (ft2) SLA (ft2)		IE	Gallons
Hydrozone Area # 1	Shrub Drip (MOD)	49.50	x	0.62	x	0.40	x	9,891	÷	0.81	149,904
Hydrozone Area # 2	Shrub Drip (LOW)	49.50	x	0.62	x	0.30	x	22,048	÷	0.81	250,612
Hydrozone Area # 3	(Tree Bubbler)	49.50	x	0.62	x	0.50	x	441	÷	0.77	8,789
Totals =								32,380			409,304

Estimated Total Water Use (ETWU) = 409,304 Gal / yr 547.2 CCF / yr

Percentage of savings over MAWA = **8.5%**
This Number Must Be Positive:

CONTROLLER SCHEDULING NOTE:
THESE SUGGESTED RUN TIMES ARE FOR REFERENCE ONLY. ACTUAL RUN TIMES MAY DIFFER DUE TO VARYING SITE CONDITIONS. CONTRACTOR SHALL ADJUST RUN TIMES AS REQUIRED TO PROVIDE APPROPRIATE WATER FOR EACH VALVE CIRCUIT. MULTIPLE CYCLES MAY BE REQUIRED TO MINIMIZE PONDING AND RUNOFF ONTO NON-IRRIGATED AREAS.

SEASONAL IRRIGATION SCHEDULE

Project Name: Long Beach City College
Meter Number: #1 Controller Letter: "A"

Cycles Per Day: 1
Days Per Week: 6

Evapotranspiration Rates:

Eto Historical: 49.56

	Winter	Spring	Summer	Fall
Eto Per Day	0.08	0.19	0.22	0.14
Eto Per Season	6.3	15.1	17.2	10.9

Run Times (Minutes per Day) = (60 x Eto x PF) ÷ (PR x IE) x (RD) ÷ (C)
Eto = Daily Evapotranspiration Rate
IE = Irrigation Efficiency
PR = Precipitation Rate (Inches per Hour)
RD = Run days (Seasonal Total)
C = Cycles per Day
PF = Plant Factor (Kc)
60 = Conversion to minutes

Irrigation Efficiency (%):

Rotors:	0.75
Spray Heads:	0.71
Bubbler Heads:	0.80
Drip Line:	0.90
Drip Emitter:	0.90
Stream Rotary:	0.75
Micro Spray	0.75

Precipitation Rate (in/hr)

Rotors:	0.45
Spray Heads:	1.60
Tree Bubbler:	1.80
Drip Line:	0.73
Vine Bubbler:	1.40
Stream Rotary:	0.45
Micro Spray:	0.61

Valve Quantity	Planting	Irrigation Type	Kc	PR	IE	Winter (Dec, Jan, Feb)	Spring (Mar, Apr, May)	Summer (Jun, Jul, Aug)	Fall (Sep, Oct, Nov)	
5	Shrub	Drip Line	0.40	0.73	0.90	3	7	8	5	Min. Per Day
10	Shrub	Drip Line	0.30	0.73	0.90	2	5	6	4	Min. Per Day
5	Tree	Bubbler	0.50	1.80	0.80	2	4	4	3	Min. Per Day
Total Valves	20	Total Hour Run Times @ 6 Days Per Week				0.8	1.8	2.0	1.3	Hours Per Day

Irrigation Pressure Calculation

Meter No:	1
Static Water Pressure PSI:	52 psi
Controller Letter:	A
Valve No:	A12
Valve Demand	19 GPM
Maximum System Demand	24 GPM
Elevation Change P.O.C. to Highest Head:	0 FT
Losses:	
1-1/2" Water Meter	1.0 psi
2" Service line	1.7 psi
2" Basket Strainer	1.5 psi
1-1/2" Master Valve	2.1 psi
1" Flow Sensor	1.0 psi
Isolation Valves	0.5 psi
1-1/2" R.C.V.	3.1 psi
700 Feet of 2" Mainline CL 315	3.0 psi
Fitting Loss 10%	1.4 psi
Lateral Line Loss 10%	3.0 psi
Loss to Highest Head	0.0 psi
Total Losses:	18 psi
Head Operating Pressure:	30 psi
Total Pressure Required:	48 psi
Static Pressure Available:	52 psi
Residual Pressure:	4 psi

IRRIGATION CONTROLLER EQUIPMENT LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
A B	CALSENSE CONTROLLER ASSEMBLIES - CONTROLLER "A" MODEL # CS3-2W-WM/CS3-EN /CS-2W-2ST(QTY TBD)/CS-2W-POC(1)/TP-110/FM1B : CONTROLLER "B" MODEL # CS3-48-WM/CS3-EN/CS3-2WIRE-OPT/CS-2W-2ST(QTY TBD)/CS-2W-POC(1)/TP-110/FM150B : CONTROLLER OPTIONS: CS3-2W-WM = 128 STATION 2-WIRE VERSION WALL MOUNT CONTROLLER. CS3-48-WM - CS3000 48 STATION BASE MODEL WALL MOUNT CONTROLLER. CS3-EN = ETHERNET DEVICE. CS3-2WIRE-OPT = 2-WIRE OPTION TO MAKE BASE MODEL CONTROLLER A HYBRID. CS-2W-2ST = TWO STATION DECODERS, ORDER QTY AS NEEDED, GROUP VALVES IN PAIRS WHEN POSSIBLE AS THIS IS A 2 STATION DECODER - QTY TBD IN FIELD. CS-2W-POC = DECODER FOR MASTER VALVE AND FLOW METER. TP-110 = AC LINE PROTECTION. FM1x0B = (1" OR 1.5") BRASS TEE-MOUNTED FLOW METER. NOTE: THE INSTALLATION OF CONTROLLERS MUST BE APPROVED AND CERTIFIED BY CALSENSE PRODUCT REPRESENTATIVE. CONTROLLER MUST BE CERTIFIED BY CALSENSE AND CONNECTED TO THE ETHERNET BEFORE FINAL JOB WALK. PROVIDE COPIES OF CERTIFICATION TO LBCC'S AUTHORIZED REPRESENTATIVE AND LANDSCAPE ARCHITECT. REVIEW THE IRRIGATION COMMUNICATION OPERATIONAL INTENT WITH THE AUTHORIZED REPRESENTATIVE PRIOR TO ORDERING IRRIGATION CONTROLLER ASSEMBLY TO ENSURE THE APPROPRIATE EQUIPMENT/OPTIONS AND CONFIGURATIONS ARE INCLUDED. VERIFY EXACT LOCATION IN FIELD WITH LBCC'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.	EE, FF, GG	L4.3
RS	CALSENSE - RAIN BUCKET. MOUNT SENSOR ON 2" GALVANIZED PIPE CLEAR OF ANY OBSTRUCTIONS AND WIRE TO CONTROLLER. VERIFY EXACT LOCATION IN FIELD WITH LBCC AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. INSTALL PER MANUFACTURES RECOMMENDATIONS.	FF	L4.3
EL	120 VOLT ELECTRICAL POWER PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD. THE COORDINATION OF POWER AND CONNECTION OF CONTROLLER SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.	N/A	N/A
E	ETHERNET DEVICE CABLE CONNECTION FOR CENTRAL CONTROL COMMUNICATION. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, CONNECTION AND THE COMPLETE SET-UP OF PROPER COMMUNICATION WITH THE CENTRAL CONTROL COMPUTER SYSTEM. PROVIDE PLENUM CAT6E CABLE BY UNIPRISE SOLUTIONS - CATEGORY 6E "ULTRAMEDIA®" 400MHZ, U/UTP, 4-PAIR, 1000 FT, BLUE - CMP - CS37P BLU C6 4/23 U/UTP CPK 1KFT WITH A RJ-45 JACK FROM THE NEAREST ROUTER IN SECOND FLOOR IDF ROOM TO CONTROLLER LOCATION. MAXIMUM RUN IS 328' INCLUDING BENDS AND TWISTS. ALL DATA CABLE TO BE INSTALLED IN 3/4" CONDUIT. INSTALLER TO BE CERTIFIED BY COMMSCOPE.	N/A	N/A
NO SYMBOL	PAIGE ELECTRIC - CONTROLLER GROUNDING: CONTRACTOR SHALL GROUND CONTROLLER AT MINIMUM USING ONE 5/8-INCH X 8-FOOT COPPER GROUNDING ROD, BUT NOT LESS THAN PER LOCAL AND NATIONAL ELECTRICAL CODE. GROUND WIRE AND ROD CONNECTIONS SHALL BE BY CADWELD PROCESS ONLY, CLAMPS ARE NOT AN ACCEPTABLE SUBSTITUTE. MAXIMUM GROUND RESISTANCE SHALL BE NO MORE THAN 10 OHM, REGARDLESS OF MANUFACTURER'S STATED NUMBER. CONTRACTOR SHALL PROVIDE PROOF OF MEASURED RESISTANCE TO COLLEGE'S AUTHORIZED REPRESENTATIVE BEFORE MAINTENANCE PERIOD BEGINS AND INCLUDE DOCUMENT WITHIN SUBMITTED OPERATIONS AND MAINTENANCE MANUAL.	GG	L4.3
GR	PAIGE ELECTRIC - GROUNDING EQUIPMENT: 5/8-INCH X 8-FOOT COPPER GROUNDING ROD. INSTALL ONE (1) GROUNDING ROD AT THE FIRST "RCV" AND LAST "RCV" ON ALL MAINLINE END RUNS AND EVERY 300 FEET ALONG 2-WIRE PATH PLACED AT CONTROL VALVE WITHIN VALVE BOX CONNECTED TO "RCV" DECODER. DO NOT SPLICE 2-WIRE PATH FOR GROUNDING. USE #6 AWG SOLID COPPER WIRE FROM THE COPPER ROD TO THE FIELD COMMON (WHITE WIRES IN THE BLACK HARNESS) OF THE DECODER. ALL GROUNDING TO BE PER CALSENSE SPECIFICATIONS. CONTACT ERIN HAGEN, CALSENSE, (760) 580-1835, FOR INSTALLATION INFORMATION AND PROCEDURE.	R, U, W, HH	L4.2 L4.3
NO SYMBOL	CALSENSE - 2 STATION RCV DECODER: MODEL CS-2W-2ST. INSTALL AT RCV MANIFOLD LOCATIONS. CONNECT TO CONTROLLER VIA 2-WIRE CABLE. A DECODER SHALL BE LOCATED NO FURTHER THAN 100' FROM THE RCV IT OPERATES. ASSIGN DECODERS AT CONTROLLER USING THE SERIAL NUMBER OF THE DECODER AND OUTPUT COLORED WIRES. LINE SURGE PROTECTION: GROUND WIRE INCLUDED WITH EACH DECODER. SEE SYSTEM GROUNDING PROTECTION GROUNDING DETAILS. P.O.C DECODER: MODEL CS-2W-POC. INSTALL ON FLOW METER AND MASTER VALVE. CONNECT TO CONTROLLER VIA 2-WIRE CABLE.	R, S, T, U, V, W	L4.2

RECYCLED WATER IRRIGATION LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	QTY	DETAIL	SHEET
*	RECYCLED WATER SIGNS, INSTALL QUANTITY AND LOCATIONS PER THE LONG BEACH CITY COLLEGE RECYCLED WATER REQUIREMENTS AND THE LOS ANGELES DEPARTMENT OF ENVIRONMENTAL HEALTH (LAC DEH) WATER RECYCLING REQUIREMENTS.	18	II	L4.3
NO SYMBOL	AS APPROVED - CONTROLLER SHALL HAVE RECYCLED WATER PLACARD INSTALLED AS REQUIRED.			
NO SYMBOL	T. CHRISTY'S - (PURPLE) "RECYCLED WATER" VALVE I.D. TAG INSTALL WITHIN EACH VALVE BOX TYP.			
NO SYMBOL	AS APPROVED - ALL VALVE BOXES SHALL BE (PURPLE) "RECYCLED WATER" AND MARKED AS REQUIRED FOR RECYCLED WATER USE.			

NOTE: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE RECLAIMED WATER IRRIGATION SYSTEM REQUIREMENTS SET FOR BY (LAC DEH) LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH.

NOTE: ALL EQUIPMENT SHALL COMPLY WITH CITY OF LONG BEACH WATER DISTRICT AND LONG BEACH CITY COLLEGE RECYCLED WATER REQUIREMENTS.

EXISTING EQUIPMENT LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION
RP	(EXISTING) BUILDING BACKFLOW PREVENTION ASSEMBLY TO BE PROTECTED IN PLACE.
	CONNECTION OF NEW MAINLINE TO EXISTING IRRIGATION MAINLINE. VERIFY SIZE, TYPE AND EXACT CONNECTION POINT LOCATION IN FIELD.
	(EXISTING) IRRIGATION MAINLINE, PROTECT IN PLACE, REPAIR ANY DAMAGE DUE TO CONSTRUCTION. VERIFY SIZE, TYPE, AND EXACT LOCATION IN FIELD. IF CONTRACTOR IS NOT ABLE TO LOCATE EXISTING MAINLINE CONTRACTOR SHALL PROVIDE AND INSTALL NEW MAINLINE AND MAKE ALL NECESSARY CONNECTIONS FOR PROPER OPERATION OF NEW AND EXISTING IRRIGATION SYSTEM.
	(EXISTING) PVC PIPE AS LATERAL LINES SHOWN FOR REFERENCE ONLY. VERIFY EXACT LOCATION IN FIELD. PROTECT IN PLACE, REPAIR ANY DAMAGE DUE TO CONSTRUCTION.
	(EXISTING) SLEEVING FOR IRRIGATION PIPE AND CONTROL WIRES. VERIFY SIZE AND EXACT LOCATION IN FIELD. IF CONTRACTOR IS NOT ABLE TO LOCATE OR UTILIZE EXISTING SLEEVE CONTRACTOR SHALL BORE UNDER AND INSTALL NEW PIPE AND OR CONTROL WIRES PLACED IN NEW SLEEVE FOR CONNECTION TO IRRIGATION SYSTEM. VERIFY ALL SLEEVE LOCATIONS PRIOR TO BIDDING AND COMMENCING WORK.
	(EXISTING) IRRIGATION SYSTEM TO BE ADJUSTED AND OR MODIFIED. CUT AND CAP EXISTING SYSTEM AS REQUIRED FOR PROPER OPERATION. REPAIR OR REPLACE ANY DAMAGED EQUIPMENT. PROVIDE 100% COVERAGE WITH NO PONDING, RUNOFF OR OVER SPRAY.
NO SYMBOL	(EXISTING) CONTROLLER "B" REMOTE CONTROL VALVES TO REMAIN, PROTECT IN PLACE. VERIFY AND TEST FOR PROPER OPERATION. REPAIR OR REPLACE IF DAMAGED. REPLACE GRAVEL AND VALVE BOX, HEAT BRAND BOX LID WITH CONTROLLER/STATION NUMBER AND ADD CHRISTY'S VALVE STATION I.D. TAG.
	CUT AND CAP EXISTING IRRIGATION MAINLINE, VERIFY EXACT LOCATION IN FIELD.
	(EXISTING) REMOTE CONTROL VALVE TO REMAIN, PROTECT IN PLACE. VERIFY AND TEST FOR PROPER OPERATION, REPAIR OR REPLACE IF DAMAGED. REPLACE GRAVEL AND VALVE BOX, VALVE BOX LID TO BE PURPLE, HEAT BRAND BOX LID WITH CONTROLLER/STATION NUMBER AND ADD CHRISTY'S VALVE STATION I.D. TAG.
E	(EXISTING) SPRINKLER HEAD. PROTECT IN PLACE AND REPAIR OR REPLACE IF DAMAGED. INSTALL PURPLE RECYCLED WATER SNAP ON CAP FOR EXISTING SPRINKLER HEADS.
M	(EXISTING) DOMESTIC WATER IRRIGATION METER. VERIFY SIZE, LOCATION, AND STATIC WATER PRESSURE IN FIELD.

NOTE: ALL MATERIALS TO BE PER DISTRICT STANDARDS.

DRIP IRRIGATION LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPH	PSI	RADIUS	PREC. RATE	DETAIL	SHEET
	NETAFIM - TLHCVXR-RW-5-12, TECHLINE "HCVXR - RWP" SERIES 17mm "RECYCLED WATER" PURPLE DRIPLINE WITH PRESSURE COMPENSATING, ANTI SIPHON CHECK VALVE AND COPPER INFUSED ROOT INTRUSION PROTECTION EMITTERS. INSTALL DRIP TUBING @ 16" MAXIMUM ROW SPACING WITH TRIANGULAR SPACED EMITTER LAYOUT.	0.53	30	N/A	0.64	A, B, C, D, E	L4.1
	NETAFIM - DRIP TUBING CONNECTIONS SHALL BE MADE USING NETAFIM 17mm DRIPLINE INSERT FITTINGS.					E	L4.1
DI	NETAFIM - 10-F-01 DRIP SYSTEM DRIP INDICATOR. PRE-ASSEMBLED WITH INDICATOR FLAG, ANCHORING STAKE, TUBING AND BARB CONNECTOR.					F	L4.1
AR	NETAFIM - TLAVRV, AIR / VACUUM RELIEF VALVE. INSTALL AT HIGHEST POINT OF DRIP ZONE.					G	L4.1
	SPEARS - FLUSH VALVE ASSEMBLY: PROVIDE GRAY 1/2" PVC THREADED BALL VALVE, MODEL 2621-005G, WITH CHAMPION IRRIGATION PRODUCTS (ARROWHEAD BRASS) BRASS HOSE-TO-PIPE THREAD INSERT ADAPTER, MODEL #10F, FOR FLUSHING PVC EXHAUST MANIFOLD PIPE WITH STANDARD GARDEN HOSE.					H	L4.1

NOTE: ALL SUB-SURFACE TUBING SHALL BE INSTALLED 2" BELOW FINISH SOIL GRADE ANCHORED WITH RAIN BIRD 6" GALVANIZED WIRE STAKES, MODEL TDS-050 BEND, INSTALLED FOUR (4) FEET ON CENTER.

IRRIGATION TREE BUBBLER LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPM	PSI	RADIUS	PREC. RATE	DETAIL	SHEET
	RAIN BIRD - RD-06-S-P30-F-NP, 6" POP-UP BUBBLER HEAD W/ RAIN BIRD 5Q-B-PCS-040. EACH SYMBOL REPRESENTS MINIMUM TWO BUBBLERS PER TREE, SEE NOTE BELOW.	.40 (.80)	30	1 FT	1.8	K	L4.1

NOTE: SINGLE SYMBOL ON PLANS REPRESENTS MINIMUM TWO (2) BUBBLERS PER TREE.
(2) BUBBLERS REQUIRED FOR 24" BOX TREES AND SMALLER.
(3) BUBBLERS REQUIRED FOR 36" BOX TREES.
(4) BUBBLERS REQUIRED FOR 48" BOX AND LARGER TREES.
PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE WITHIN TREE WELL TYPICAL.

IRRIGATION EQUIPMENT LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
R1	P.O.C. - POINT OF CONNECTION #1, NEW 1-1/2" RECYCLED WATER IRRIGATION METER. VERIFY SIZE, LOCATION, AND STATIC WATER PRESSURE IN FIELD.	N/A	N/A
R2	P.O.C. - POINT OF CONNECTION #2, (EXISTING) 2" IRRIGATION METER TO BE CONVERTED TO RECYCLED WATER USE CONNECTION. VERIFY SIZE, LOCATION, AND STATIC WATER PRESSURE IN FIELD.	N/A	N/A
S	YARDNEY - SB2-P-F-80, 2" (PURPLE) BASKET STRAINER WITH FLANGED CONNECTIONS AND 80 MESH FILTER ELEMENT. STRAINER ASSEMBLY SHALL BE INSTALLED WITHIN A V.I.T. STRONG BOX SBBC-30CR SMOOTH TOUCH ENCLOSURE INSTALLED ON A POURED IN PLACE CONCRETE PAD.	M	L4.2
M2	GRISWOLD - MODEL 2030-L-R-E, 2" NORMALLY CLOSED, EPOXY COATED, RECYCLED WATER, MASTER CONTROL VALVE. INSTALL WITH 2-WIRE DECODER. INSTALL PER MANUFACTURERS RECOMMENDATIONS. CONNECT MV WIRES VIA POC DECODER TO THE 2-WIRE DECODER CABLE.	N	L4.2
M1	GRISWOLD - MODEL 2030-K-R-E, 1-1/2" NORMALLY CLOSED, EPOXY COATED, RECYCLED WATER, MASTER CONTROL VALVE. INSTALL WITH 2-WIRE DECODER. INSTALL PER MANUFACTURERS RECOMMENDATIONS. CONNECT MV WIRES VIA POC DECODER TO THE 2-WIRE DECODER CABLE.	N	L4.2
FS2	CALSENSE - FM2B, BRASS 2" FLOW SENSOR INSTALL WITH 2-WIRE P.O.C. DECODER, PER MANUFACTURER'S RECOMMENDATIONS. WIRE TO CONTROLLER FLOW SENSOR COMUNICATION CABLE, 2 CONDUCTOR, SHEILDED 16 AWG SOLID COPPER INSTALLED WITHIN 1-1/4' PVC CONDUIT.	O	L4.2
FS1	CALSENSE - FM1B, 1" BRASS FLOW SENSOR INSTALL WITH 2-WIRE P.O.C. DECODER, PER MANUFACTURER'S RECOMMENDATIONS. WIRE TO CONTROLLER FLOW SENSOR COMUNICATION CABLE, 2 CONDUCTOR, SHEILDED 16 AWG SOLID COPPER INSTALLED WITHIN 1-1/4' PVC CONDUIT.	O	L4.2
EZ	EZ-FLO SYSTEMS - EZ-010-FX-CBV-xxx-FERTI-MAXX STARTER-25, 9.4 GALLON FERTILIZING SYSTEM WITH 25 LB BAG STARTER FERTILIZER.	P	L4.2
	NIBCO - T-580-70, BRONZE BALL VALVE, LINE SIZE PER MAINLINE.	Q	L4.2
	RAIN BIRD - EFB-CP-R-PRSD (1" OR 1-1/2") SERIES BRASS, RECYCLED WATER, PRESSURE REGULATING, REMOTE CONTROL VALVE WITH PURPLE HANDLE, SIZE AS SHOWN. INSTALL WITH 2-WIRE DECODER.	R, JJ	L4.2 L4.3
	RAIN BIRD - EFB-CP-R, (1" OR 1-1/2") SERIES BRASS, RECYCLED WATER, REMOTE CONTROL VALVE WITH PURPLE HANDLE, SIZE AS SHOWN. INSTALL WITH 2- WIRE DECODER. INSTALLED WITH RAIN BIRD PRB-R-QKCHK-100, 1" PRESSURE REGULATING, RECYCLED WATER, QUICK-CHECK BASKET FILTER(S). FOR DEMANDS (1 - 13) GPM. INSTALL ONE (1) BASKET FILTER. FOR DEMANDS (14 - 35) GPM. INSTALL TWO (2) BASKET FILTERS.	S, JJ	L4.2 L4.3
	RAIN BIRD - 33DNP, 3/4" QUICK COUPLER VALVE WITH PURPLE LOCKING COVER MARKED FOR RECYCLED WATER USE.	X, JJ	L4.2 L4.3

IRRIGATION PIPE & WIRE LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
	AS APPROVED - NON-PRESSURE LATERAL LINE, SCH. 40 (3/4" - 2") PURPLE "RECYCLED WATER" PVC PIPE WITH WORDS "RECYCLED WATER-DO NOT DRINK" INSTALLED 12" BELOW GRADE.	Y, AA	L4.3
	AS APPROVED - PRESSURE MAINLINE, CLASS 315 (2" - 3") PURPLE "RECYCLED WATER" PVC PIPE WITH WORDS "RECYCLED WATER-DO NOT DRINK" INSTALLED 18" BELOW GRADE. INSTALL WITH 3" WIDE "RECYCLED WATER" METALLIC DETECTABLE WARNING TAPES.	Y, AA	L4.3
NO SYMBOL	T. CHRISTY - TA-DT-3-PRW, 3" WIDE DETECTABLE PURPLE "RECYCLED WATER" METALLIC BACKED UNDERGROUND WARNING TAPE. INSTALL WARNING TAPE CONTINUOUSLY ALONG MAINLINE ROUTING, ONE (1) LOCATED IMMEDIATELY ON TOP OF MAINLINE ATTACHED EVERY 5' AND ONE (1) LOCATED 12" ABOVE MAINLINE.	Y, Z, AA	L4.3
	PURPLE "RECYCLED WATER" AS SLEEVING - SCH 40 PVC PIPE WITH WORDS "RECYCLED WATER-DO NOT DRINK". EXTEND 12" BEYOND EDGE OF HARDSCAPE. SLEEVE SHALL BE MINIMUM TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED, MINIMUM 2" SIZE. CONTRACTOR SHALL SAWCUT PAVING/CONCRETE OR BORE UNDER AND INSTALL NEW PIPE AND OR CONTROL WIRES PLACED IN NEW SLEEVE FOR CONNECTION TO IRRIGATION SYSTEM. BACKFILL AND INSTALL ASPHALT SLURRY MIX OR CONCRETE TO MATCH EXISTING CONDITIONS, AS APPROVED BY COLLEGE.	Z, AA, BB	L4.3
NO SYMBOL	CONTRACTOR SHALL COORDINATE ALL CONDUITS, SLEEVES, AND CABLE ROUTING WITH GENERAL CONTRACTOR AND ANY AFFECTED ON-SITE TRADES AS REQUIRED THROUGHOUT PROJECT.	Z, AA	L4.3
	PAIGE ELECTRIC - MODEL P7354-D; HUNTER "PURPLE" JACKETED 2 CONDUCTOR, #14/2 AWG., 14 GAUGE 2-WIRE CABLE. INSTALL ALL WIRE WITHIN 1-1/4" ELECTRICAL CONDUIT WITH SWEEP ELLS AT EACH "RCV" BOX AND PULL BOXES LOCATED AT ALL CROSSINGS. CONNECT TO CONTROLLER PER MANUFACTURER'S SPECIFICATIONS.	R, S, T, U, V, W	L4.2
NO SYMBOL	3M - SCOTCHCAST, CONNECTOR SEALING PACK, MODEL 3570G-N, "EPOXY RESIN" WIRE SPLICE CONNECTORS FOR ALL 2-WIRE DECODER/RCV CONNECTIONS AND SPLICES. THE 3570G-N SEALING PACK WILL ACCOMMODATE ONE 3M™ PERFORMANCE PLUS WIRE CONNECTOR O/B +, R/Y+, T/R+,T/Y+ OR ONE 3M™ ELECTRICAL SPRING AND GROUNDING CONNECTOR 312 OR 512. INSTALL PER MANUFACTURE RECOMMENDATIONS.	CC	L4.3
	AS APPROVED - MAINLINE STUB-OUT WITH SPARE CONTROLLER WIRES FOR FUTURE ADJACENT IRRIGATION IMPROVEMENTS CONNECTION LOCATED WITHIN A PLASTIC RECTANGULAR VALVE BOX, LABEL LID "SW". CONFIRM EXACT LOCATION IN FIELD WITH LBCC'S AUTHORIZED REPRESENTATIVE. INSTALL CONTROL WIRES WITH 36" MINIMUM LENGTH COILED EXPANSION WIRE LOOP.	DD	L4.3

NOTE:
ALL WIRE SPLICES SHALL BE PLACED WITHIN PLASTIC VALVE BOX OR WIRE PULL BOX. WIRE SPLICES MUST BE TWISTED WITH WIRE TWISTING TOOL WITH A MAXIMUM OF TWO WIRES PER TWIST. REFER TO MANUFACTURE RECOMMENDATION FOR PROPER WIRE CONNECTIONS.

SPLICING RECOMMENDATIONS:
WIRE SPLICES ARE THE WEAK LINK OF ANY ELECTRICAL CIRCUIT. IT IS ESPECIALLY IMPORTANT TO MAKE PROPER JOINTS IN IRRIGATION SYSTEMS BECAUSE THE JOINTS ARE EXPOSED TO WET AND DAMP ENVIRONMENTS THAT CAN CAUSE CORROSION OF THE COPPER CONDUCTOR, AND PREMATURE FAILURE. CALSENSE REQUIRES THE STRICT USE OF MODEL 3M - SCOTCHCAST, CONNECTOR SEALING PACK, MODEL 3570G-N.

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SEALS / APPROVALS
REGISTERED LANDSCAPE ARCHITECT JAMES J. RIDGE LIC. #2809 (Signature) 05/17/18 (Date) 05/31/19 (Exp. Date) STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
DATE ________

PROJECT TITLE
BUILDINGS 1 & 2 Z
4901 EAST CARSON STREET
LONG BEACH, CA. 90808
T: (562) 938-4111
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LONG BEACH CITY COLLEGE
LONG BEACH CITY COLLEGE
LIBERAL ARTS CAMPUS

	SUBMITTALS	
	07/ 24/ 2017	50% CD
	10/ 19/ 2017	95% CD
	11/ 17/ 2017	CONSTRUCTION DOCUMENTS
	12/ 19/ 2017	DISTRICT COMMENTS
4	05/ 17/ 2018	ADDENDUM 4

PROJECT IDENTIFICATION
THE ORIGINAL SIZE OF THIS SHEET IS 30" x 42"
DATE 05/17/2018
DRAWN BY MR
CHECKED BY TC

SHEET TITLE
IRRIGATION LEGEND & CALCULATIONS

SHEET NUMBER
L3.1

J:\Dwgs\HPI\LBCC Bldgs 1 & 2\cd\lac-il.dwg Tue.,22 May.2018-9:03am Plotted by: Terri

RECYCLED AND POTABLE WATER NOTES

A. THE INSTALLATION OF THE IRRIGATION WATER SYSTEM SHALL CONFORM TO THE REGULATIONS FOR THE CONSTRUCTION OF IRRIGATION WATER SYSTEMS WITHIN THE WATER DISTRICT AND THE ACCOMPANYING PLANS AND SPECIFICATIONS.

B. ALL ONSITE RECYCLED AND POTABLE WATER PIPING INSTALLED ON THIS PROJECT SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY REGULATIONS AND THE IRRIGATION SPECIFICATIONS.

C. RECYCLED WATER PIPING SHALL BE PURPLE PVC MANUFACTURED FOR RECYCLED (RECLAIMED) WATER SYSTEMS.

D. MARKING ON THE PURPLE PVC PIPE SHALL INCLUDE THE FOLLOWING:

CAUTION RECYCLED (OR RECLAIMED) WATER; NOMINAL PIPE SIZE; PVC-1120; PRESSURE RATING IN POUNDS PER SQUARE INCH AT 73 DEGREES; ASTM DESIGNATIONS SUCH AS 1785, 2241, 2672, 3139. PRINTING SHALL BE PLACED CONTINUOUSLY ON TWO SIDES OF THE PIPE.

E. ALL RECYCLED WATER SPRINKLER BOX COVERS AND CONTROL VALVES, ISOLATION VALVES, QUICK COUPLERS, AND ALL APPURTENANCES SHALL BE TAGGED WITH IDENTIFICATION TAGS.

1. TAGS SHALL BE WEATHERPROOF PLASTIC, 3"X4", PURPLE IN COLOR WITH THE WORDS "WARNING RECYCLED (OR RECLAIMED) WATER -DO NOT DRINK" IMPRINTED ON ONE SIDE, AND "AVISA AGUA IMPURA - NO TOMAR" ON THE OTHER SIDE. IMPRINTING SHALL BE PERMANENT AND BLACK IN COLOR. USE TAGS AS MANUFACTURED BY T. CHRISTY ENTERPRISES OR APPROVED EQUAL.

2. ONE TAG SHALL BE ATTACHED TO EACH APPURTENANCE AS FOLLOWS, OR;

IDENTIFICATION SHALL BE AFFIXED TO EACH IRRIGATION VALVE LID COVER AND VALVE AS FOLLOWS:
(A) IDENTIFY VALVE COVER WITH LABEL OR BRANDED HOT STAMP THAT READS "RECYCLED (OR RECLAIMED) WATER DO NOT DRINK" OR USE PURPLE COVER WITH SAME IDENTIFICATION.
(B) ATTACH TAG TO CONTROL VALVE STEM DIRECTLY OR WITH PLASTIC TIE-WRAP. OR
(C) ATTACH TAG TO CONTROL VALVE SOLENOID WIRE DIRECTLY OR WITH PLASTIC TIE-WRAP.
(D) ATTACH TO BODY OF THE RELATIVE APPURTENANCE WITH A PLASTIC TIE-WRAP.

F. WARNING TAPES SHALL BE USED ON ALL CONSTANT PRESSURE MAIN LINE PIPING CARRYING POTABLE WATER.

G. WARNING TAPES SHALL BE A MINIMUM OF 3-INCHES WIDE AND SHALL RUN CONTINUOUSLY FOR THE ENTIRE LENGTH OF ALL CONSTANT PRESSURE MAIN LINE PIPING. THE TAPE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH PLASTIC TAPE BANDED AROUND THE WARNING TAPE AND THE PIPE EVERY 5 FEET ON CENTER.

H. WARNING TAPE FOR THE CONSTANT PRESSURE POTABLE WATER PIPING SHALL BE BLUE IN COLOR WITH THE WORDS "CAUTION BURIED WATER LINE BELOW" IMPRINTED IN MINIMUM 1 INCH HIGH LETTERS, BLACK IN COLOR. IMPRINTING SHALL BE CONTINUOUS AND PERMANENT.

I. LONG BEACH HEALTH DEPARTMENT SHALL BE NOTIFIED TWO DAYS PRIOR TO THE START OF IRRIGATION CONSTRUCTION AND EACH WORKDAY THEREAFTER UNTIL THE COMPLETION OF PROJECT. (4)

J. ALL PRESSURE MAIN LINE PIPING FROM THE RECYCLED WATER SYSTEM SHALL BE INSTALLED TO MAINTAIN 10 FEET MINIMUM HORIZONTAL SEPARATION FROM ALL POTABLE WATER PIPING. WHERE RECYCLED AND POTABLE WATER PRESSURE MAIN LINE PIPING CROSS, THE RECYCLED WATER PIPING SHALL BE INSTALLED BELOW THE POTABLE WATER PIPING, WHEN POSSIBLE, IN A CLASS 200 PURPLE PVC SLEEVE WHICH EXTENDS A MINIMUM OF 5 FEET ON EITHER SIDE OF THE POTABLE WATER PIPING. PROVIDE A MINIMUM VERTICAL CLEARANCE OF 12-INCHES. CONVENTIONAL (WHITE) PVC PIPE MAY BE USED FOR SLEEVING MATERIAL IF IT IS TAPED WITH 3-INCH WIDE PURPLE WARNING TAPE WHICH READS "CAUTION, RECYCLED (OR RECLAIMED) WATER".

K. THE IRRIGATION SYSTEM HAS BEEN DESIGNED TO AND MUST BE OPERATED BETWEEN THE HOURS OF 10:00 PM AND 6:00 AM UNLESS OTHERWISE DIRECTED BY THE DISTRICT ENGINEER.

L. ALL NEW COMMON AREAS WHERE RECYCLED WATER IS USED AND THAT ARE ACCESSIBLE TO THE GENERAL PUBLIC SHALL BE POSTED WITH CONSPICUOUS SIGNS THAT INCLUDE THE FOLLOWING WORDING IN A SIZE NO LESS THAN 4 INCHES HIGH BY 8 INCHES WIDE: "RECYCLED WATER - DO NOT DRINK" "RECLAIMED WATER - DO NOT DRINK". EACH SIGN SHALL ALSO DISPLAY AN INTERNATIONAL SYMBOL CONVEYING THE SAME WARNING.

M. ADJUST SPRAY HEADS TO ELIMINATE OVERSPRAY ONTO AREAS NOT UNDER THE CONTROL OF THE CUSTOMER. FOR EXAMPLE: POOL DECKS, PRIVATE PATIOS, STREETS AND SIDEWALKS.

N. CONTACT THE LONG BEACH HEALTH DEPARTMENT TWO DAYS PRIOR TO THE IRRIGATION SYSTEM COVERAGE AND CROSS CONNECTION TEST AT AND ARRANGE A WALK THROUGH OF THE SYSTEM. CROSS CONNECTION TEST WILL REQUIRE AT LEAST 2 WEEKS NOTICE TO SCHEDULE WITH LONG BEACH WATER DEPARTMENT AND LONG BEACH HEALTH DEPARTMENT. (4)

O. FAILURE TO COMPLY WITH ANY OR ALL OF THE ABOVE GUIDELINES WILL PLACE THE SYSTEM IN VIOLATION OF DISTRICT RULES AND REGULATIONS, AND WILL RESULT IN TERMINATION OF SERVICE UNTIL THE APPROPRIATE CORRECTIVE MEASURES HAVE BEEN TAKEN.

P. WARNING TAPE ON RECYCLED WATER CONSTANT PRESSURE MAIN LINE PIPING IS ONLY ALLOWED ON PROJECT-BY-PROJECT APPROVAL FROM THE DISTRICT ENGINEER. IF APPROVED, IT MUST FOLLOW THESE INSTALLATION SPECIFICATIONS.

1. WARNING TAPE SHALL BE USED ON ALL CONSTANT PRESSURE MAINS.

2. WARNING TAPE SHALL BE A MINIMUM OF 3-INCHES WIDE AND SHALL RUN CONTINUOUSLY FOR THE ENTIRE LENGTH OF ALL CONSTANT PRESSURE MAIN LINE PIPING. THE TAPE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH PLASTIC TAPE BANDED AROUND THE WARNING TAPE AND THE PIPE EVERY 5 FEET ON CENTER.

3. WARNING TAPE FOR THE CONSTANT PRESSURE RECYCLED WATER PIPING SHALL BE PURPLE IN COLOR WITH THE WORDS "CAUTION RECYCLED (OR RECLAIMED) WATER" IMPRINTED A MINIMUM OF 1-INCH HIGH AND BLACK IN COLOR. IMPRINTING SHALL BE CONTINUOUS AND PERMANENT.

(4)

Q. CONTACT THE LONG BEACH HEALTH DEPARTMENT FOR INSPECTION AT LEAST 72 HOURS BEFORE BACKFILLING MAIN RECYCLED WATER IRRIGATION LINES.

R. CONTACT THE LONG BEACH HEALTH DEPARTMENT TO SCHEDULE CROSS CONNECTION SHUT DOWN TEST ONCE IRRIGATION AND FACILITY IS COMPLETE. A CROSS CONNECTION SHUT DOWN TEST IS REQUIRED BEFORE RECYCLED WATER METER IS SET OR TURNED ON. NOTE: AN ALTERNATE PORTABLE SOURCE WILL BE REQUIRED TO PRESSURIZE THE IRRIGATION LINES FOR THE TEST.

ONSITE RECYCLED AND POTABLE WATER SEPARATION REQUIREMENTS:

HORIZONTAL SEPARATIONS: WHEN POTABLE WATER LINE AND RECYCLED WATER LINE CROSS, THE RECYCLED LINE SHALL BE INSTALLED WITHIN A PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND 10 FEET FROM EACH SIDE, FROM THE CENTER LINE OF POTABLE LINE, FOR A TOTAL OF 20 FEET. A 10 FOOT HORIZONTAL SEPERATION BETWEEN POTABLE WATER AND NON-POTABLE WATER LINES MUST BE MAINTAINED AT ALL TIMES. THE POTABLE LINES MUST BE INSTALLED ABOVE THE NON-POTABLE LINE.

VERTICAL SEPARATIONS: THE PRESSURIZED RECLAIMED WATER PIPING SHALL MAINTAIN A MINIMUM OF ONE FOOT VERTICAL SEPARATION AT ALL TIMES FROM ALL PRESSURIZED POTABLE WATER PIPING AND/OR A SANITARY SEWER SYSTEM. THE PRESSURIZED RECLAIMED WATER PIPING SHALL BE INSTALLED ONE FOOT BELOW ALL PRESSURIZED POTABLE WATER PIPING ONE FOOT ABOVE ALL SANITARY SEWER SYSTEMS. IF A ONE FOOT VERTICAL SEPARATION IS NOT POSSIBLE, SPECIAL CONSTRUCTION REQUIREMENTS SHALL BE CONSIDERED. REFER TO DISTRICT STANDARDS.

THE ON-SITE POTABLE LINE(S) SHALL BE MARKED WITH STENCIL OR BLUE TAPE IDENTIFYING IS AS POTABLE WATERLINE.

ALL GATE VALVES, MANUAL, BALL VALVES, CONTROL VALVES, ELECTRICAL CONTROL VALVES, PRESSURE REDUCING VALVES FOR RECYCLED WATER SYSTEMS SHALL BE INSTALLED BELOW GRADE IN A HINGED LOCKING VALVE BOX.

RECYCLED WATER:

THE DESIGN SHALL PROVIDE FOR CONNECTION OF RECYCLED WATER. PLANS SHALL BE IN ACCORDANCE WITH THE WATER DISTRICT RECYCLED GUIDELINES. A RECYCLED WATER USE PERMIT SHALL BE OBTAINED PRIOR TO RECEIVING A RECYCLED WATER CONNECTION. http://www.lbwater.org/sites/default/files/ctools/rules_regs05.pdf

Existing Irrigation Notes

1. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE EXISTING IRRIGATION AND PLANTING ON SITE. ANY DAMAGE OR ADJUSTMENTS REQUIRED INCLUDING REPLACING OR RELOCATING IRRIGATION LINES, HEADS, VALVES, WIRES OR ANY UTILITY THAT OCCURS ON THE PARCEL DUE TO THE CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COLLEGE. THE CONTRACTOR MUST REVIEW ANY REQUIRED MODIFICATIONS TO THESE AREAS AND REVIEW WITH COLLEGE'S REPRESENTATIVE PRIOR TO COMMENCING WORK. THE CONTRACTOR MUST NOTIFY THE COLLEGE'S AUTHORIZED REPRESENTATIVE OF THESE CONDITIONS OR ANY DISCREPANCIES PRIOR TO COMMENCING WORK.

2. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, PROPERTY LINES, DIMENSIONS, ETC. PRIOR TO COMMENCING WORK. ALL EXISTING IRRIGATION SYSTEMS SHALL BE VERIFIED IN THE FIELD AT START OF CONSTRUCTIONS. ALL EXISTING MAINLINES, RCVS, BACKFLOW DEVICES, CONTROLLERS, METERS, SERVICE LINES, ETC. SHALL BE VERIFIED IN FIELD. ALL EXISTING IRRIGATION EQUIPMENT SHALL BE CLEARLY INDICATED INCLUDING SIZES AND MODEL NUMBERS TO SCALE ON AN ACCURATE BASE DRAWING AND SUBMITTED AS A SHOP DRAWING. SAID SHOP DRAWING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT, AND COLLEGE'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND APPROVAL. NOTIFY THE COLLEGE'S AUTHORIZED REPRESENTATIVE IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. NO WORK SHALL PROCEED WITHOUT APPROVAL OF SAID SHOP DRAWINGS.

3. ALL EQUIPMENT LOCATIONS AND PIPE ROUTING SHALL BE STAKED IN FIELD FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ALL LAYOUT SHALL BE AS APPROVED BY, LANDSCAPE ARCHITECT, AND COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVAL OF LAYOUT.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF PROPOSED IRRIGATION EQUIPMENT AND RELATED EQUIPMENT, INCLUDING BUT NOT LIMITED TO R.C.V. CONTROL WIRES, ELECTRICAL WIRES, CONDUIT, REMOTE CONTROL VALVES, ETC. ALL LAYOUT AND LOCATIONS SHALL BE CONFIRMED WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO COMMENCING WORK.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING COMPLETE 100% HEAD TO HEAD COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY THE COLLEGE'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

7. CONTRACTOR SHALL ADJUST AND CAP OFF EXISTING ADJACENT IRRIGATION SYSTEM AS REQUIRED. SYSTEM SHALL PROVIDE COMPLETE 100% HEAD TO HEAD COVERAGE IN ALL AREAS AS APPROVED BY COLLEGE'S AUTHORIZED REPRESENTATIVE. ALL LAYOUT SHALL BE CONFIRMED WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

8. CONTRACTOR SHALL REFER TO CORRESPONDING ON-SITE WATER AND SEWER PLAN FOR UNDERLYING WATERLINES, EASMENTS, AND OTHER RELATED EQUIPMENT. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS IN FIELD WITH COLLEGES AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO EXISTING IRRIGATION, LANDSCAPE AND HARDSCAPE DAMAGED BY NEW CONSTRUCTION AT NO ADDITIONAL COST TO THE COLLEGE.

10. CONTRACTOR SHALL MEET WITH THE COLLEGE PRIOR TO BEGINNING DEMOLITION OR ANY OTHER WORK, AND WALK SITE TO LOCATE EXISTING CONTROLLER AND LINES AND OTHER IRRIGATION TO BE PROTECTED IN PLACE.

11. CONTRACTOR SHALL PROVIDE FOR THE IRRIGATION OF EXISTING PLANT MATERIAL THROUGHOUT THE CONSTRUCTION PROCESS. ANY DAMAGE DUE TO CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY TO PREVENT ANY LAPSE IN IRRIGATION OF THE EXISTING PLANT MATERIAL. ANY PLANT MATERIAL AND/OR IRRIGATION DAMAGED AS PART OF CONSTRUCTION SHALL BE REPAIRED TO A LIKE NEW CONDITION AS PART OF CONTRACT.

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

13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ADJUSTMENT/MODIFICATION OF EXISTING IRRIGATION SYSTEM WITHIN THIS AND OTHER AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS. ALL LAYOUT SHALL BE CONFIRMED WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

14. NO DISRUPTION OF THE EXISTING IRRIGATION SYSTEMS WATERING WILL BE ALLOWED DURING CONSTRUCTION. ALL ADJACENT SYSTEM SHALL MAINTAIN AUTOMATIC PROGRAMMED WATERING SCHEDULES THROUGHOUT CONSTRUCTION.

15. PRIOR TO BID CONTRACTOR SHALL OBTAIN EXISTING IRRIGATION AS-BUILT RECORD DRAWINGS FOR ADJACENT PARKING LOT 10 IRRIGATED AREAS PRIOR TO STARTING WORK. ALL EXISTING IRRIGATION EQUIPMENT LOCATION, SIZES, AND CONDITIONS SHALL BE VERIFIED IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE AT START OF WORK.

16. WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED, THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

AS-BUILT NOTE:
AS-BUILT RECORD DRAWINGS WERE NOT AVAILABLE AT TIME OF SYSTEM DESIGN. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXISTING IRRIGATION SYSTEM AS-BUILTS FROM COLLEGE PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONFIRM ALL CONNECTION POINTS AND EXISTING IRRIGATION SYSTEMS AFFECTED IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF PROPOSED IRRIGATION SYSTEM CONNECTION POINT AND CONTROLLER LOCATION FOR APPROVAL BY COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. ALL LABOR AND MATERIALS REQUIRED TO IRRIGATE AREAS WITHIN THE LIMITS OF WORK AND TO ADJUST AREAS ADJACENT TO THE LIMITS OF WORK SHALL BE INCLUDED AS PART OF THIS CONTRACT. NO ADDITIONAL COSTS WILL BE ALLOWED FOR THE PROPOSED IRRIGATION IMPROVEMENTS OR ADJUSTMENT OF THE EXISTING ADJACENT IRRIGATION SYSTEMS.

NOTE:
"CONTRACTOR TO REPAIR OR REPLACE ALL LANDSCAPE AND IRRIGATION MISSING OR NOT WORKING TO A FULLY FUNCTIONING SYSTEM WITH 100% COVERAGE". ALL EXISTING SYSTEMS SHALL BE REPAIRED TO PREVENT OVERSPRAY OR RUNOFF ONTO SIDEWALKS OR STREETS.

Irrigation Installation Notes

1. THE CONTRACTOR SHALL OBTAIN, COORDINATE AND PAY FOR ANY AND ALL PERMITS AND ALL INSPECTIONS AS REQUIRED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY AND ALL DAMAGES TO OPERATIONS OR WORK OF OTHER CONTRACTORS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ACTIVITIES WITH ALL AGENCIES AND OTHER TRADES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCROACHMENT INTO ADJACENT PROPERTY, R.O.W.'S, EASEMENTS, SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR OR REPLACE, AT NO ADDITIONAL COST TO THE COLLEGE, ANY DAMAGE TO UNDERGROUND UTILITIES THAT MAY OCCUR.
5. NOT APPLICABLE.
6. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON PLANS AT THE SITE PRIOR TO COMMENCEMENT OF ANY WORK. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO PROJECT LANDSCAPE ARCHITECT FOR DIRECTION. ANY CONTINUATION OF WORK IS AT THE CONTRACTOR'S RISK AND EXPENSE.
7. 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 PROJECT LANDSCAPE ARCHITECT FOR DIRECTION.
8. BEFORE ANY WORK COMMENCES, A CONFERENCE SHALL BE HELD WITH THE COLLEGE REPRESENTATIVE, LANDSCAPE ARCHITECT AND THE CONTRACTOR, REGARDING GENERAL REQUIREMENTS OF THIS WORK.
9. INSTALL ALL IRRIGATION COMPONENTS ACCORDING TO LOCAL CODES AND ORDINANCES.
10. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ALL IRRIGATION EQUIPMENT DOWNSTREAM OF THE POINT OF CONNECTION (P.O.C.)
11. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
12. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS (INCLUDING EXISTING AND/OR NEW PLANT MATERIAL), GRADE DIFFERENCES OR DIFFERENCES IN THE AREA'S DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
13. THE WORK SHOWN ON THESE PLANS IS DIAGRAMMATIC; ALL ITEMS, I.E. CONTROLLERS, VALVES, MAINLINES, SLEEVES, WIRES, IRRIGATION HEADS, ETC. ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY. DO NOT SCALE DIMENSIONS. DETAIL DRAWINGS MAY CLARIFY LOCATIONS OF SOME ITEMS. THE CONTRACTOR SHALL NOT LOCATE ANY ITEMS WHERE IT IS OBVIOUS THAT THEY ARE IN CONFLICT WITH UNDERGROUND UTILITIES, STRUCTURES, OTHER IMPROVEMENTS, OR VEHICULAR OR PEDESTRIAN SAFETY CONSIDERATIONS.
14. CONTROLLER LOCATIONS ARE APPROXIMATE. FINAL LOCATION OF THE AUTOMATIC CONTROLLER AND THE BACKFLOW DEVICE SHALL BE APPROVED BY THE COLLEGE AND THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
15. ALL CONSTANT PRESSURE LINES SHALL BE TESTED FOR 3 HOURS UNDER A HYDROSTATIC PRESSURE OF 150 POUNDS PER SQUARE INCH AND BE PROVEN WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS. HYDROSTATIC TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE LANDSCAPE ARCHITECT, CITY PUBLIC WORKS INSPECTOR, LONG BEACH HEALTH DEPARTMENT INSPECTOR OR, IF APPROVED BY LANDSCAPE ARCHITECT, CONTRACTOR MAY E-MAIL DIGITAL PHOTOGRAPHS OF THE PRESSURE GAUGE TO THE LANDSCAPE ARCHITECT AT BEGINNING AND END OF TEST PERIOD. (4)
16. 120-VOLT ELECTRICAL POWER OUTLET AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE PROVIDED PER THE ELECTRICAL ENGINEER'S PLANS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ELECTRICAL SERVICE WITH THE GENERAL CONTRACTOR AND TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL OUTLET TO THE AUTOMATIC CONTROLLER.
17. ALL LOCAL 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. http://www.lbwater.org/sites/default/files/ctools/rules_regs05.pdf
18. BACKFLOW DEVICE SHALL BE INSTALLED IN GROUND COVER AREA WHEREVER POSSIBLE. FINAL LOCATION SHALL BE DETERMINED BY THE COLLEGE'S AUTHORIZED REPRESENTATIVE AND MAY VARY FROM THAT INDICATED ON THE DRAWINGS.
19. QUICK COUPLER VALVES, CONTROL VALVES, AND SHUT-OFF VALVES SHALL BE INSTALLED IN GROUND COVER AREAS WHEREVER POSSIBLE.
20. PIPING AND WIRE CONDUIT INSTALLATION UNDER PAVING SHALL BE INSTALLED IN SCH 40 PVC SLEEVES, AS CALLED OUT ON PLANS, OR AS PER LOCAL CODES AND MUST BE COORDINATED WITH THE GENERAL CONTRACTOR AND CONTRACTORS OF ALL VARIOUS TRADES THAT MAY BE INVOLVED TO ELIMINATE PROBLEMS THAT MAY ARISE FROM INACCESSIBILITY OR DAMAGE TO ANOTHER TRADE'S WORK. PIPING AND WIRE CONDUIT PENETRATIONS THROUGH EXISTING WALLS SHALL BE CORE DRILLED AND SLEEVED PER ABOVE, UNLESS AN EXISTING SLEEVE IS AVAILABLE FOR RE-USE WHICH WILL NOT SIGNIFICANTLY AFFECT THE SYSTEM DESIGN. PER DETAIL Q, SHEET L5.40.
21. USE CHECK VALVES AS REQUIRED TO ELIMINATE LOW HEAD DRAINAGE.
22. THE CONTRACTOR SHALL INSTALL KBI SERIES ANTI-DRAIN VALVES ON ALL LATERALS IN AREAS WHERE SLOPE OF GRADE EXCEEDS 4:1, WHERE POST VALVE SHUT-OFF DRAINING OF THE IRRIGATION OCCURS, OR AS DIRECTED BY THE COLLEGE'S AUTHORIZED REPRESENTATIVE.
23. THE CONTRACTOR SHALL ONLY APPLY SUFFICIENT WATER TO PROMOTE HEALTHY GROWTH OF PLANT MATERIAL. AT NO TIME SHALL THE CONTRACTOR APPLY WATER AT A RATE OF FREQUENCY WHICH CAUSES RUNOFF OR OVER-SATURATION OF THE SOIL.
24. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO ADJACENT PAVING, WALLS OR OTHER HARDSCAPE ELEMENTS TO THE EXTENT POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND ADJUSTING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING FLOW FOR EACH SYSTEM.
25. WHEN RADIUS OF SPRINKLER HEADS AS REQUIRED FOR PROPER COVERAGE IS LESS THAN RADIUS SHOWN ON LEGEND, THE CONTRACTOR SHALL EQUIP SPRINKLER HEAD WITH A PRESSURE COMPENSATING SCREEN (PCS) FOR LOW FLOW AND RADIUS CONTROL.
26. USE ADJUSTABLE ARC NOZZLES FOR ALL HEADS LOCATED IN AREAS WHERE A STANDARD ARC PATTERN SPRAYS OVER ONTO ADJACENT PAVING, WALLS OR OTHER HARDSCAPE ELEMENTS. ADJUSTABLE ARC NOZZLE SHOULD HAVE THE SAME RADIUS OF THROW AS THE NOZZLE BEING REPLACED.
27. NO OVERSPRAY OR LOW HEAD DRAINAGE SHALL BE ALLOWED.
28. WHEN VERTICAL OBSTRUCTIONS (LIGHT POLES, FIRE HYDRANTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE COLLEGE.
29. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWING. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE IMMEDIATELY UPON REJECTION.
30. ALL ELECTRICAL CONTROL WIRE SHALL BE DIRECT BURIAL, #14 UL APPROVED, IN AN 18" DEEP TRENCH, INSTALLED UNDERNEATH THE MAINLINE PIPE WHEN RUN IN THE SAME TRENCH. WIRE CONNECTORS SHALL BE PENTITE OR DRI-SPLICE ONLY. EXTRA HOT WIRE - 2 PER EACH GROUP OF 5 WIRES - LABEL ALL SPARE WIRES AT BOTH ENDS. COLORS FOR CONTROL WIRE SHALL BE AS FOLLOWS:
    A. COMMON WIRE - WHITE
    B. HOT WIRE - BLACK
    C. EXTRA COMMON WIRE, MINIMUM 3 EACH DIRECTION AND ONE TO EACH LEG OF MAINLINE FROM POC PER CONTROLLER - WHITE WITH ORANGE STRIPE (DIFFERENT STRIPE COLOR PER CONTROLLER)
31. ALL AUTOMATIC CONTROLLER PROGRAMS MUST BE SET TO OPERATE BETWEEN THE HOURS OF 10 P.M. AND 6 A.M.
32. THE ENTIRE SPRINKLER SYSTEM SHALL BE GUARANTEED BY THE CONTRACTOR AS TO MATERIAL AND WORKMANSHIP, INCLUDING THE SETTLING OF BACKFILLED AREAS AND TRENCHES FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE OF THE WORK. SHOULD ANY OPERATION DIFFICULTIES IN CONNECTION WITH THE SPRINKLER SYSTEM DEVELOP WITHIN THE SPECIFIED GUARANTEE PERIOD, WHICH IN THE OPINION OF THE COLLEGE MAY BE DUE TO INFERIOR MATERIAL AND/OR WORKMANSHIP, SAID DIFFICULTIES SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE COLLEGE AT NO ADDITIONAL COST.
33. THE CONTRACTOR SHALL AT ALL TIMES PROTECT HIS WORK FROM DAMAGE AND THEFT AND REPLACE ALL DAMAGED OR STOLEN PARTS AT HIS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE COLLEGE.
34. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT EACH POINT OF CONNECTION. THE CONTRACTOR SHALL VERIFY WATER PRESSURE IN THE FIELD PRIOR TO CONSTRUCTION TO DETERMINE IF IT IS SUFFICIENT TO OPERATE SYSTEMS AS DESIGNED. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE PROJECT LANDSCAPE ARCHITECT. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO THE COLLEGE.
35. AFTER INSTALLATION OF THE IRRIGATION SYSTEM IS COMPLETED, THE CONTRACTOR SHALL PERFORM A COVERAGE TEST IN THE PRESENCE OF THE LANDSCAPE ARCHITECT AND CITY PUBLIC WORKS INSPECTOR TO DETERMINE IF THE IRRIGATION COVERAGE FOR PLANTING AREAS IS ADEQUATE AND COMPLETE. FURNISH ALL MATERIALS AND PERFORM ALL WORK REQUIRED TO CORRECT ANY INADEQUACIES OF COVERAGE DUE TO DEVIATIONS FROM THE PLANS OR BECAUSE DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS WERE NOT BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

Irrigation General Notes

1. IRRIGATION PLANS ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. ALL IRRIGATION EQUIPMENT, SPRINKLERS AND PIPE ARE TO BE INSTALLED IN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE. THE IRRIGATION CONTRACTOR SHALL ENSURE NO OVERSPRAY ONTO HARDSCAPE, STREETS, WALLS OR ANY OTHER HARDSCAPE / STRUCTURE.

2. MAINLINE SHOWN WITHIN PAVING FOR DRAWING CLARITY ONLY, ACTUAL MAINLINE LOCATION TO BE A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.

3. OVERHEAD IRRIGATION SHALL NOT BE PERMITTED WITHIN 24 INCHES OF ANY NON-PERMEABLE SURFACE, (PER STATE ORDINANCE AB 1881.) ABSOLUTELY NO OVERSPRAY OR LOW HEAD DRAINAGE IS ALLOWED.

4. IRRIGATION SLEEVES SHOWN FOR MAJOR STREET AND DRIVEWAY CROSSINGS FOR CLARITY ONLY. CONTRACTOR SHALL INSTALL SLEEVING BELOW ALL PAVING, HARDSCAPE, ETC. AND AS DIRECTED BY COLLEGE'S AUTHORIZED REPRESENTATIVE.

5. ALL PIPING AND WIRE SHALL BE SLEEVED UNDER PAVING. ALL SLEEVES TO BE MINIMUM 2X DIAMETER OF PIPE SLEEVES. ALL MAINLINE SHALL BE ACCOMPANIED WITH A MINIMUM 2-INCH DIAMETER WIRE SLEEVE. SLEEVING TO EXTEND MINIMUM 12 INCHES BEYOND PAVING.

6. ALL LEAD WIRES TO BE #14 GAUGE, AND BLACK IN COLOR. ALL COMMON WIRE TO BE #14 GAUGE AND WHITE WITH COLORED STRIPE. FOR MULTIPLE CONTROLLERS USE DIFFERING COLOR PER CONTROLLER.

7. TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN PAVING AND BUILDINGS FOR DRAWING CLARITY ONLY, ACTUAL LOCATION TO BE WITHIN PLANTER. BUBBLERS SHALL BE ALIGNED WITH TREES AND AS DIRECTED BY COLLEGE'S AUTHORIZED REPRESENTATIVE. CONFIRM ALL LAYOUT IN FIELD WITH COLLEGE'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

8. ELECTRIC CONTROL VALVES AND ISOLATION VALVE LOCATIONS ON THIS DRAWING ARE APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE OUT EACH ELECTRICAL CONTROL VALVE AND ISOLATION VALVE LOCATION FOR REVIEW AND APPROVAL BY COLLEGE PRIOR TO INSTALLATION OF ALL VALVES. FINAL LOCATION AND EXACT POSITIONING FOR ELECTRIC CONTROL VALVES AND ISOLATION VALVES SHALL BE DETERMINED BY THE COLLEGE. MINOR MODIFICATIONS OF ELECTRIC CONTROL VALVES AND ISOLATION VALVE LOCATIONS AS REQUESTED BY THE COLLEGE SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COLLEGE. FAILURE TO OBTAIN COLLEGE'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE COLLEGE DIRECTED REVISIONS AT NO ADDITIONAL COST TO THE COLLEGE. IN GENERAL, UNLESS OTHERWISE DIRECTED BY COLLEGE, ALL VALVES SHALL BE INSTALLED THREE FEET FROM EDGE OF HARDSCAPE, WALK OR CURB IN SHRUB PLANTING AREAS.

COLOR CHART NOTE:
AS A REQUIREMENT THE AUTOMATIC CONTROLLER SHALL CONSIST OF A NEATLY DRAWN 11"x17" LAMINATED IRRIGATION PLAN AND COLORED ZONE MAP LAYOUT CHART. LAYOUT CHART SHALL BE COLOR CODED INDICATING LOCATION OF ALL CONTROLS, PIPING, SLEEVES, HEADS (INCLUDING TYPE), VALVES AND CONNECTION TO WATER SERVICE.

MAINTENANCE SCHEDULE:

1) LANDSCAPES SHALL BE MAINTAINED TO ENSURE WATER EFFICIENCY FOR 90 DAYS FROM DATE OF SUBSTANTIAL COMPLETION OR LANDSCAPE ACCEPTANCE, WHICHEVER IS LATER. A REGULAR MAINTENANCE SCHEDULE SHALL INCLUDE BUT NOT LIMITED TO CHECKING, ADJUSTING, CLEANING AND REPAIRING EQUIPMENT; RESETTING THE AUTOMATIC CONTROLLER, AERATING AND DETACHING TURF AREAS; REPLENISHING MULCH; FERTILIZING; PRUNING; AND WEEDING IN ALL LANDSCAPE AREAS. PER SPECIFICATION SECTION 329300.19

2) REPAIR OF IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERIALS OR THEIR APPROVED EQUIVALENTS.

3) THE LANDSCAPE MAINTENANCE PERIODS SHALL START AT THE END OF EACH PHASE OF WORK.

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SEALS / APPROVALS

REGISTERED LANDSCAPE ARCHITECT
JAMES J. RIDGE
LIC. #2809
(Signature)
05/17/18
(Date)
05/31/19
(Exp. Date)
STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
DATE ________________

PROJECT TITLE
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LONG BEACH CITY COLLEGE
LIBERAL ARTS CAMPUS

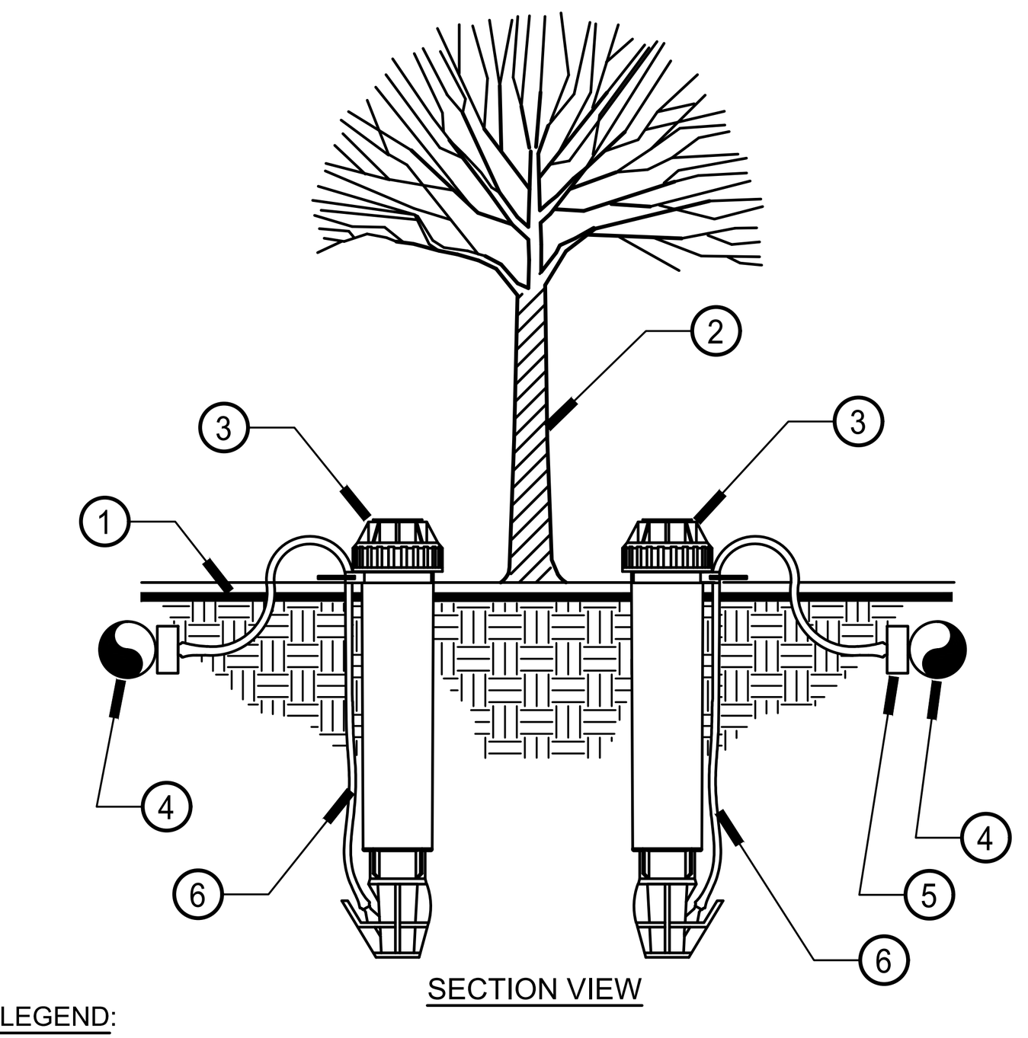
SUBMITTALS		
	07/ 24/ 2017	50% CD
	10/ 19/ 2017	95% CD
	11/ 17/ 2017	CONSTRUCTION DOCUMENTS
	12/ 19/ 2017	DISTRICT COMMENTS
4	05/ 17/ 2018	ADDENDUM 4

PROJECT IDENTIFICATION
THE ORIGINAL SIZE OF THIS SHEET IS 30" x 42"
DATE 05/17/2018
DRAWN BY MR
CHECKED BY TC

SHEET TITLE
IRRIGATION NOTES

SHEET NUMBER
L3.2

J:\Dwgs\HPI\LBCC Bldgs 1 & 2\cd\lac-id.dwg Tue, 22 May 2018-3:03pm Plotted by: Terri



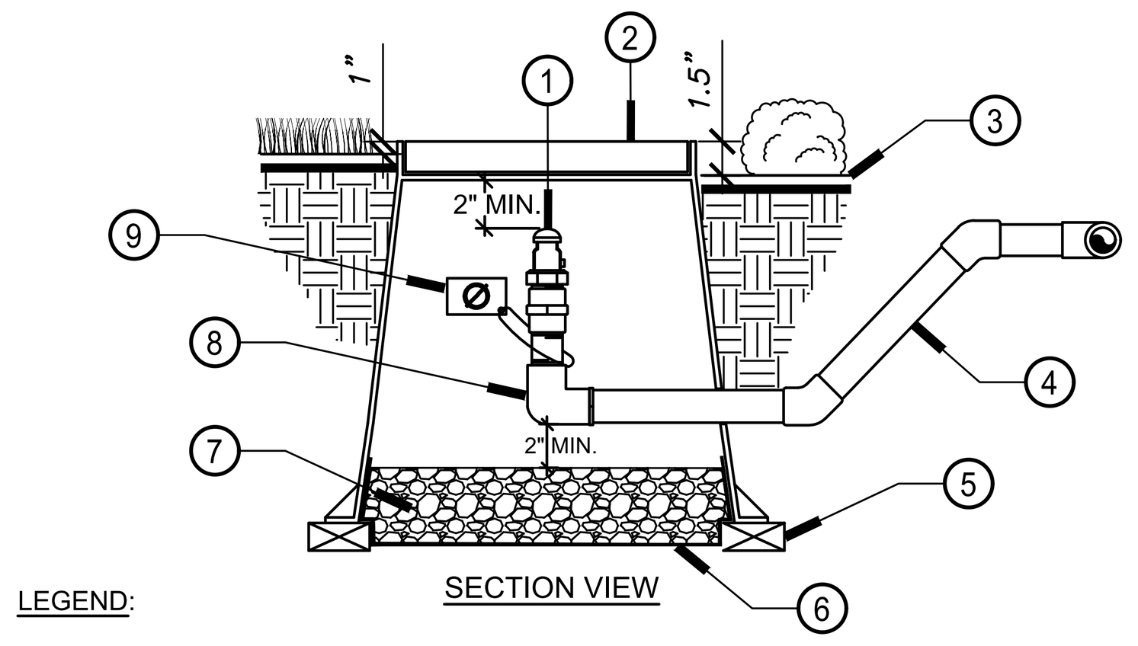
LEGEND:

1. FINISH GRADE.
2. TREE.
3. MICRO-SPRAY POP-UP: RAIN BIRD XERI-POP XP-600X, XERI-POP MICRO SPRAY 6" POP-UP HEAD WITH RAIN BIRD SXB-360-1032 FULL-CIRCLE, ADJUSTABLE XERI-SPRAY WITH 10-32 THREADS. INSTALL WITH RAIN BIRD XBA-1800, 1800 XERI-BUBBLER ADAPTER.
4. IN-LINE DRIP TUBING, SEE LEGEND FOR TYPE.
5. ¼" SELF-PIERCING BARB CONNECTOR: RAIN BIRD SPB-025.
6. ¼" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)

NOTE:

A. (2) BUBBLERS REQUIRED FOR 24" BOX TREES AND SMALLER.
(3) BUBBLERS REQUIRED FOR 36" BOX TREES.
(4) BUBBLERS REQUIRED FOR PALMS AND 48" BOX AND LARGER TREES.
B. PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE. ADJUST PER ROOTBALL SIZE, TYPICAL.

(J) TREE XERI-POP MICRO-SPRAY — NOT TO SCALE



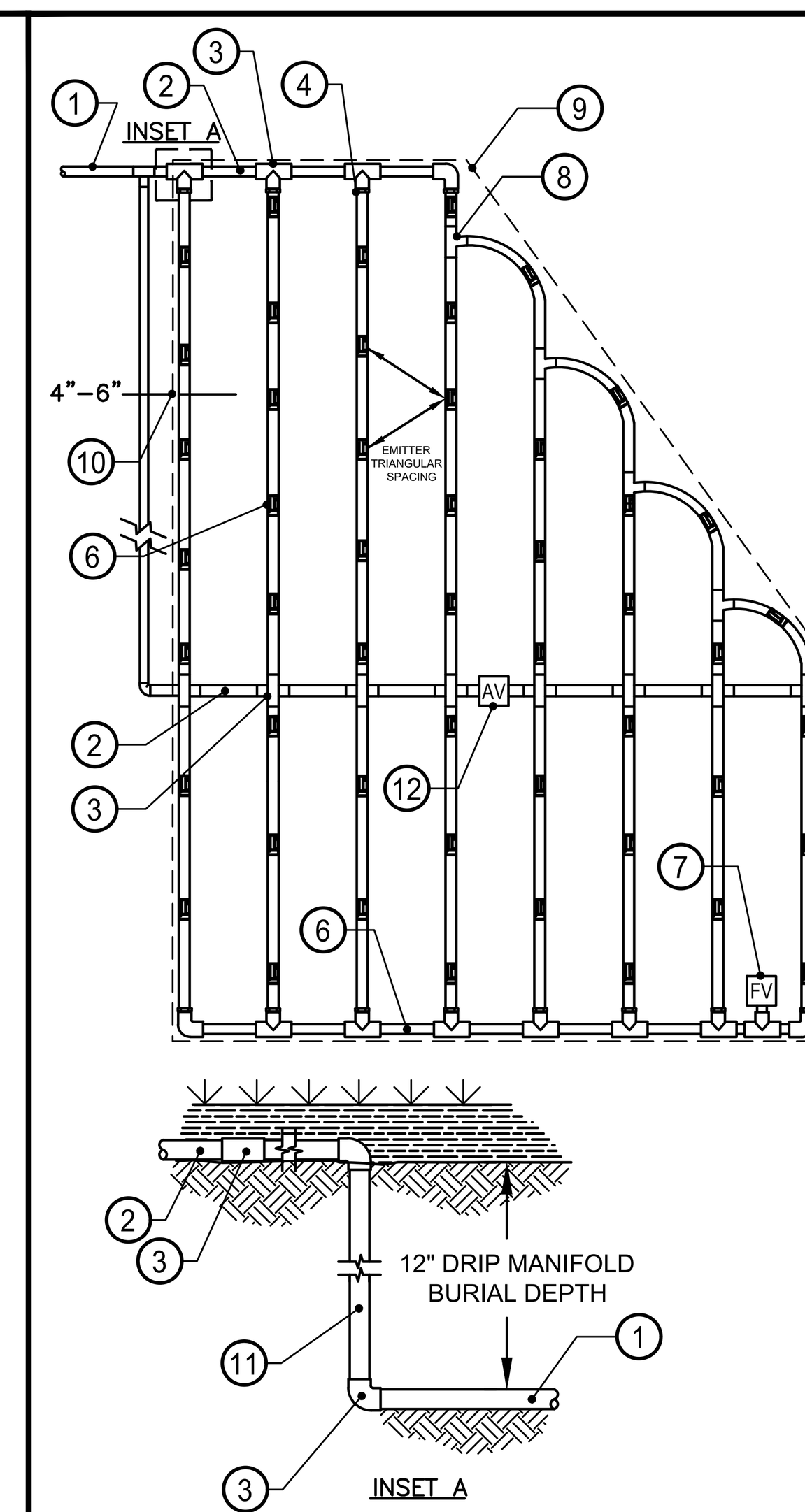
LEGEND:

1. DRIP SYSTEM AIR RELEASE VALVE, SEE LEGEND FOR TYPE. INSTALLED ON SCH. 40 PVC THREADED COUPLING WITH A 3/4" SCH. 80 NIPPLE, LENGTH AS REQUIRED TO LOCATE VALVE 2" FROM TOP OF VALVE BOX.
2. (PURPLE) "RECYCLED WATER" SIX INCH ROUND PLASTIC VALVE BOX, HEAT BRAND "ARV" ONTO LID.
3. FINISHED GRADE.
4. (PURPLE) "RECYCLED WATER" PVC PIPE FROM DISCHARGE HEADER, 1/2" SCH 40, LENGTH AS REQUIRED.
5. NOMINAL SIZE SOLID BRICK SUPPORTS (3 REQUIRED - EQUALLY SPACED).
6. LANDSCAPE FABRIC.
7. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
8. PVC SCH 40 ELBOW (SxT) OR TEE , 3/4" SIZE WITH 3/4" x 1/2" SCH 40 PVC SLIP BUSHING.
9. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ: "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.

NOTES:

A. USE SCH 40 PVC 45 DEGREE ELLS TO TRANSITION TO DRIPLINE HEADER DEPTH.
B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN GROUNDCOVER / SHRUB AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.
D. INSTALL AIR RELIEF VALVE 18" FROM PAVING.

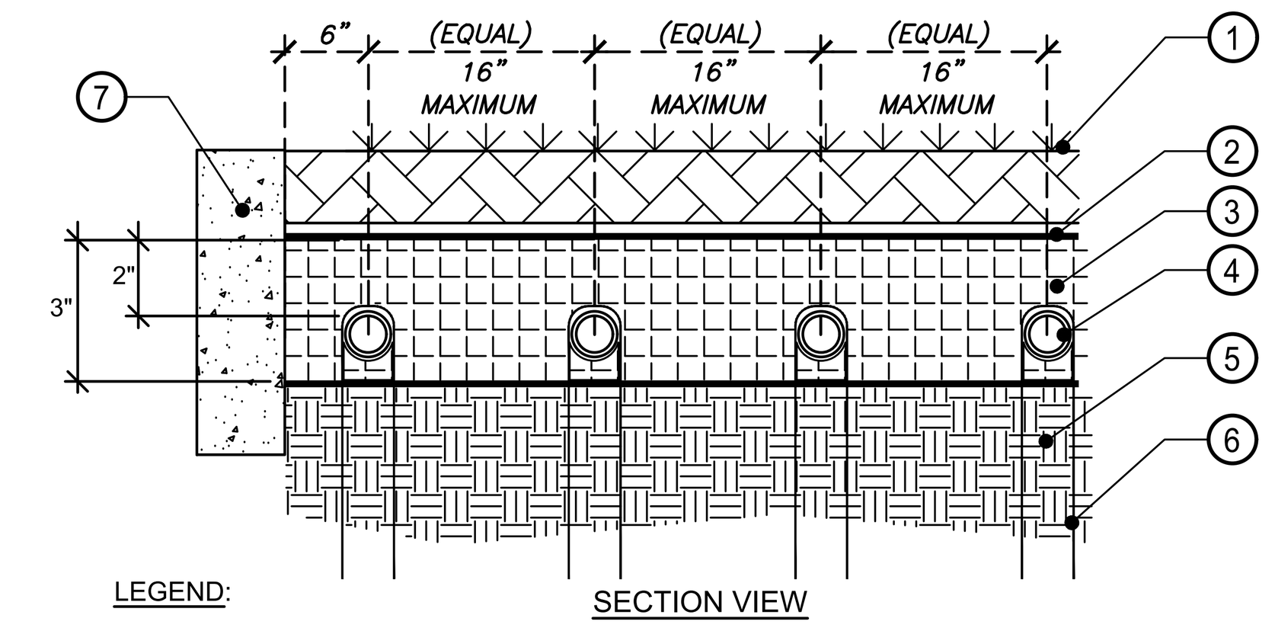
(G) DRIP AIR RELIEF VALVE — NOT TO SCALE



LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE VALVE KIT.
2. PVC PIPE SUPPLY HEADER - SEE PLAN FOR SIZE.
3. SCH 40 PVC TEE SxSxT OR ELL, LINE SIZE.
4. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
5. IN-LINE DRIP TUBING WITH TRIANGULAR SPACING EMITTERS 12 INCH ON CENTER, ROW SPACING 14-16 INCHES ON CENTER FOR SHRUB AREAS AND 12 INCHES MAXIMUM FOR TURF AREAS. - SEE LEGEND FOR TYPE. INSTALL WITH 6" GALVANIZED STEEL WIRE STAKES FOUR (4) FEET ON CENTER.
6. PVC PIPE FLUSH EXHAUST MANIFOLD.
7. COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD, PLUMBED TO EXHAUST HEADER PVC PIPE AT LOW / END OF DRIP ZONE, TYP. INSTALL "ORANGE" COLOR FOR DOMESTIC WATER AND "PURPLE" FOR RECYCLED WATER - SEE LEGEND FOR TYPE.
8. DRIP FITTING - SEE LEGEND FOR TYPE, TYP.
9. PLANTER AREA PERIMETER.
10. PERIMETER DRIPLINE PIPE TO BE INSTALLED 4"-6" FROM PERIMETER OF PLANTER AREA, MINIMUM 12" DISTANCE FROM BUILDING.
11. PVC PIPE SCH 40 RISER, LENGTH AS REQUIRED.
12. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)

(D) DRIPLINE LAYOUT (TYP) — NOT TO SCALE



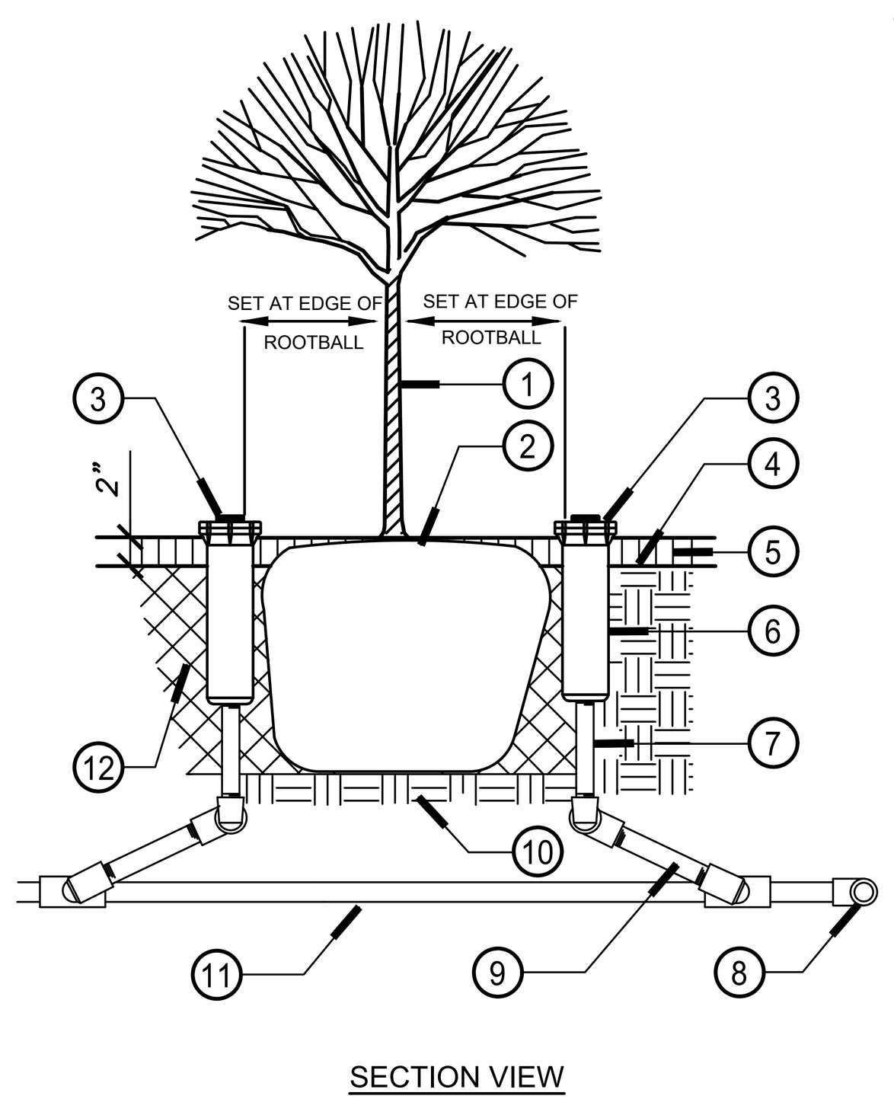
LEGEND:

1. BARK MULCH FOR SHRUB AREA PLANTING, SEE PLANTING PLAN FOR DEPTH AND TYPE.
2. FINISHED GRADE.
3. AMENDED SOIL. BRING SOIL LEVEL MINIMUM 3" BELOW FINISHED GRADE PRIOR TO DRIP TUBING INSTALLATION.
4. IN-LINE DRIP TUBING - SEE LEGEND FOR TYPE, EMITTER AND ROW SPACING.
5. AMENDED SOIL AS PER LANDSCAPE DRAWINGS.
6. 6" WIRE STAKES FOUR (4) FEET ON CENTER - SEE LEGEND FOR TYPE.
7. HARDSCAPE / CURB / PAVING.

NOTES

A. TO INSURE EVEN PARALLEL AND LEVEL TUBING ROWS IT IS RECOMMENDED THAT THE SOIL LEVEL IN THE PLANTER AREAS BE BROUGHT TO MINIMUM 3"- 4" BELOW FINISHED GRADE AND PROPERLY COMPACTED AS PER THE LANDSCAPED DRAWINGS PRIOR TO THE INSTALLATION OF THE TUBING.
B. INSTALL TUBING ROWS A MAXIMUM 16" ROW SPACING. SECURE TO GRADE USING 6" GALVANIZED WIRE HOOP STAKES AT MAXIMUM 4 FEET ON CENTER SPACING.
C. BACKFILL FINAL 2" - 3" OF SOIL AFTER INSTALLATION OF TUBING.
D. DRIP TUBING SHALL BE INSTALLED WITH EMITTERS TRIANGULAR SPACED.
E. INSTALL PERIMETER TUBING MAXIMUM 6" FROM PERIMETER EDGE FOR GROUNDCOVER AREAS OR AT FIRST LINE OF SHRUBS.
F. INSTALL PARALLEL TO SLOPE AT ALL TIMES.
G. CONTRACTOR SHALL DETERMINE MINIMUM ROW SPACING IN THE FIELD AFTER REVIEW OF PLANT SPACING FOR EACH PLANTER.
H. EACH AND EVERY SHRUB SHALL RECEIVE WATER FROM A MINIMUM OF TWO INLINE EMITTERS.
I. AREAS OF TIGHTLY SPACED GROUNDCOVER WILL REQUIRE 12" OR CLOSER ROW SPACING.
J. FOR ANY 'SINGLE' OR' DOUBLE' ROW TYPE PLANTINGS, INSTALL DRIP TUBING ON BOTH SIDES OF THE SHRUB ROW TO IRRIGATE SHRUBS ON EITHER SIDE.
K. DUE TO SOIL STRATA DIFFERENCES AND POSSIBLE COMPACTION CONTRACTOR SHALL FIELD VERIFY PRIOR TO STARTING WORK AND BEFORE BACKFILLING THAT THE FINAL LAYOUT AND ROW SPACING WILL PROVIDE ADEQUATE WATER TO ALL PLANTS.

(A) DRIPLINE LAYOUT (TYP) — NOT TO SCALE



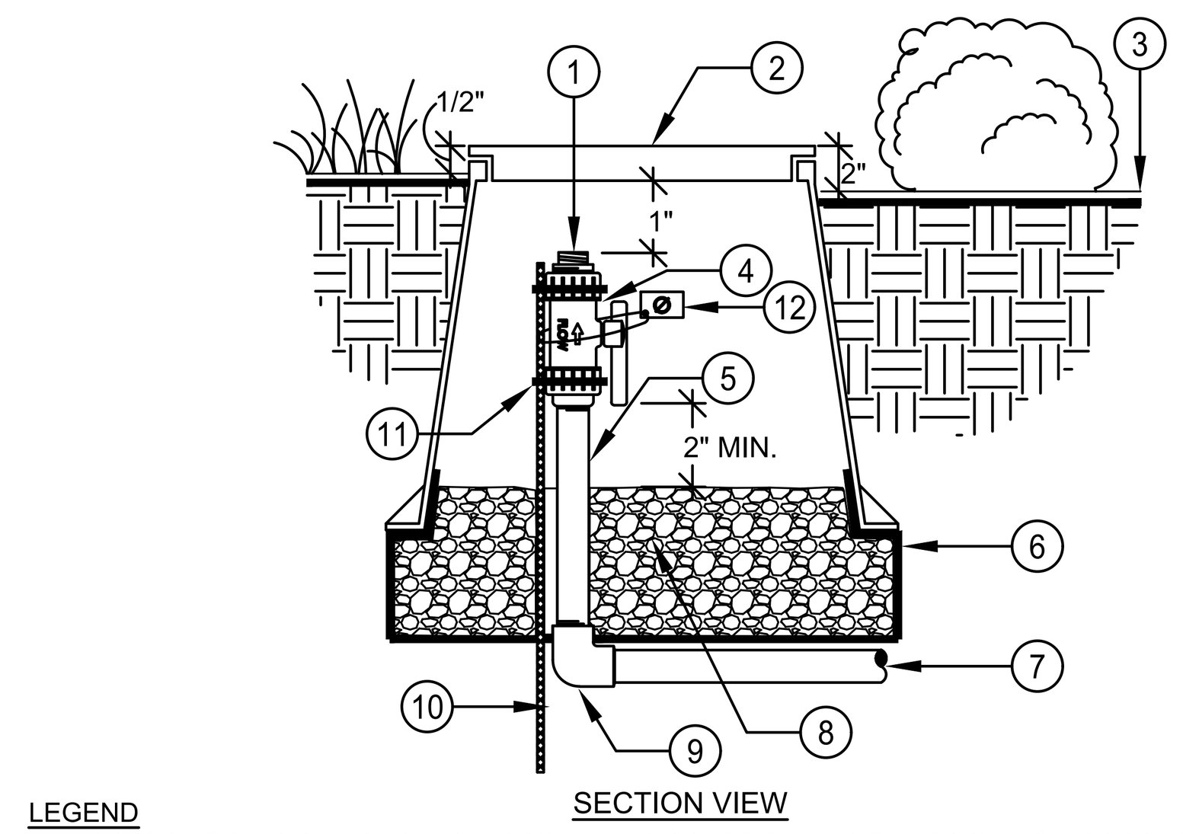
LEGEND:

1. TREE TRUNK.
2. TREE ROOTBALL.
3. IRRIGATION POP-UP HEAD WITH BUBBLER NOZZLE - SEE LEGEND FOR TYPE.
4. FINISHED GRADE.
5. 2" LAYER OF MULCH, PER PLANTING PLANS.
6. IRRIGATION POP-UP HEAD - SEE LEGEND FOR TYPE.
7. SCH 80 PVC THREADED RISER - LENGTH AS REQUIRED.
8. PVC LATERAL, PER PLAN.
9. PRE-ASSEMBLED TRIPLE SWING JOINT: HUNTER SJ SERIES (OR APPROVED EQUAL). LAY LENGTH TO BE 6" MINIMUM, SIZE AS PER SPRINKLER OUTLET.
10. SET ROOTBALL ON UNDISTURBED NATIVE SOIL.
11. PVC SCH 40 TEE -SST OR ELL -ST ON PVC LATERAL.
12. TREE PIT, PER PLANTING DETAILS.

NOTE:

A. (2) BUBBLERS REQUIRED FOR 24" BOX TREES AND SMALLER.
(3) BUBBLERS REQUIRED FOR 36" BOX TREES.
(4) BUBBLERS REQUIRED FOR PALMS AND 48" BOX AND LARGER TREES.
B. PERCOLATION TEST TO BE DONE FOR DEEP WATERING, AND RESULTS RETURNED TO LANDSCAPE ARCHITECT.
C. PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE. ADJUST PER ROOTBALL SIZE, TYPICAL.
D. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.

(K) POP-UP TREE BUBBLER — NOT TO SCALE



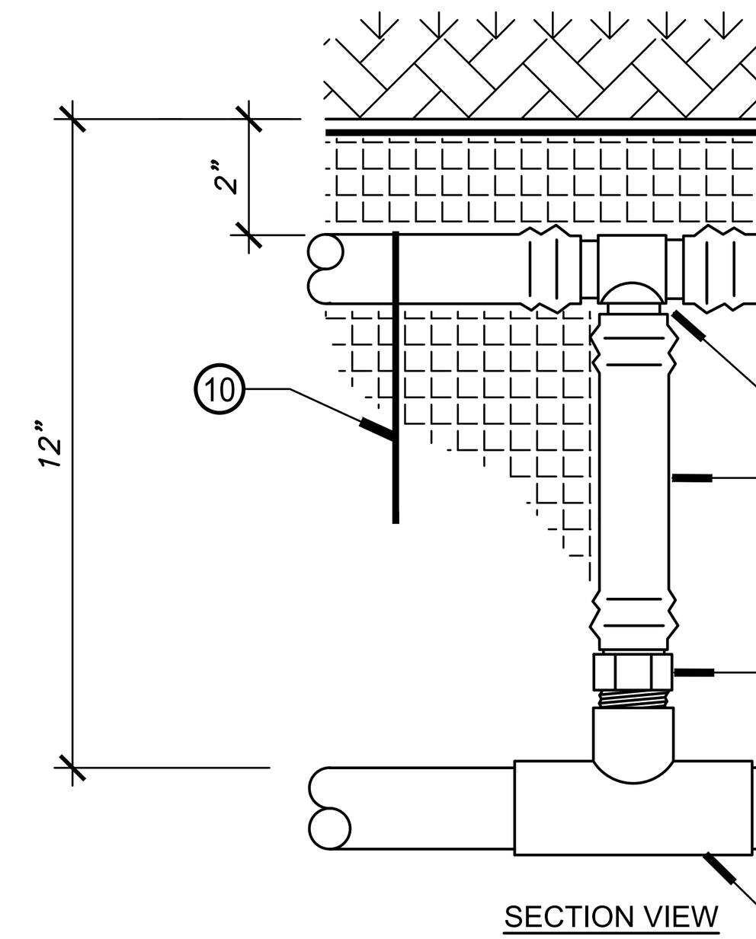
LEGEND

1. BRASS HOSE/PIPE ADAPTER, ARROWHEAD BRASS/CHAMPION IRRIGATION PRODUCTS, MODEL #10F (3/4" MALE HOSE THREAD TO 1/2" MALE PIPE THREAD)
2. (PURPLE) "RECYCLED WATER" TEN INCH ROUND PLASTIC VALVE BOX, HEAT BRAND "FV" ONTO LID.
3. FINISH GRADE.
4. 1/2" PVC SCH 80 THREADED BALL VALVE. REFER TO LEGEND FOR SPECIFICATION.
5. SCH 80 PVC NIPPLE 1/2" x LENGTH AS REQUIRED.
6. LANDSCAPE FABRIC.
7. PVC SCH 40 PIPE FROM DRIP ZONE MANIFOLD 'FOOTER'. MANIFOLD PIPE SIZE BASED ON ZONE FLOW. REFER TO LEGEND FOR SIZES.
8. 1/2" ROUND WASHED PEA GRAVEL - 2.5 CUBIC FEET MINIMUM.
9. PVC SLIP (LINE SIZE) x 1/2" THREAD ELL (SF)
10. (#3) 3/8" x 24" REBAR STAKE.
11. STAINLESS STEEL CLAMPS, (2 REQ.) TYPICAL.
12. CHRISTY'S RECYCLED WATER WARNING TAG: "RECYCLED WATER - DO NOT DRINK" IN ENGLISH AND SPANISH.

NOTES:

A. INSTALL MINIMUM ONE (1) FLUSH VALVE AT EACH END OF DRIP ZONE.
B. DUE TO FIELD CHANGES OR OTHER REASONS TOTAL FV SYMBOLS SHOWN ON PLAN MAY NOT EQUAL TOTAL QUANTITY OF FV'S REQUIRED.
C. CONTRACTOR SHALL REVIEW DRIP ZONE AREA AND LAYOUT TO DETERMINE EXACT QUANTITY OF FV'S TO INSTALL.
D. IN SHRUB AREAS INSTALL VALVE BOX 2" ABOVE SOIL LEVEL OR 1" ABOVE MULCH LAYER, WHICHEVER IS HIGHER.

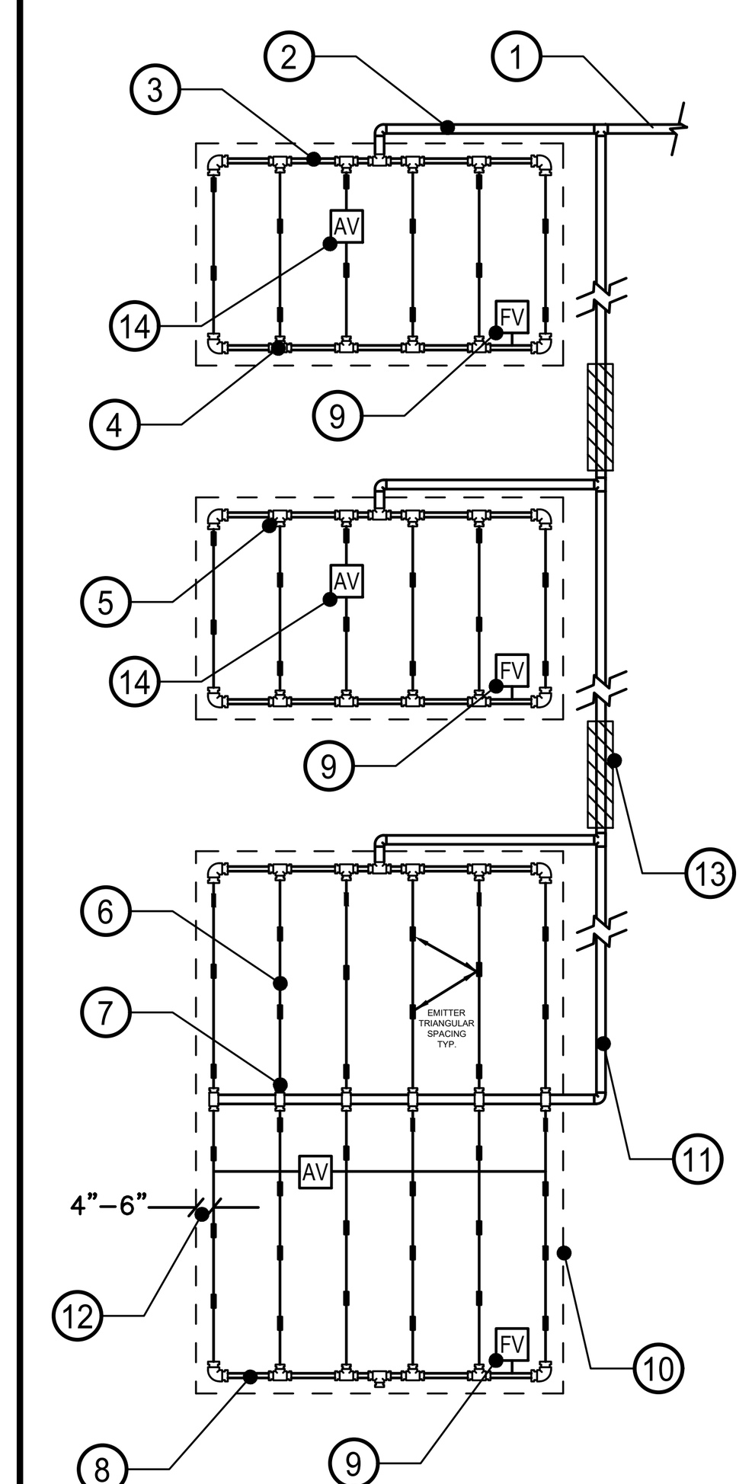
(H) MANUAL FLUSH VALVE — NOT TO SCALE



LEGEND:

1. BARK MULCH FOR SHRUB AREA PLANTING, SEE PLANTING PLAN FOR DEPTH AND TYPE.
2. FINISHED GRADE.
3. AMENDED SOIL.
4. DRIP TUBING - SEE LEGEND FOR TYPE.
5. DRIPLINE BARB INSERT FITTINGS - SEE LEGEND FOR TYPE.
6. BLANK POLY TUBING - LENGTH AS REQUIRED.
7. DRIP TUBING MALE ADAPTER.
8. PVC LATERAL LINE PIPING INLET OR EXHAUST MANIFOLD.
9. SCH 40 PVC TEE SxSxT, LINE SIZE BY ½".
10. 6" WIRE STAKES FOUR (4) FEET ON CENTER.

(E) DRIPLINE CONNECTION — NOT TO SCALE



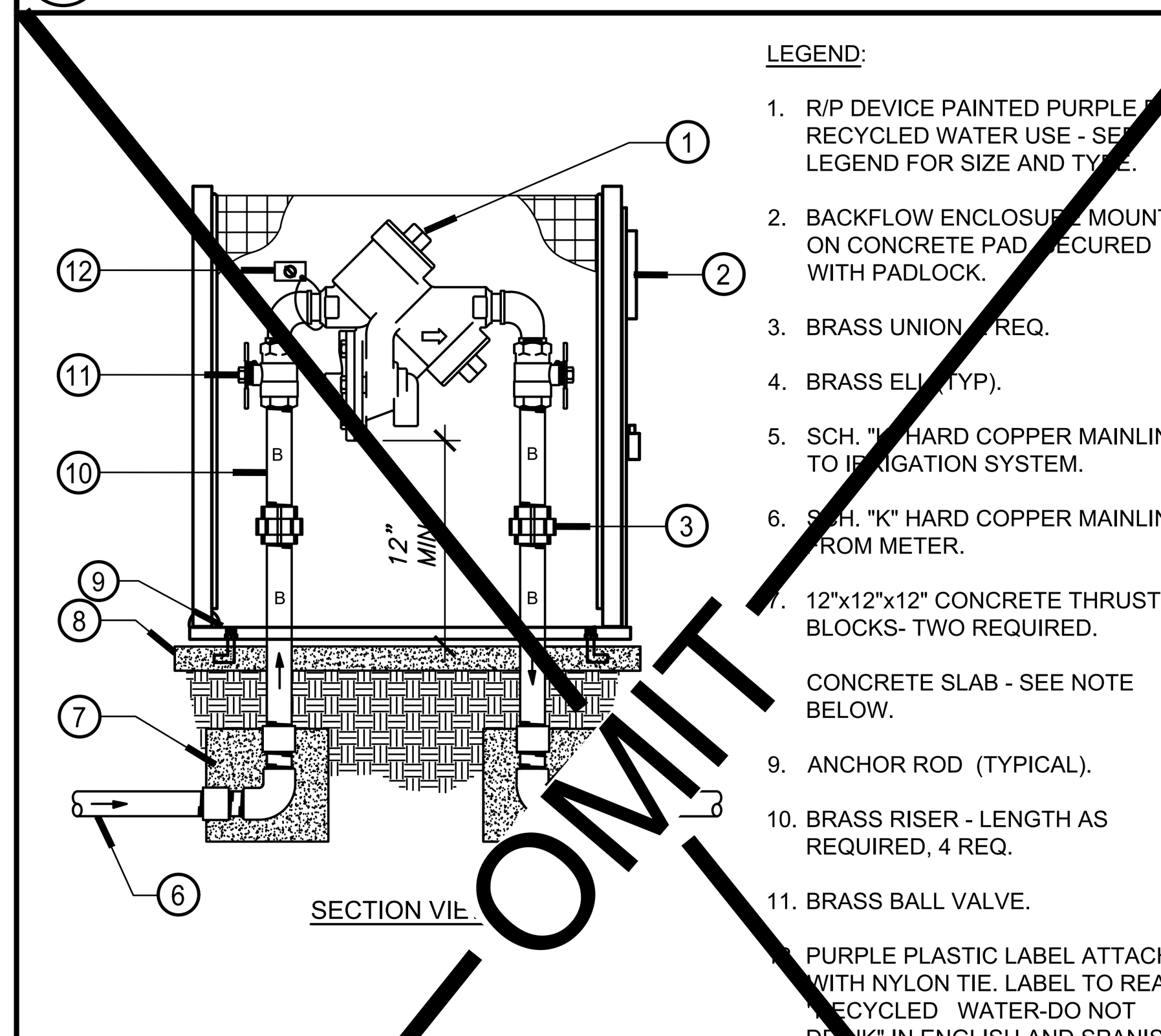
LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE KIT.
2. PVC PIPE LATERAL LINE SUPPLY MANIFOLD.
3. PVC PIPE INLET HEADER.
4. SCH 40 PVC TEE SxSxT, LINE SIZE BY ½".
5. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
6. IN-LINE DRIP TUBING WITH EMITTERS 12 INCH ON CENTER, MAXIMUM ROW SPACING 12"-14" ON CENTER IN SHRUB AREAS AND 10"-12" IN TURF - SEE LEGEND FOR TYPE.
7. TEE MALE ADAPTER.
8. PVC PIPE FLUSH EXHAUST MANIFOLD.
9. COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD, PLUMBED TO EXHAUST HEADER PVC PIPE AT LOW / END OF DRIP ZONE, TYP. INSTALL "ORANGE" COLOR FOR DOMESTIC WATER AND "PURPLE" FOR RECYCLED WATER - SEE LEGEND FOR TYPE.
10. PLANTER AREA PERIMETER.
11. PERIMETER DRIPLINE LATERALS 18" FROM EDGE. REFER TO PIPE INSTALLATION DETAIL FOR DEPTH, SEE PLAN FOR SIZE.
12. PERIMETER DRIPLINE PIPE TO BE INSTALLED 4"-6" FROM PERIMETER OF PLANTER AREA, MINIMUM 12" DISTANCE FROM BUILDING.
13. INSTALL PVC LATERAL LINE WITHIN SLEEVES BETWEEN ALL PLANTERS - SEE LEGEND FOR TYPE.
14. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)

NOTES:

A. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
B. DRIP EMITTER LAYOUT SHALL BE TRIANGULAR SPACED INSTALLED WITH 6" WIRE STAKES FOUR (4) FEET ON CENTER.

(B) DRIPLINE LAYOUT (TYP) — NOT TO SCALE



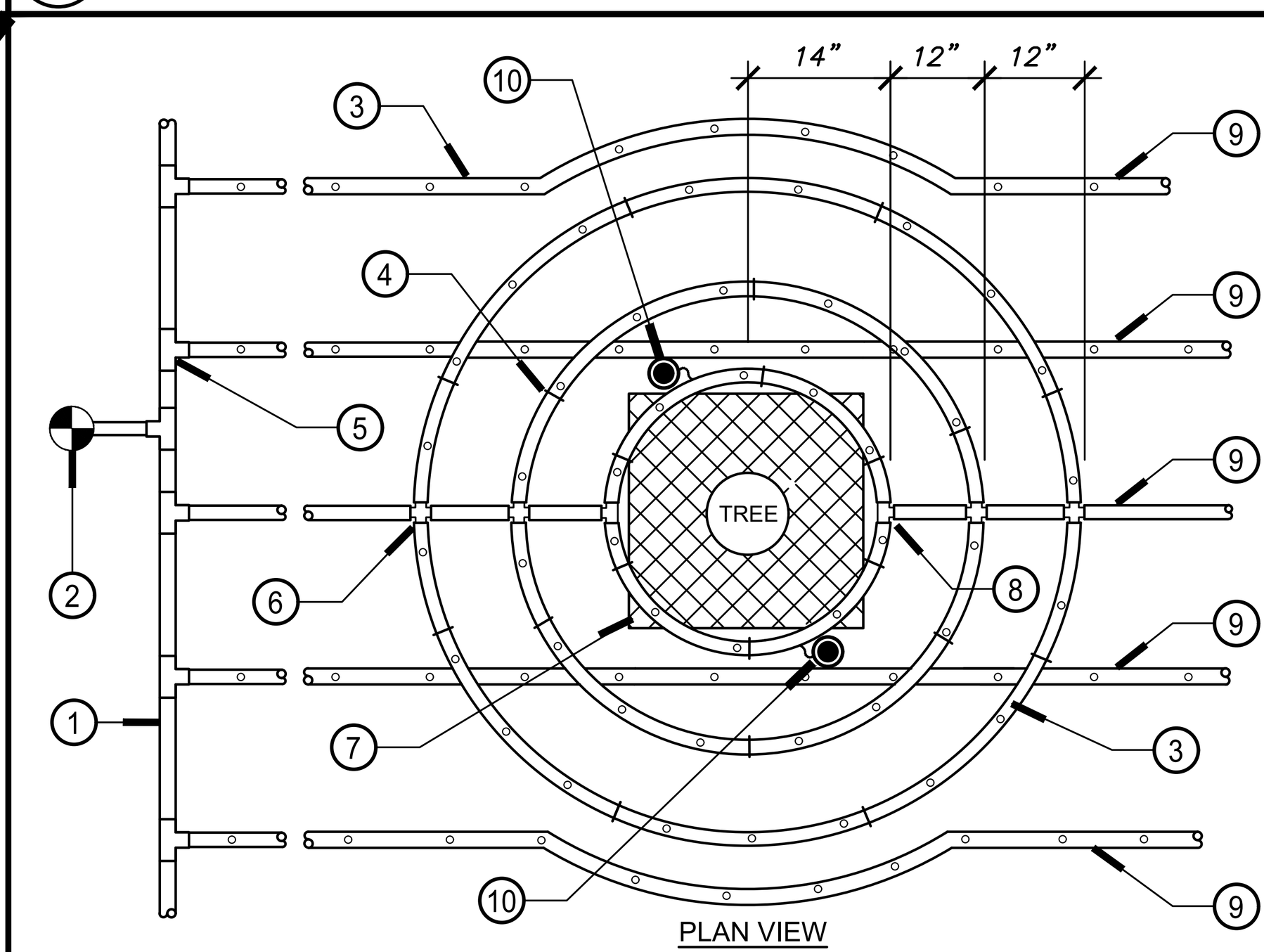
LEGEND:

1. R/P DEVICE PAINTED PURPLE FOR RECYCLED WATER USE - SEE LEGEND FOR SIZE AND TYPE.
2. BACKFLOW ENCLOSURE MOUNTED ON CONCRETE PAD SECURED WITH PADLOCK.
3. BRASS UNION 2 REQ.
4. BRASS ELL (TYP).
5. SCH. "K" HARD COPPER MAINLINE TO IRRIGATION SYSTEM.
6. SCH. "K" HARD COPPER MAINLINE FROM METER.
7. 12"x12"x12" CONCRETE THRUST BLOCKS- TWO REQUIRED.
8. CONCRETE SLAB - SEE NOTE BELOW.
9. ANCHOR ROD (TYPICAL).
10. BRASS RISER - LENGTH AS REQUIRED, 4 REQ.
11. BRASS BALL VALVE.
12. PURPLE PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.

NOTES:

A. CONCRETE SLAB SHALL BE MINIMUM 6" THICK, 18" WIDE, AND EXTEND MINIMUM 8" PAST THE BACKFLOW ASSEMBLY PIPING.
B. IF BACKFLOW ENCLOSURE IS SPECIFIED IN THE LEGEND, THE CONCRETE SLAB SHALL BE THE SIZE REQUIRED BY THE MANUFACTURER.
C. BACKFLOW PREVENTION DEVICE ASSEMBLY SHALL BE INSTALLED IN ACCORDANCE TO GOVERNING CODES AND ORDINANCE.
D. WRAP SUBSURFACE BRASS PIPING WITH 10 MILL UPC PIPE WRAP.
E. PROVIDE 6" CLEARANCE ALL AROUND ENCLOSURE. SLOPE TO DRAIN AWAY AND FINISH WITH 1/4" ROUND OVER.
F. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS. PROVIDE ADEQUATE CLEARANCE FOR MAINTENANCE.
G. BACKFLOW TO BE PAINTED PURPLE IN COLOR.

(L) BACKFLOW DEVICE — NOT TO SCALE



LEGEND:

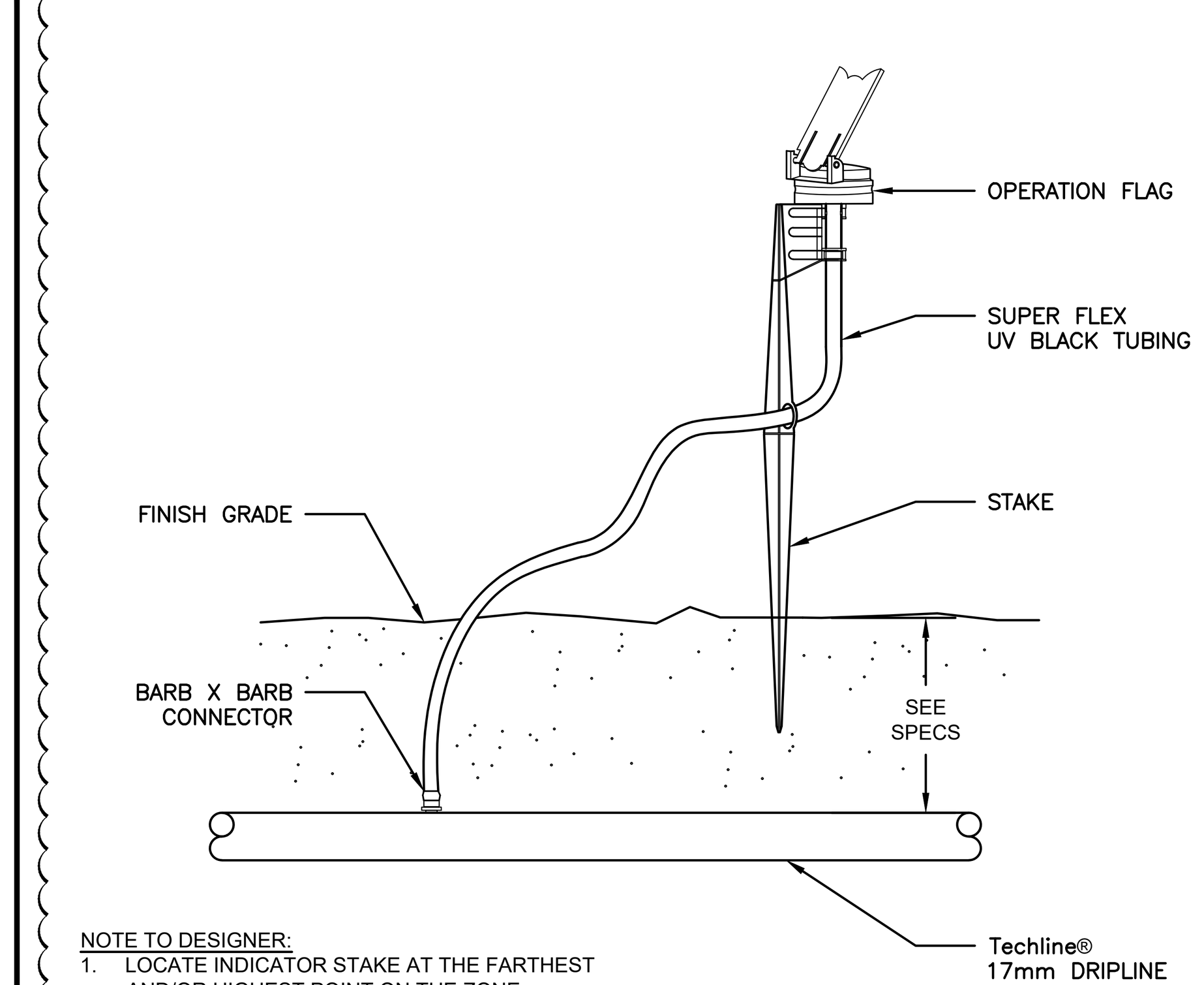
1. SUPPLY HEADER, 3/4" PVC SCH 40.
2. DRIP REMOTE CONTROL VALVE ASSEMBLY. SEE LEGEND FOR TYPE.
3. LANDSCAPE DRIPLINE TUBING. DRIPLINE SPACING: 12".
4. 9" WIRE STAKES - 5 FEET ON CENTER.
5. PVC SCH 40 SxSxT TEE / ELL WITH DRIPLINE INSERT FITTING.
6. DRIPLINE INSERT CROSS FITTINGS TYP.
7. TREE ROOTBALL.
8. DRIPLINE INSERT TEE FITTINGS TYP.
9. DRIPLINE TUBING CONTINUING TO FLUSH MANIFOLD.
10. 6" XERI-POP MICRO SPRAY BUBBLER. (2 REQ. PER TREE) SEE LEGEND FOR TYPE.

NOTE:

DRIPLINE TUBING TO BE INSTALLED BELOW GRADE WITH 2" TOPSOIL COVER. DRIP RINGS FOR ADDITIONAL DEEP WATER TO TREES PLANTED IN SHRUB AND GROUND COVER AREAS - RINGS TO BE CONNECTED TO SHRUB AND GROUND COVER DRIPLINES. DRIP EMITTERS TO BE PLACED AT TREE ROOTBALL AND ADJUST FLOW PER TREE WATER REQUIREMENT.

4

(I) TREE DRIP-RING LAYOUT — NOT TO SCALE



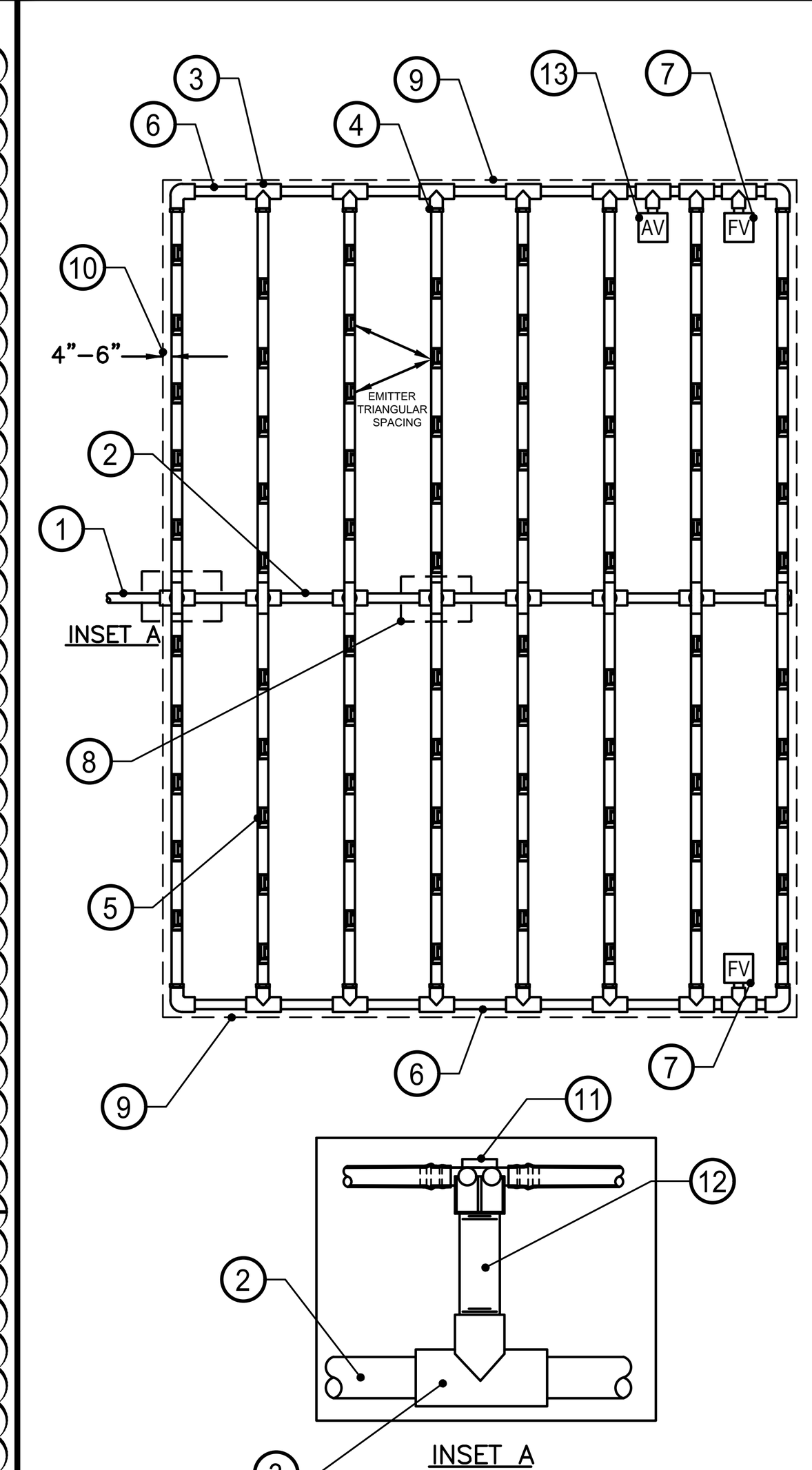
NOTE TO DESIGNER:
1. LOCATE INDICATOR STAKE AT THE FARTHEST AND/OR HIGHEST POINT ON THE ZONE.

Techline® OPERATION PRESSURE INDICATOR STAKE

NETAFIM™

4

(F) PRESSURE INDICATOR STAKE



LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE VALVE KIT.
2. PVC PIPE SUPPLY MANIFOLD - SEE PLAN FOR SIZE.
3. SCH 40 PVC TEE SxSxT OR ELL, LINE SIZE BY ½".
4. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
5. IN-LINE DRIP TUBING WITH EMITTERS 12 INCH ON CENTER, MAXIMUM ROW SPACING 14"-16" ON CENTER FOR SHRUB AREAS AND 10"-12" FOR TURF - SEE LEGEND FOR TYPE. EMITTERS TO BE TRIANGULAR SPACING. INSTALL WITH 6" GALVANIZED STEEL WIRE STAKES FOUR (4) FEET ON CENTER.
6. PVC PIPE FLUSH EXHAUST MANIFOLD.
7. COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD, PLUMBED TO EXHAUST HEADER PVC PIPE AT LOW / END OF DRIP ZONE, TYP. INSTALL "ORANGE" COLOR FOR DOMESTIC WATER AND "PURPLE" FOR RECYCLED WATER - SEE LEGEND FOR TYPE.
8. CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET "A"
9. PLANTER AREA PERIMETER.
10. PERIMETER DRIPLINE PIPE TO BE INSTALLED 4"-6" FROM PERIMETER OF PLANTER AREA, AND MINIMUM 12" CLEARANCE FROM BUILDING.
11. DRIP FITTING (TYPICAL) , SEE LEGEND FOR TYPE. INSTALL STAINLESS STEEL CLAMPS ON FITTINGS FOR ANY SYSTEM THAT EXCEEDS 50 PSI.
12. ¾" PVC THREADED NIPPLE, LENGTH AS REQUIRED.
13. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)

(C) DRIPLINE LAYOUT (TYP) — NOT TO SCALE

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SEALS / APPROVALS

REGISTERED LANDSCAPE ARCHITECT — JAMES J. RIDGE — LIC. #2809 — (Signature) 05/17/18 (Date) 05/31/19 (Exp. Date) — STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
DATE ____________________

PROJECT TITLE

BUILDINGS 1 & 2 Z
4901 EAST CARSON STREET
LONG BEACH, CA. 90808
T: (562) 938-4111
F: (562) 938-3912

LONG BEACH CITY COLLEGE
LONG BEACH CITY COLLEGE
LIBERAL ARTS CAMPUS

SUBMITTALS		
	07/ 24/ 2017	50% CD
	10/ 19/ 2017	95% CD
	11/ 17/ 2017	CONSTRUCTION DOCUMENTS
	12/ 19/ 2017	DISTRICT COMMENTS
4	05/ 17/ 2018	ADDENDUM 4

PROJECT IDENTIFICATION
THE ORIGINAL SIZE OF THIS SHEET IS 30" x 42"

DATE 05/17/2018

DRAWN BY MR

CHECKED BY TC

SHEET TITLE

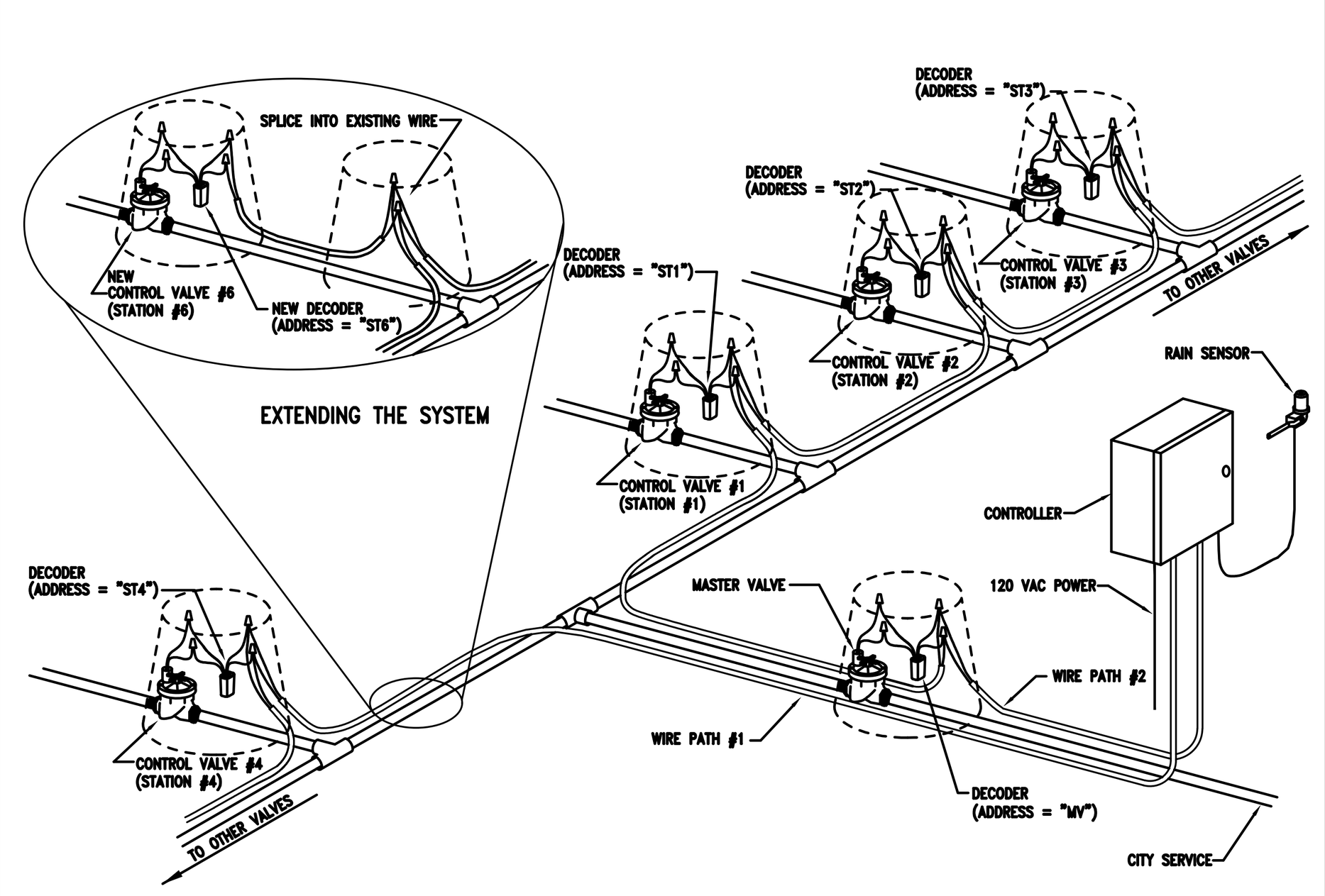
IRRIGATION DETAILS

SHEET NUMBER

L4.1

STEPS TO EXTENDING THE SYSTEM:

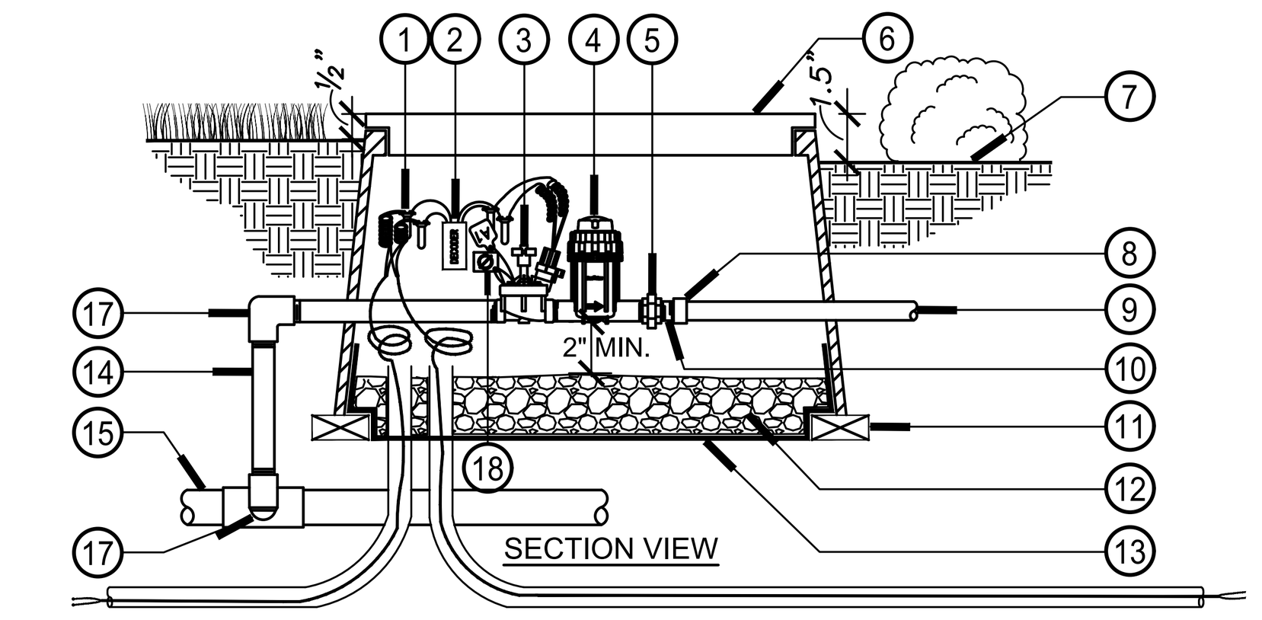
1. TAP AND EXTEND MAIN LINE.
2. SPLICE INTO WIRE AND EXTEND.
3. PROGRAM BLANK DECODER TO NEW STATION ADDRESS.
4. INSTALL NEW VALVE AND DECODER.
5. ENTER NEW STATION # (DECODER ADDRESS) AT CONTROLLER.



NOTES:

A. ALL WIRE CONNECTION SHALL BE MADE WITH APPROVED CONNECTORS.
B. MAKE ALL WIRE SPLICES IN VALVE BOXES.
C. LEAVE A MINIMUM OF 24" EXTRA WIRE AT ALL SPLICE POINTS.
D. MAXIMUM DISTANCE FROM DECODER TO VALVE = 100 FEET
E. INSTALL 2-WIRE CABLE WITHIN 1-1/4" PVC CONDUIT.
F. GROUND SYSTEM PER MANUFACTURE RECOMMENDATIONS.

(V) DECODER WIRING (TYPICAL) NOT TO SCALE



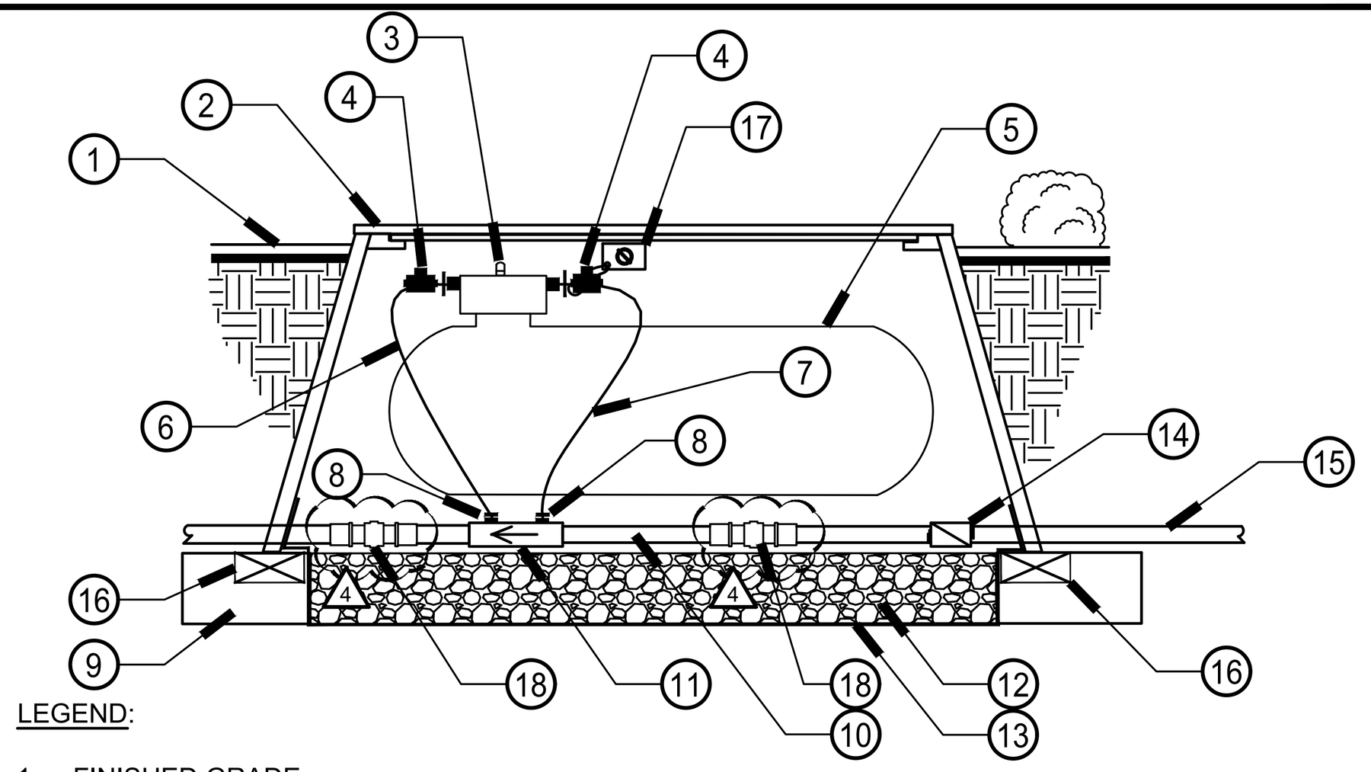
LEGEND:

1. CONTROL WIRES WITH EPOXY-FILLED CONNECTIONS - PROVIDE MIN. 24" COIL OF WIRE AT VALVE - SEE LEGEND FOR TYPE.
2. DECODER - SEE LEGEND FOR TYPE.
3. REMOTE CONTROL VALVE - SEE LEGEND FOR TYPE.
4. BASKET FILTER W/ PRESSURE REGULATOR - SEE LEGEND FOR TYPE.
5. PVC SCH 80 UNION.
6. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR JUMBO VALVE BOX WITH LOCKING COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "RCV" & CONTROLLER STATION NUMBER ONTO LID.
7. FINISHED GRADE - SET TOP OF VALVE BOX ½" ABOVE GRADE IN TURF AREAS AND 2" ABOVE GRADE IN SHRUB / GROUND COVER AREAS.
8. PVC SCH 40 MALE ADAPTER.
9. PVC LATERAL LINE TO DRIP SYSTEM.
10. PVC SCH 80 NIPPLE - LENGTH AS REQUIRED, TYPICAL.
11. NOMINAL SIZE SOLID BRICK - 4 REQUIRED, ONE AT EACH CORNER OF VALVE BOX.
12. PEA GRAVEL - MINIMUM 4" DEPTH WITH 2" VALVE CLEARANCE.
13. LANDSCAPE FABRIC.
14. PVC SCH 80 NIPPLE (2" LENGTH, HIDDEN) AND PVC SCH 40 ELL.
15. PVC MAINLINE - DEPTH PER SPECIFICATIONS.
16. PVC SCH 40 TEE OR ELL.
17. PVC SCH 40 ELL.
18. CHRISTY'S RECYCLED WATER WARNING TAG AND VALVE STATION # I.D. TAG ATTACHED TO VALVE BONNET BOLT.

NOTES:

A. WIRES MUST EXTEND MINIMUM 24" ABOVE VALVE BOX FOR SERVICE.
B. SET TOP OF VALVE BOX 1/2" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUND COVER AND SHRUB AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS TYPICAL.
D. USE SCH 80 PVC FITTINGS.

(S) DRIP REMOTE CONTROL VALVE (DECODER) NOT TO SCALE

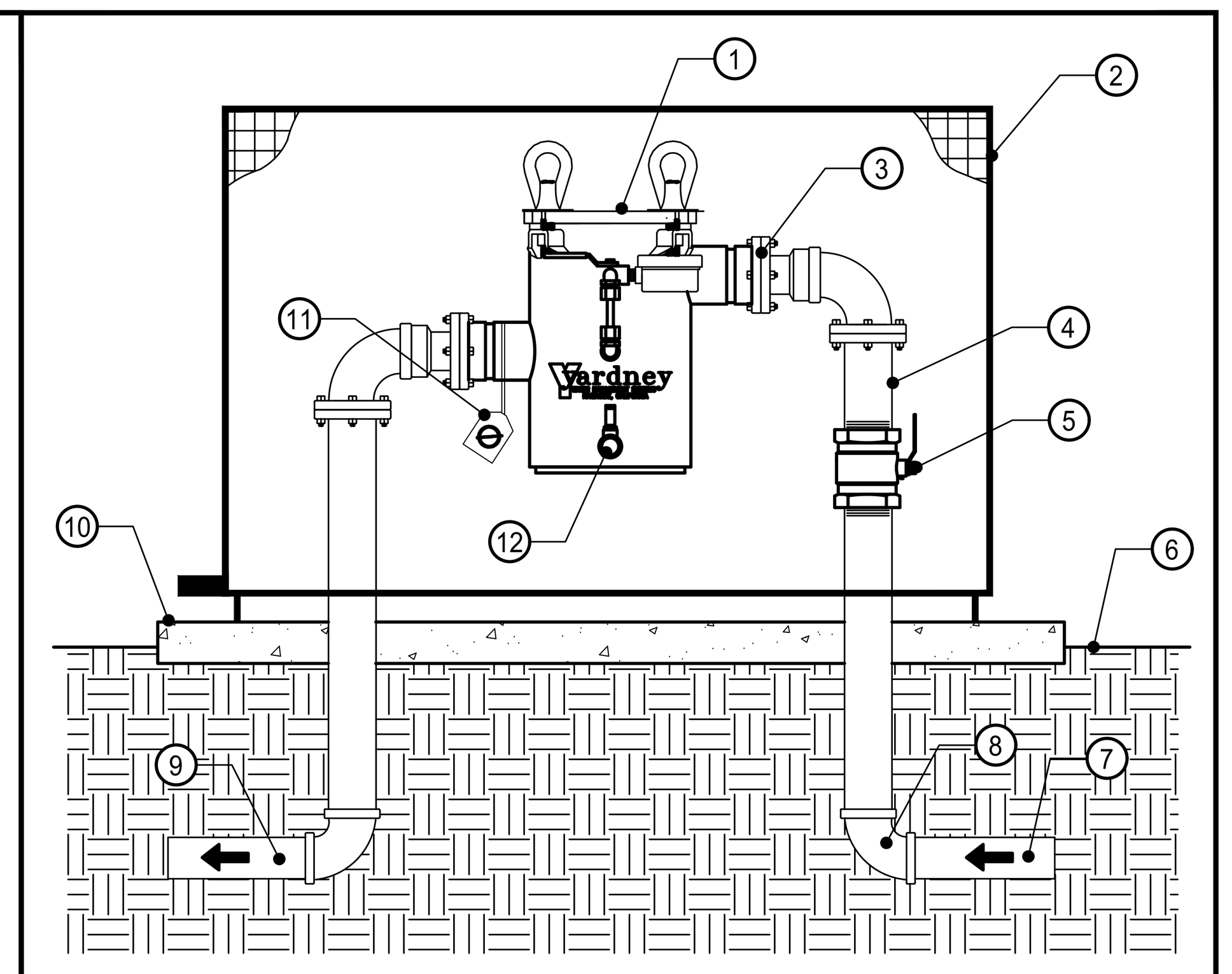


LEGEND:

1. FINISHED GRADE.
2. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR SUPER JUMBO VALVE BOX, WITH LOCKING PURPLE COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "FI" ONTO LID MARKED FOR "RECYCLED WATER", SIZE PER MANUFACTURE RECOMMENDATIONS.
3. PROPORTIONING CAP WITH FEED ADJUSTMENT KNOB.
4. EZ-FLO SHUT OFF VALVES.
5. EZ-FLO FERTILIZING SYSTEM, SEE LEGEND FOR SIZE.
6. (FERTILIZER OUT) CONNECT CLEAR TUBE TO GREEN CONNECTIONS ON PROPORTIONING CAP AND COUPLING.
7. (WATER IN) CONNECT BLACK TUBE TO BLUE CONNECTIONS ON PROPORTIONING CAP AND COUPLING.
8. 1/4" TUBING CLAMP - BOTH THE GREEN AND BLUE COUPLING TUBING CONNECTIONS.
9. APPROVED BACKFILL.
10. PVC MAIN LINE TO VALVE MANIFOLD.
11. EZ COUPLING CONNECTOR - INSTALL ACCORDING TO WATER FLOW DIRECTION ARROW, SIZE PER MAINLINE.
12. 1/2" ROUND WASHED PEA GRAVEL (MINIMUM 4" DEPTH).
13. LANDSCAPE FABRIC.
14. INLINE THREADED BRASS CHECK VALVE, SIZE PER MAINLINE.
15. PVC MAIN LINE FROM P.O.C EQUIPMENT.
16. NOMINAL SIZE SOLID BRICK (4 REQUIRED - ONE AT EACH CORNER OF VALVE BOX).
17. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
18. SCH. 80 PVC UNION, SCH. 80 PVC NIPPLE (EACH SIDE), SCH 80 PVC FEMALE ADAPTER (2 EACH SIDE) △4

NOTE:
ITEMS 3, 4, 5, 6, 7 AND 8 ARE INCLUDED WITH THE EZ-FLO SYSTEM.
ITEM 11 IS PURCHASED SEPARATELY, SIZE ITEM 11PER MAINLINE.

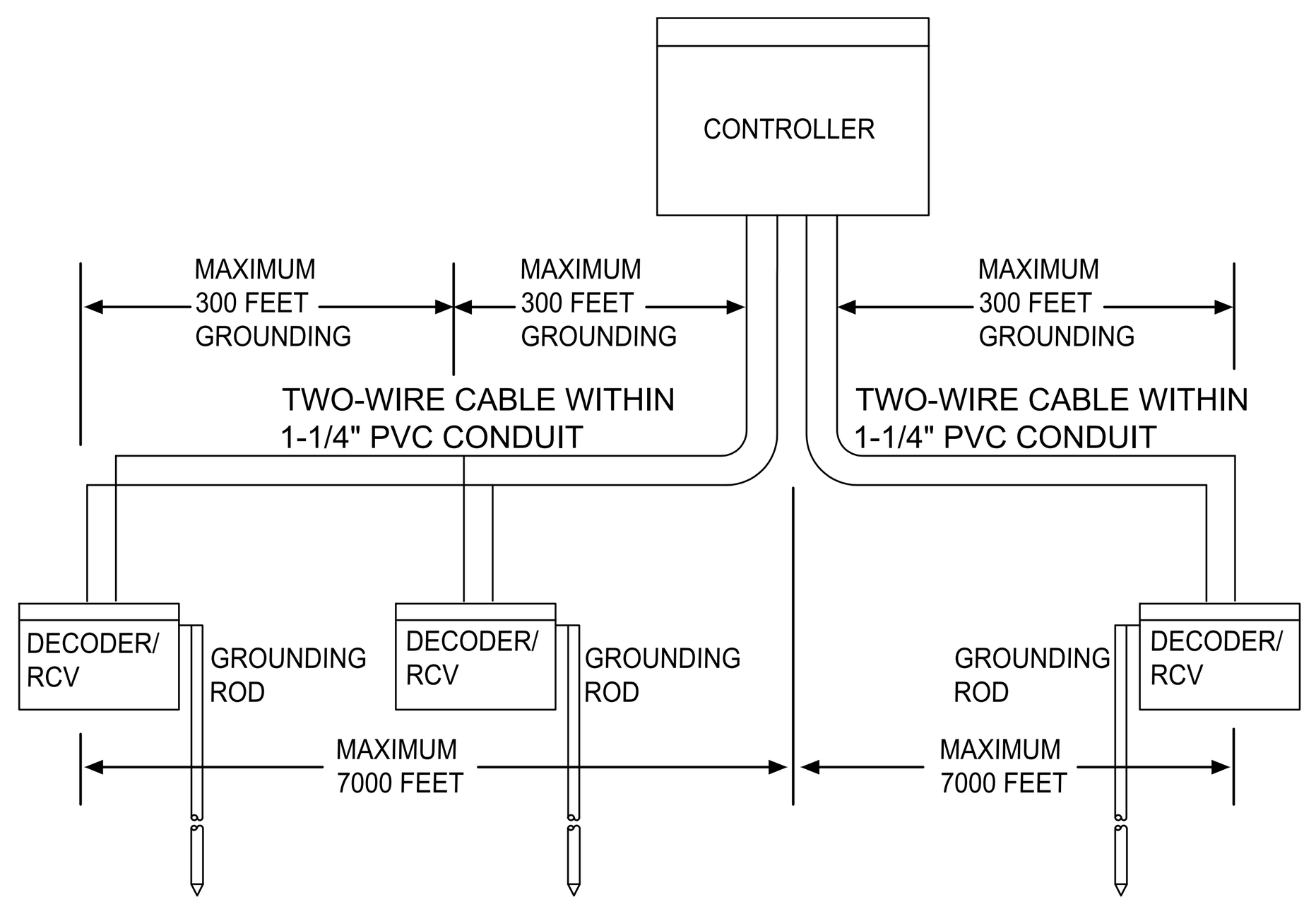
(P) FERTILIZING SYSTEM NOT TO SCALE



LEGEND:

1. BASKET STRAINER, REFER TO LEGEND FOR TYPE.
2. LOCKABLE ENCLOSURE, REFER TO LEGEND FOR TYPE.
3. FLANGE, (SIZE VARIES)
4. BRASS NIPPLES (LENGTH VARIES, 3 REQUIRED, LINE SIZE)
5. BRASS / BRONZE BALL VALVE.
6. FINISH GRADE.
7. BRASS / COPPER MAINLINE FROM WATER SOURCE.
8. BRASS ELBOWS (TxT, 2 REQUIRED, LINE SIZE)
9. BRASS / COPPER MAINLINE TO MASTER VALVE AND FLOW SENSOR.
10. 6" THICK CONCRETE PAD.
11. PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
12. 1/2" MPT DRAIN VALVE.

(M) BASKET STRAINER NOT TO SCALE

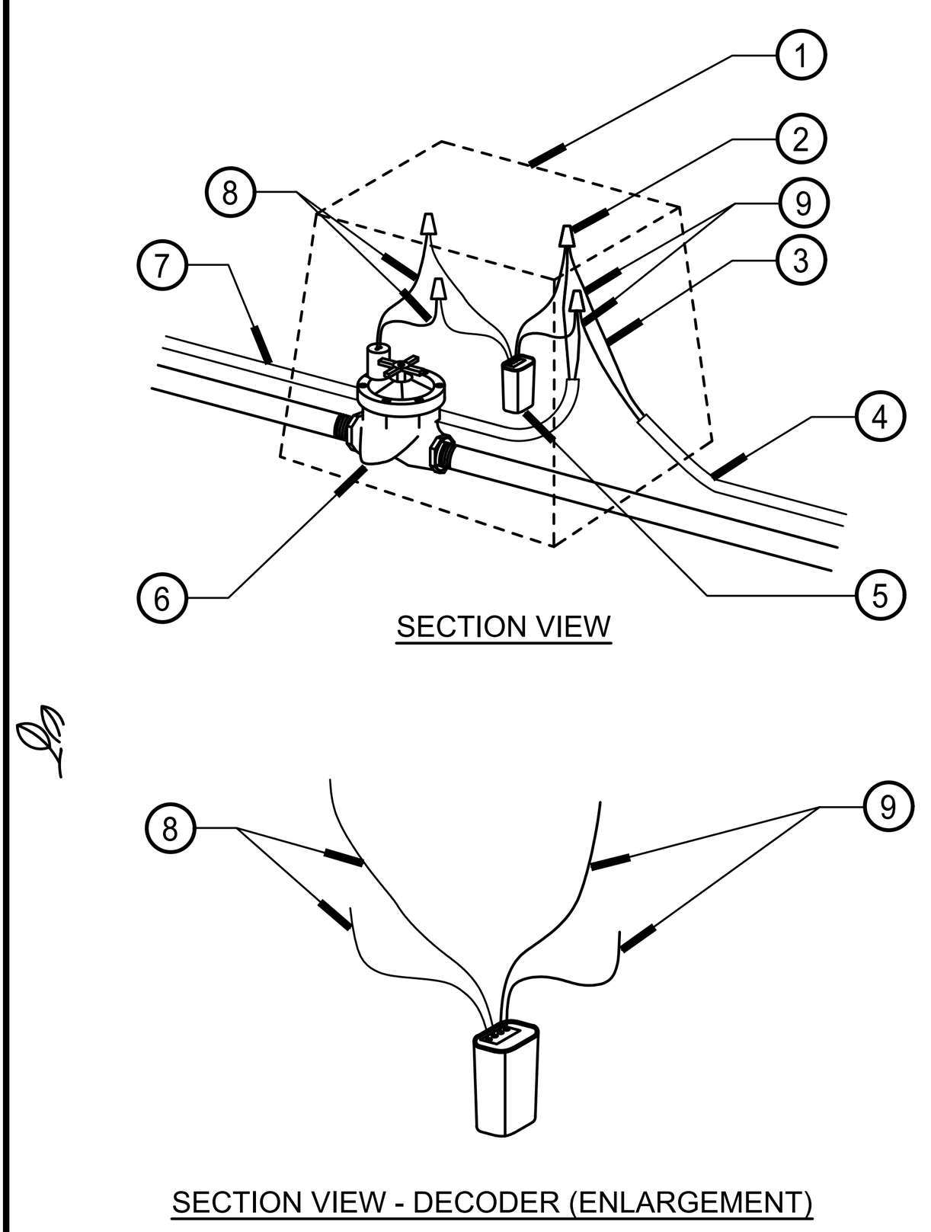


NOTES:

1. SURGE PROTECTION GROUNDING SHOULD BE INSTALLED EVERY 300 FEET OR FOR EVERY EIGHT DECODERS ON TWO-WIRE PATH.
2. GROUNDING TO BE INSTALLED AT END OF WIRE RUN THAT TERMINATES IN THE FIELD (STAR CONFIGURATION).
3. GROUNDING EQUIPMENT: 5/8-INCH X 8-FOOT COPPER GROUNDING ROD. INSTALL ONE (1) GROUNDING ROD AT THE FIRST "RCV" AND LAST "RCV" ON ALL MAINLINE END RUNS AND EVERY 300 FEET ALONG 2-WIRE PATH PLACED WITHIN VALVE BOX CONNECTED TO "RCV" DECODER. DO NOT SPLICE 2-WIRE PATH FOR GROUNDING.

NOT TO SCALE

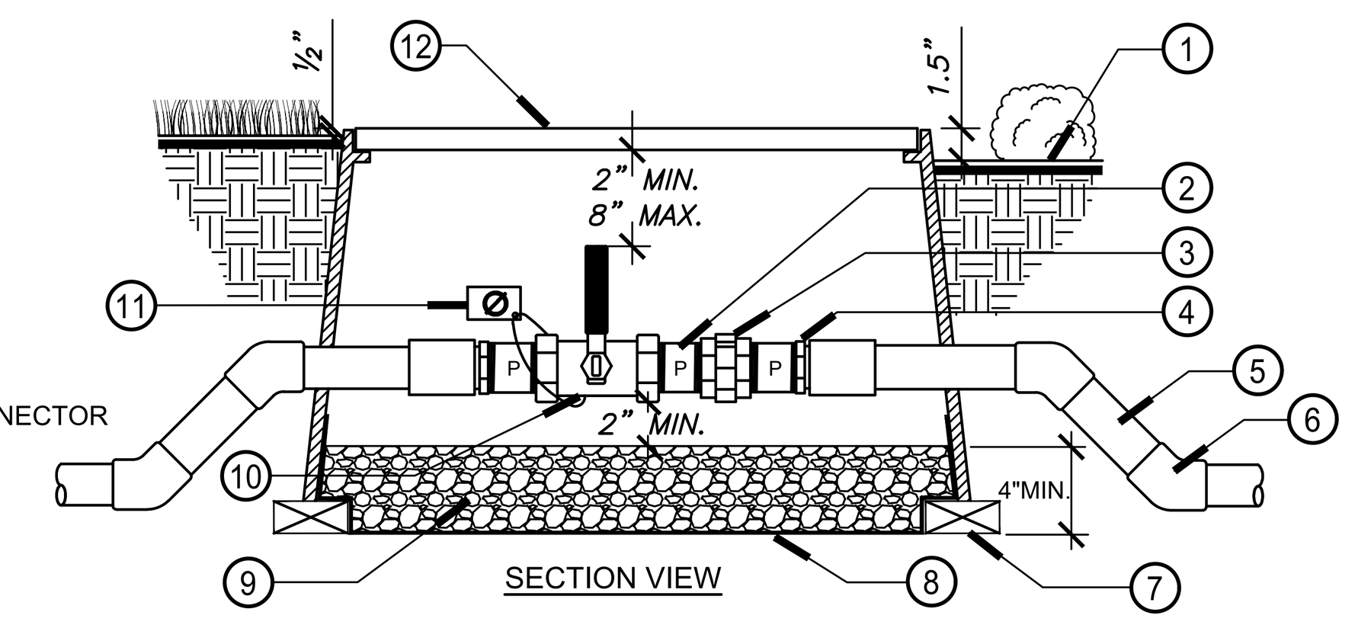
(W) DECODER 2-WIRE CABLE LAYOUT



LEGEND:

1. VALVE BOX.
2. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N (1 OF 4).
3. STRIP BACK 6" OF OUTER WIRE JACKET TO EXPOSE CONDUCTORS FOR TESTING WITH CLAMP METER.
4. TWO-WIRE PATH FROM CONTROLLER OR PREVIOUS VALVE (#14/2 AWG) WITHIN 1-1/4" PVC CONDUIT.
5. 2-WIRE DECODER.
6. CONTROL VALVE (24 VAC).
7. TWO-WIRE PATH TO NEXT VALVE (#14/2 AWG) WITHIN 1-1/4" PVC CONDUIT.
8. WIRES TO VALVE SOLENOID.
9. WIRES TO TWO-WIRE PATH.

(T) DECODER WIRING (TYPICAL) NOT TO SCALE



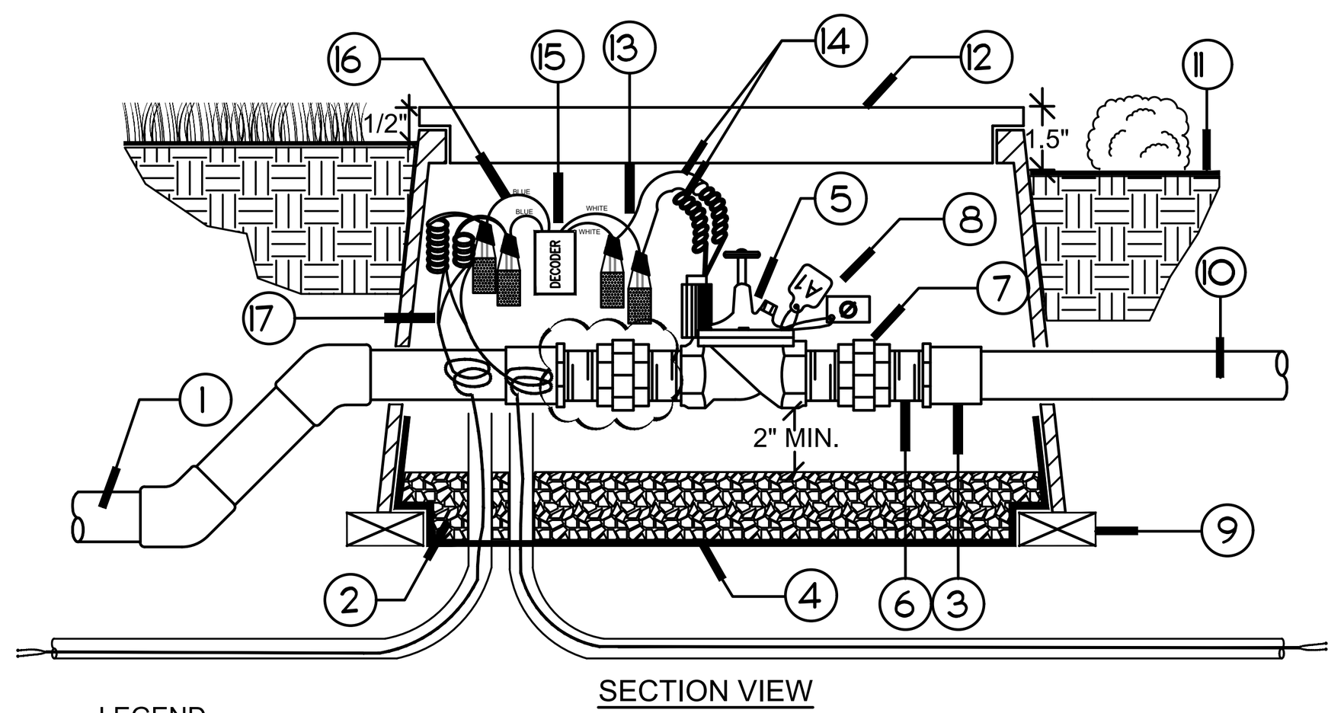
LEGEND:

1. FINISHED GRADE.
2. SCH 80 PVC NIPPLE - LENGTH AS REQUIRED.
3. SCH 80 PVC UNION.
4. SCH 80 PVC REDUCER BUSHING, SxT, SIZE AS REQUIRED (QTY. 2 REQUIRED).
5. PVC MAINLINE (PURPLE) WITH WORDS "RECYCLED WATER-DO NOT DRINK" - DEPTH PER SPECS.
6. 45 DEGREE ELBOW, SCH 80 FITTINGS SHALL BE USED TO RAISE MAINLINE FOR BALL VALVE WITHIN 12" OF FINISHED GRADE. (QTY. 4 REQUIRED)
7. NOMINAL SIZE SOLID BRICK (QTY. 4 REQUIRED - ONE AT EACH CORNER OF VALVE BOX).
8. LANDSCAPE FABRIC.
9. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH WITH 2" MINIMUM CLEARANCE.
10. BALL VALVE - SEE LEGEND FOR TYPE. INSTALL SHUTOFF HANDLE PERPENDICULAR TO BOX LID.
11. PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
12. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR VALVE BOX WITH LOCKING COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "BV" ONTO LID MARKED FOR "RECYCLED WATER".

NOTES:

A. SCH 80, 45 DEGREE ELBOW FITTINGS, SHALL BE USED TO RAISE MAINLINE WITHIN 12" OF FINISHED GRADE. (FOUR REQUIRED)
B. PLACE VALVE BOX IN GROUNDCOVER AND SHRUB AREAS WHENEVER POSSIBLE.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.
D. VALVE BOX TO BE INSTALLED AS TO ALLOW FOR PROPER OPERATION OF BALL VALVE. INSTALL AT RIGHT ANGLE TO HARDSCAPE EDGE - INSTALL VALVE CENTERED IN BOX.
E. BOLTDOWN VALVE BOX COVER WITH STAINLESS STEEL BOLT AND WASHER.
F. ALL MAINLINE AND VALVE FITTINGS SHALL BE SCHEDULE 80 FITTINGS.

(Q) BALL VALVE NOT TO SCALE



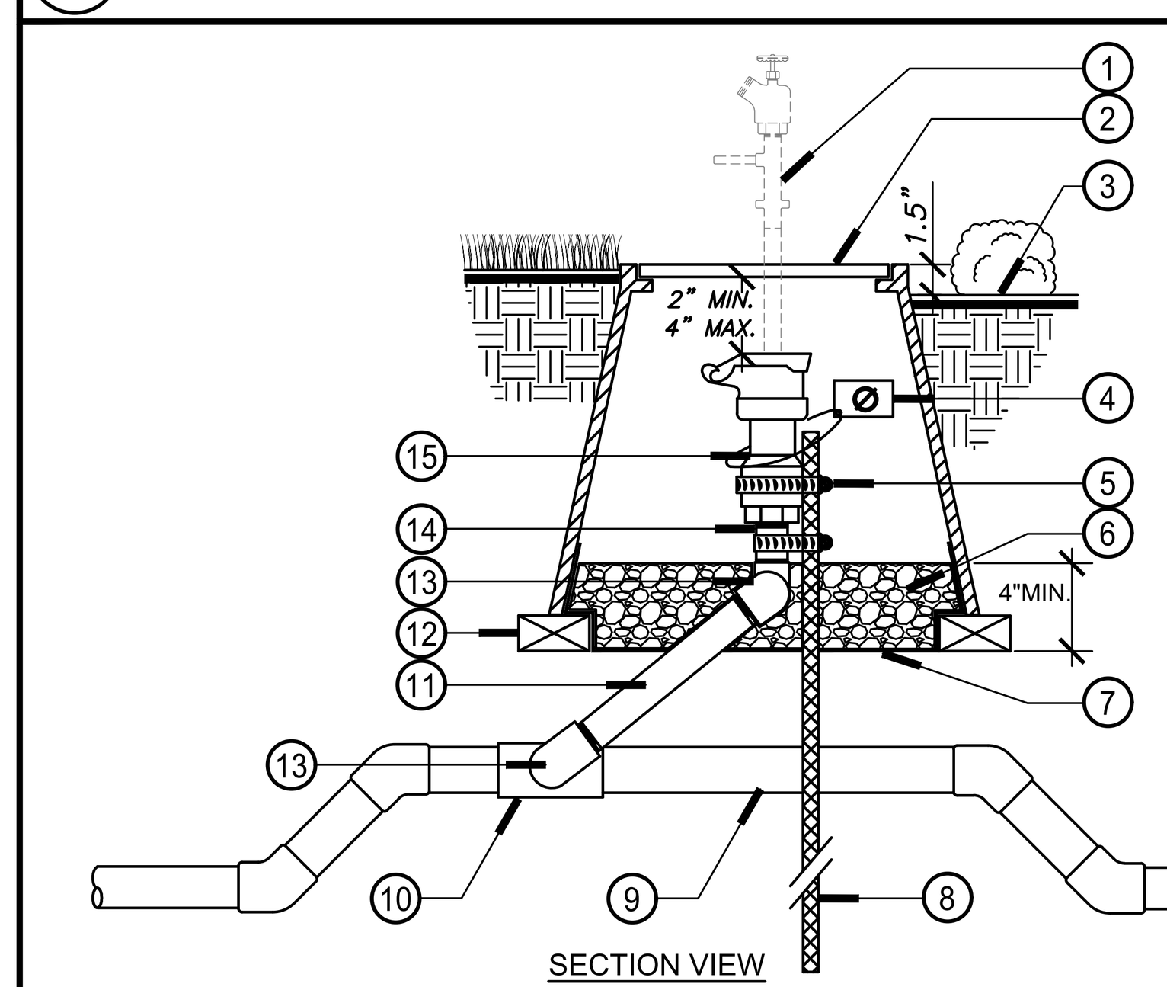
LEGEND

1. PVC MAINLINE SEE LEGEND FOR TYPE
2. 6" MINIMUM DEPTH PEA GRAVEL
3. SCH 80 PVC FEMALE ADAPTER (2 REQ.)
4. LANDSCAPE FABRIC
5. MASTER CONTROL VALVE SEE LEGEND FOR TYPE
6. SCH. 80 PVC NIPPLE LENGTH AS REQUIRED (4 REQ.) △4
7. SCH. 80 PVC UNION
8. CHRISTY'S RECYCLED WATER WARNING TAG AND VALVE STATION # I.D. TAG ATTACHED TO VALVE BONNET BOLT.
9. NOMINAL SIZE SOLID BRICK (4 REQ.)
10. PVC MAINLINE TO FLOW SENSOR
11. FINISHED GRADE
12. PLASTIC RECTANGULAR VALVE BOX WITH PURPLE LOCKING COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "MV" & CONTROLLER LETTER ONTO LID.
13. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N, PER CALSENSE SPEC. (4 REQ.)
14. WHITE WIRES TO SOLENOID
15. DECODER (ADDRESS = "MV")
16. BLUE WIRES TO 2-WIRE COMMUNICATION PATH
17. 2-WIRE COMMUNICATION PATH WITHIN 1-1/4" PVC CONDUIT / SWEEP ELL.

NOTES:

A. WIRES MUST EXTEND MINIMUM 24" ABOVE VALVE BOX FOR SERVICE.
B. SET TOP OF VALVE BOX 1/2" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUND COVER AND SHRUB AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS TYPICAL.
D. USE SCH 80 PVC FITTINGS.
E. INSTALL 45 DEGREE ELLS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION ABOVE MAINLINE DEPTH.

(N) MASTER VALVE NOT TO SCALE



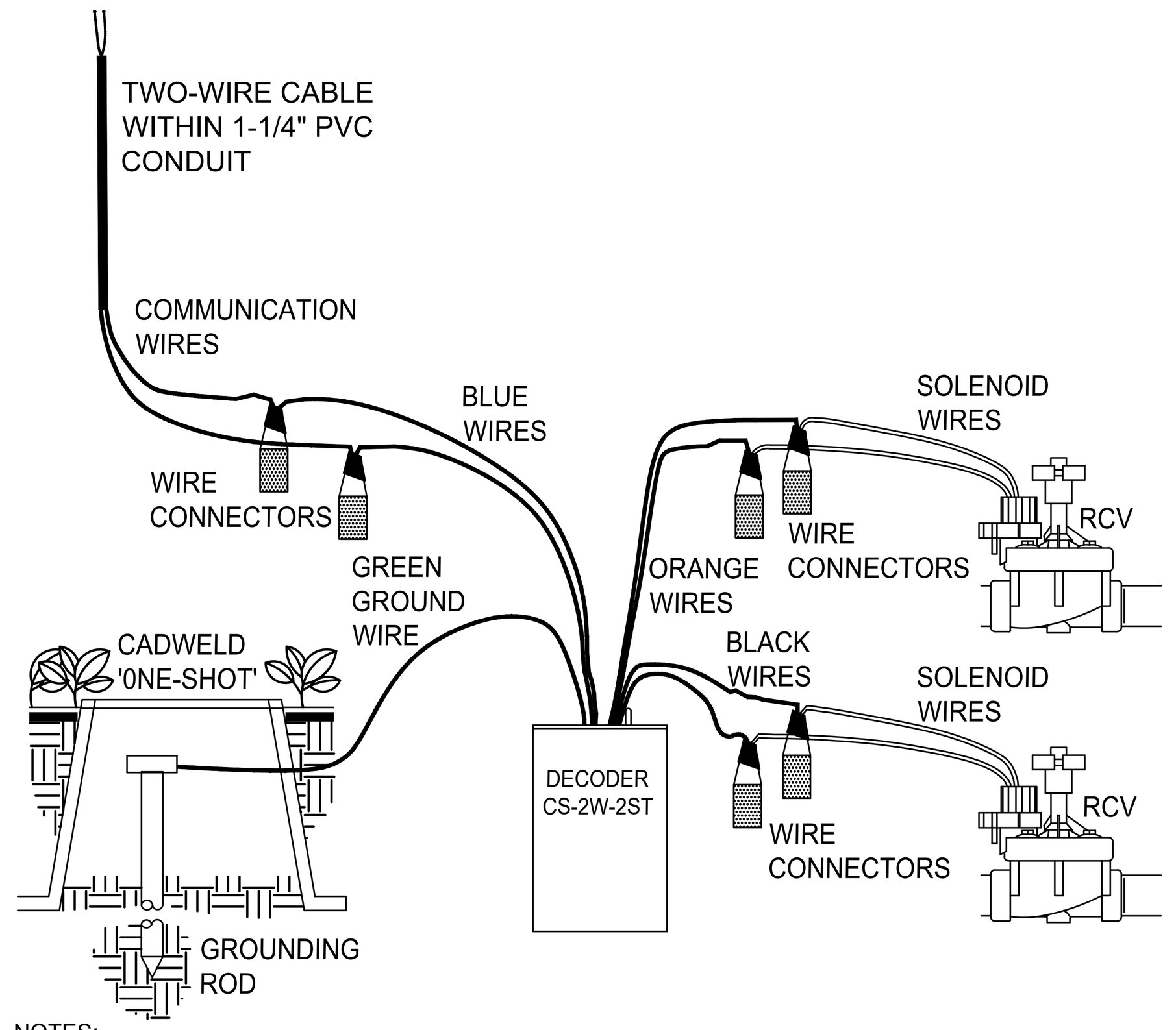
LEGEND:

1. REMOVABLE QUICK COUPLER KEY ASSEMBLY CONNECTION. KEY MUST CLEAR VALVE BOX, AS SHOWN.
2. (PURPLE) "RECYCLED WATER" PLASTIC 10" ROUND VALVE BOX WITH LOCKING COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "QCV" ONTO LID MARKED FOR "RECYCLED WATER".
3. FINISHED GRADE.
4. PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
5. STAINLESS STEEL CLAMP - 2 REQUIRED.
6. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
7. LANDSCAPE FABRIC.
8. #4 REBAR - 36" MINIMUM LENGTH.
9. PVC MAINLINE - SEE LEGEND FOR TYPE.
10. PVC SCH 80 TEE OR ELL.
11. BRASS NIPPLE, 6" MINIMUM LENGTH
12. NOMINAL SIZE SOLID BRICK SUPPORTS (3 MINIMUM REQUIRED - SPACED EQUALLY).
13. BRASS ELL - 2 REQUIRED.
14. BRASS NIPPLE, LENGTH AS REQUIRED.
15. QUICK COUPLING VALVE WITH (PURPLE) RECYCLED WATER LOCKING CAP - SEE LEGEND FOR TYPE.

NOTES:

A. USE SCH. 80 PVC 45 DEGREE ELLS TO TRANSITION TO MAINLINE DEPTH.
B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN MULCH OR GROUNDCOVER / SHRUB AREAS, SET ½" ABOVE FINISHED GRADE IN TURF AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.
D. QUICK COUPLER VALVES SHALL BE OF A TYPE APPROVED FOR RECYCLED WATER USE.

(X) QUICK COUPLER VALVE NOT TO SCALE

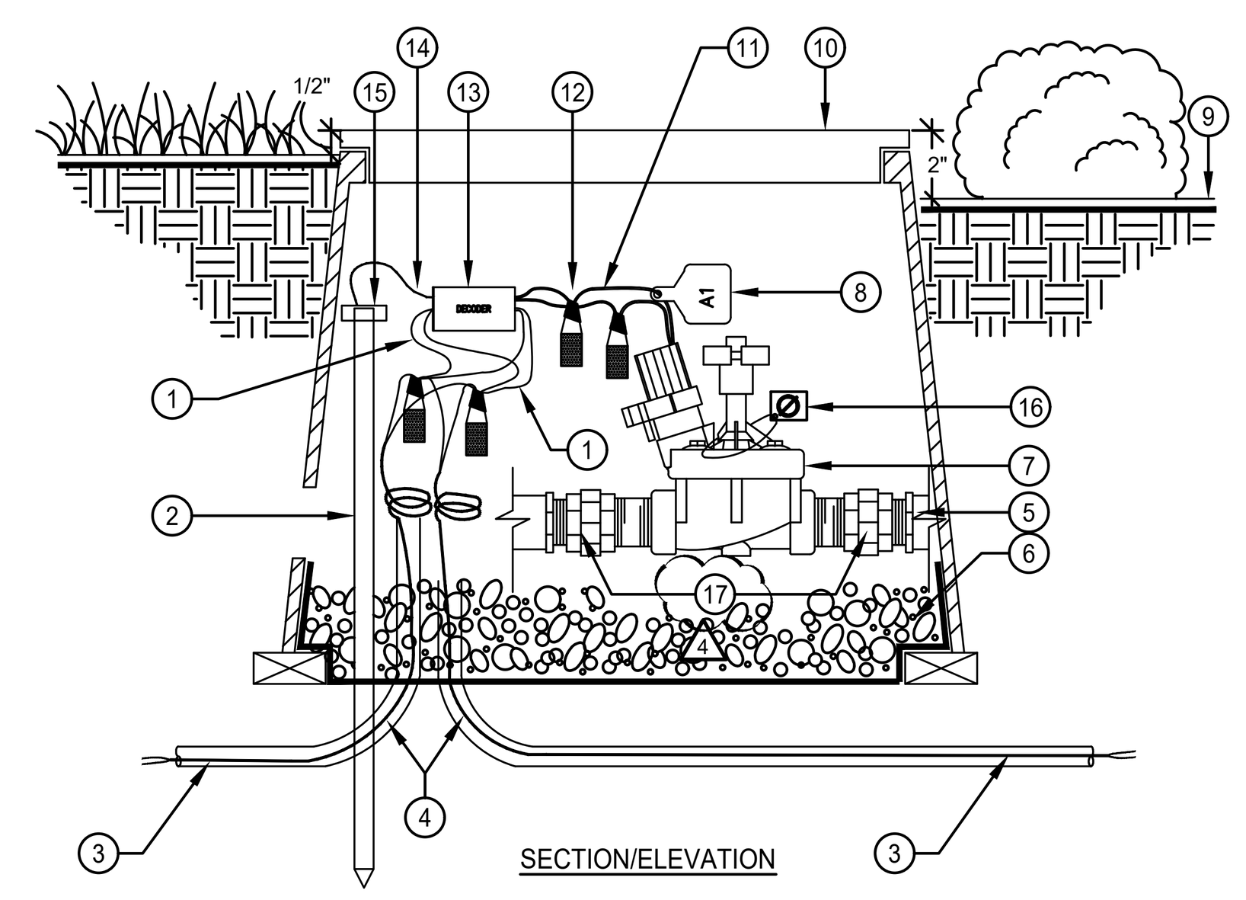


NOTES:

1. CS-2W-2ST COMES WITH A BUILT-IN SURGE PROTECTOR. REFER TO DECODER CONNECTION WIRING DIAGRAM FOR GROUNDING INSTRUCTIONS.
2. GROUNDING SHALL BE PER MANUFACTURES RECOMMENDATIONS.
3. WIRE SPLICES ARE THE WEAK LINK OF ANY ELECTRICAL CIRCUIT. IT IS ESPECIALLY IMPORTANT TO MAKE PROPER JOINTS IN IRRIGATION SYSTEMS BECAUSE THE JOINTS ARE EXPOSED TO WET AND DAMP ENVIRONMENTS THAT CAN CAUSE CORROSION OF THE COPPER CONDUCTOR, AND PREMATURE FAILURE. CALSENSE RECOMMENDS THE STRICT USE OF 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N, AS MANUFACTURED BY THE 3M COMPANY, FOR ALL WIRE CONNECTIONS.

NOT TO SCALE

(U) CS-2W-2ST DECODER CONNECTION



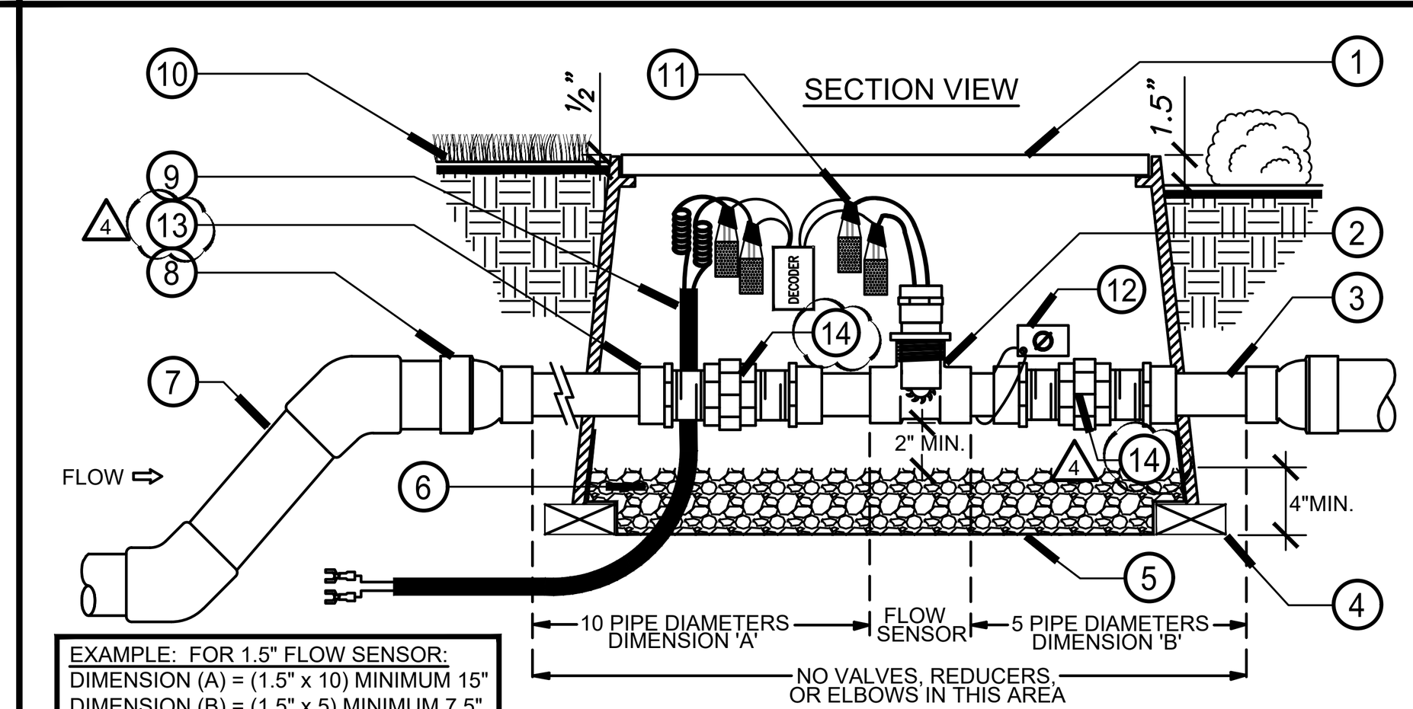
LEGEND

1. DECODER WIRES.
2. 5/8-INCH X 8-FOOT COPPER GROUNDING ROD: GROUNDED TO 10 OHMS OR LESS.
3. 2-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, ;POC DECODER, OR CONTROLLER) WITHIN 1-1/4" CONDUIT.
4. COMMUNICATION WIRE TO DECODER.
5. IRRIGATION MAINLINE.
6. 3/4" CRUSHED GRAVEL.
7. REMOTE CONTROL VALVE.
8. VALVE ID TAG.
9. FINISH GRADE OR TOP OF MULCH.
10. "PURPLE" RECTANGULAR SPECIFICATION GRADE VALVE BOX WITH COVER.
11. SOLENOID WIRE (1 OF 2.)
12. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N, PER CALSENSE SPEC. (4 REQ).
13. FIELD DECODER: CALSENSE, MODEL CS-2W-2ST.
14. GREEN WIRE FROM DECODER TO CADWELD' ONE-SHOT' CONNECTOR ON GROUNDING ROD.
15. CADWELD 'ONE-SHOT' GROUNDING CONNECTOR.
16. CHRISTY'S RECYCLED WATER WARNING TAG AND VALVE STATION # I.D. TAG ATTACHED TO VALVE BONNET BOLT.
17. PVC SCH 80 UNION. △4

NOTES:

A. EVERY 300-350 FEET WITH ONE 5/8-INCH X 8-FOOT COPPER GROUNDING ROD PER IRRIGATION CONTROLLER AND DECODER. #6 AWG SOLID COPPER WIRE FROM THE COPPER ROD TO THE FIELD COMMON (WHITE WIRES IN THE BLACK HARNESS) OF THE CONTROLLER / DECODERS ON 2-WIRE PATH.
B. PLACE 2 FEET OF EXTRA COILED WIRE IN EVERY VALVE BOX FOR EASIER SERVICING.

(R) REMOTE CONTROL VALVE NOT TO SCALE



EXAMPLE: FOR 1.5" FLOW SENSOR:
DIMENSION (A) = (1.5" x 10) MINIMUM 15"
DIMENSION (B) = (1.5" x 5) MINIMUM 7.5"

LEGEND:

1. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR VALVE BOX WITH BOLT DOWN COVER, USE STAINLESS BOLT NUT AND WASHER - HEAT BRAND "FS" ONTO LID.
2. FLOW SENSOR - SEE LEGEND FOR SIZE AND TYPE.
3. MAINLINE - SIZE PER FLOW SENSOR, LENGTH AS REQUIRED PER MANUFACTURE RECOMMENDATIONS.
4. NOMINAL SIZE SOLID BRICK (4 REQUIRED, ONE AT EACH CORNER).
5. LANDSCAPE FABRIC.
6. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
7. PVC MAINLINE TO MASTER VALVE - SEE LEGEND FOR TYPE, SIZE PER PLAN.
8. SCH 80 REDUCER COUPLING - SIZE PER MAINLINE AND FLOW SENSOR (2 REQUIRED).
9. 1-1/4" SCH 40 PVC WIRE CONDUIT WITH SWEEP ELBOW TO CONTROLLER LOCATION.
10. FINISHED GRADE. SET TOP OF VALVE BOX ½" ABOVE GRADE IN TURF AREAS AND 1-1/2" ABOVE GRADE IN SHRUB / GROUNDCOVER AREAS.
12. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N (4 REQ.) PROVIDE MINIMUM 24" WIRE EXPANSION COILS AT FLOW SENSOR.
12. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
13. SCH 80 PVC FEMALE ADAPTER (2 REQ.) △4
14. PVC SCH 80 UNION.

NOTES:

A. USE SCH 80 PVC FITTINGS.
B. SET TOP OF VALVE BOX ½" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUNDCOVER AND SHRUB AREAS.
C. SET VALVE BOX AND VALVE ASSEMBLY IN GROUNDCOVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUNDCOVER.
D. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.
E. INSTALL 45 DEGREE ELLS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION ABOVE LATERAL LINE DEPTH.
F. INSTALL FLOW SENSOR PER MANUFACTUR'S RECOMMENDATIONS.

(O) FLOW SENSOR NOT TO SCALE

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SEALS / APPROVALS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
DATE ____________________

PROJECT TITLE
BUILDINGS 1 & 2 Z
4901 EAST CARSON STREET
LONG BEACH, CA. 90808
T: (562) 938-4111
F: (562) 938-3912

LONG BEACH CITY COLLEGE
LONG BEACH CITY COLLEGE LIBERAL ARTS CAMPUS

SUBMITTALS		
	07/ 24/ 2017	50% CD
	10/ 19/ 2017	95% CD
	11/ 17/ 2017	CONSTRUCTION DOCUMENTS
	12/ 19/ 2017	DISTRICT COMMENTS
△4	05/ 17/ 2018	ADDENDUM 4

PROJECT IDENTIFICATION
THE ORIGINAL SIZE OF THIS SHEET IS 30" x 42"

DATE 05/17/2018

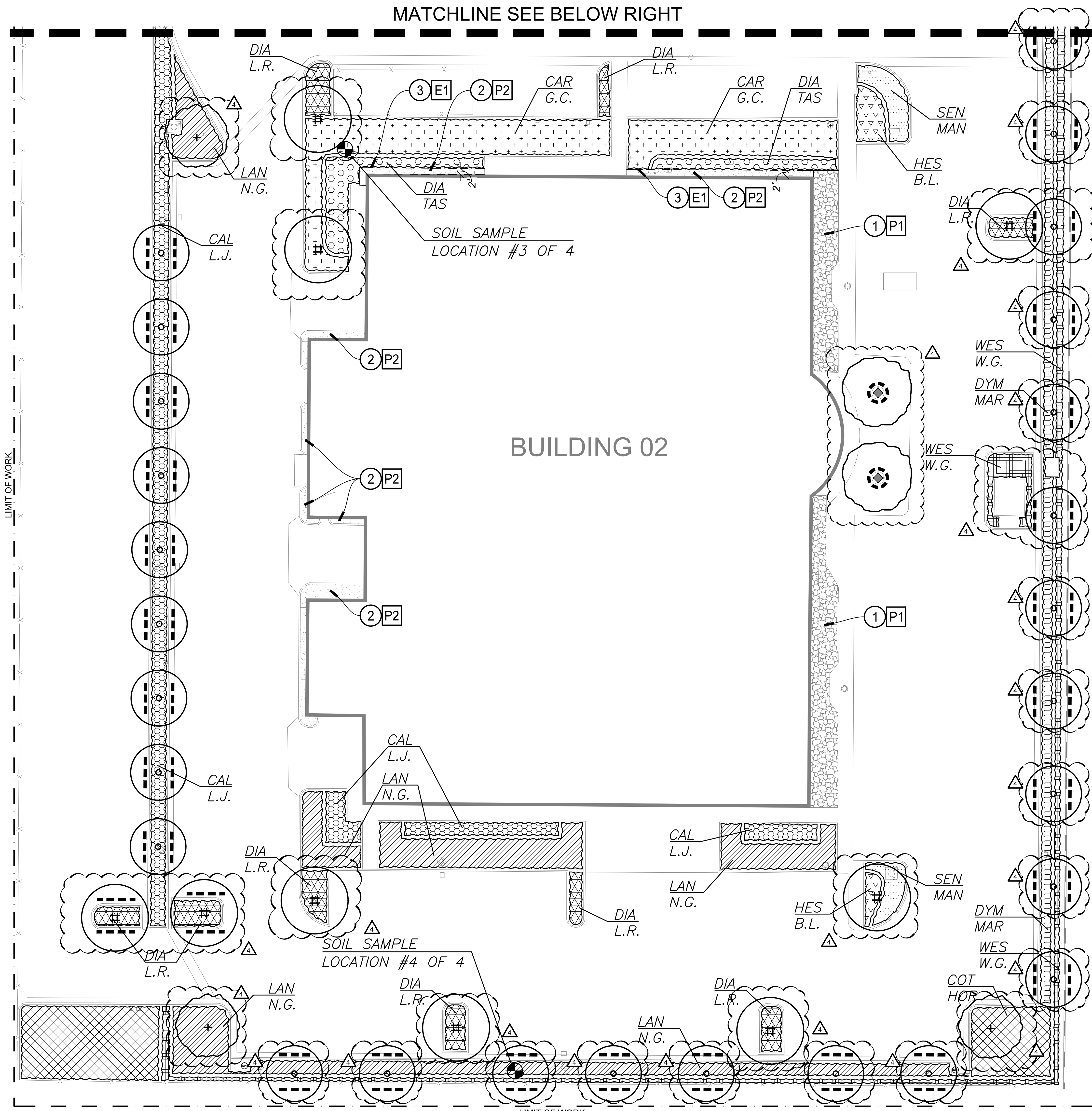
DRAWN BY MR

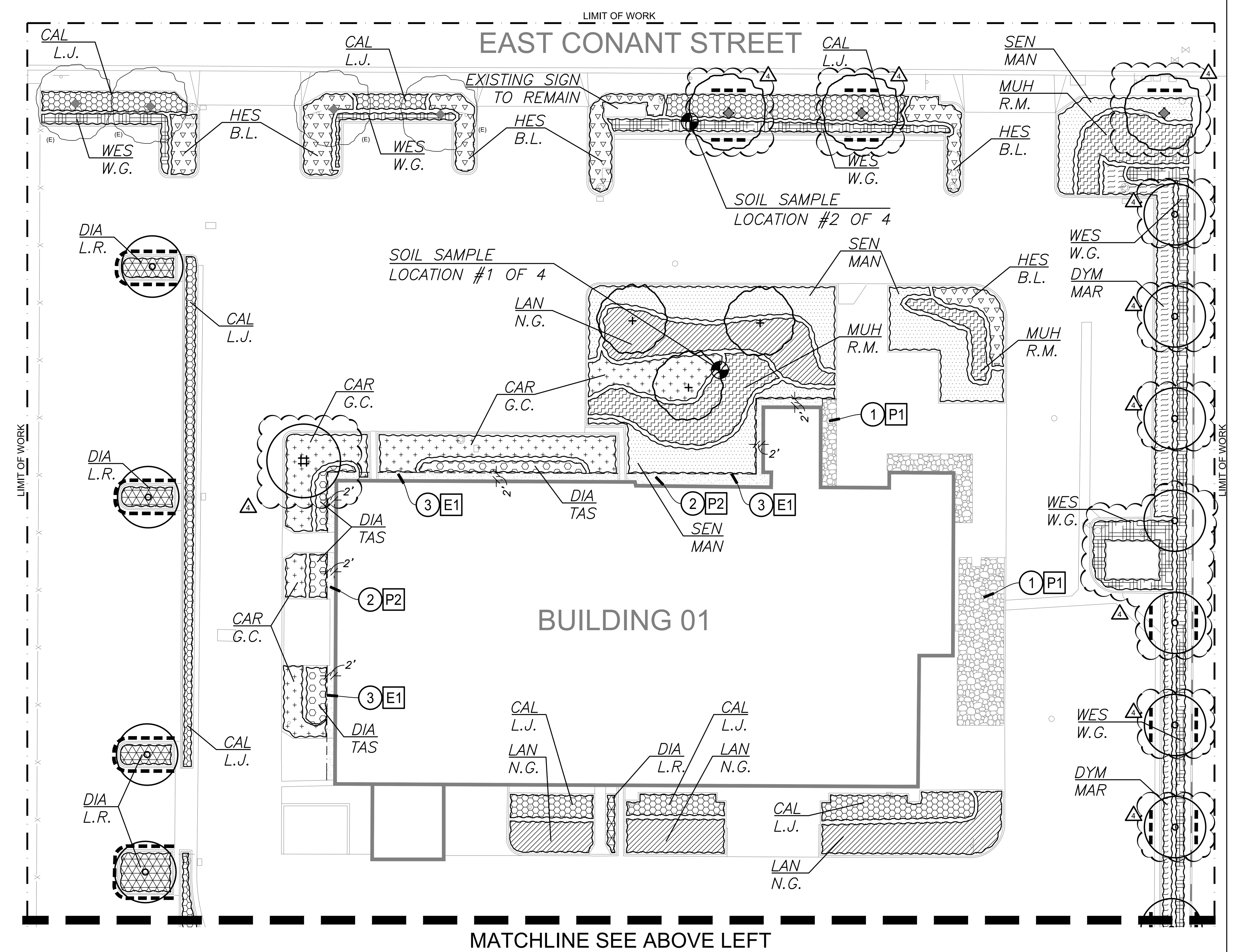
CHECKED BY TC

SHEET TITLE
IRRIGATION DETAILS

SHEET NUMBER
L4.2

J:\Dwg\HPI\LBCC Bldgs 1 & 2\cd\lac-pp.dwg Tue, 22 May 2018 9:03am Plotted by: Terri





PLANT LEGEND

SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	QTY.	DETAIL
		LOPHOSTEMON CONFERTUS	BRISBANE BOX	24" BOX	PER PLAN	MOD	38	E, L7.1
		BRACHYCHITON ACERIFOLIUS	FLAME TREE	24" BOX	PER PLAN	LOW	10	D, L7.1
		CERCIDIUM FLORIDUM	PALO VERDE	24" BOX	PER PLAN	MOD	6	D, L7.1
		KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	24" BOX	PER PLAN	LOW	5	D, L7.1
GROUNDCOVERS								
	DYM MAR	DYMONDIA MARGARETAE	SILVER CARPET	FLATS	8" O.C.	LOW	1808 SF.	A - C, L7.1
	SEN MAN	SENECIO MANDRALISCAE	KLEINIA	4" POTS	8" O.C.	LOW	6,052	A - C, L7.1
FOREGROUND								
	DIA L.R.	DIANELLA 'LITTLE REV'	LITTLE REV FLAX LILY	1 GAL.	24" O.C.	LOW	376	A - C, L7.1
	HES B.L.	HESPERALOE PARVIFLORA 'BRAKE LIGHTS'	RED YUCCA	1 GAL.	30" O.C.	LOW	231	A - C, L7.1
	CAR G.C.	CARISSA MACROCARPA 'GREEN CARPET'	GREEN CARPET NATAL PLUM	1 GAL.	30" O.C.	LOW	685	A - C, L7.1
	COT HOR	COTONEASTER HORIZONTALIS	ROCK COTONEASTER	5 GAL.	36" O.C.	LOW	210	A - C, L7.1
MIDGROUND								
	CAL L.J.	CALLISTEMON 'LITTLE JOHN'	LITTLE JOHN BOTTLEBRUSH	5 GAL.	36" O.C.	LOW	543	A - C, L7.1
	LAN N.G.	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.	36" O.C.	LOW	611	A - C, L7.1
	MUH R.M.	MUHLENBERGIA CAPILLARIS 'REGAL MIST'	REGAL MIST PINK MUHLY GRASS	1 GAL.	36" O.C.	MOD	166	A - C, L7.1
	DIA TAS	DIANELLA TASMANICA VARIEGATA	VARIEGATED FLAX LILY	5 GAL.	36" O.C.	MOD	127	A - C, L7.1
BACKGROUND								
	WES W.G.	WESTRINGIA FRUTICOSA 'WYNYABBIE GEM'	WYNYABBIE COAST ROSEMARY	5 GAL.	36" O.C.	LOW	383	A - C, L7.1

HARDSCAPE LEGEND

SYMBOL	DESCRIPTION	DETAIL REF.
1	FURNISH AND INSTALL DECORATIVE COBBLE MULCH.	A, L6.1
2	FURNISH AND INSTALL DRAINAGE GRAVEL.	A,B, L6.1
3	METAL EDGING AT DRAINAGE GRAVEL.	B, L6.1

EXISTING TREE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME
	PHOENIX DACTYLIFERA	DATE PALM
	LAGERSTOEMIA	CRAPE MYRTLE
	STREET TREE	
	PINUS SPP.	PINE TREE
	EUCALYPTUS SPP.	
	FICUS NITIDA	INDIAN LAUREL FIG
	METROSIDEROS EXCELSA	NEW ZEALAND CHRISTMAS TREE
	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE

COLOR AND FINISH SCHEDULE

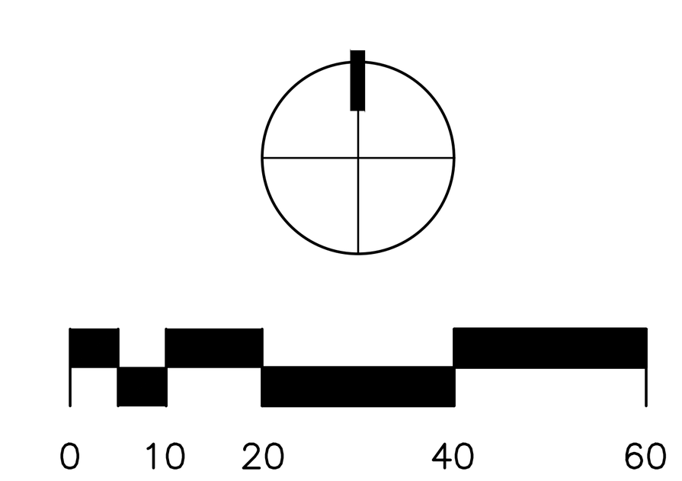
SYMBOL	KEY	DESCRIPTION	MANUFACTURER	MODEL	COLOR	FINISH	COMMENTS
PAVING:							
	P1	DECORATIVE COBBLE MULCH	SOUTHWEST BOULDER & STONE OR APPROVED EQUAL	ARIZONA COBBLE	--	--	1" - 2" DIA.
	P2	DRAINAGE GRAVEL	SOUTHWEST BOULDER & STONE OR APPROVED EQUAL	ARIZONA COBBLE	--	--	3/4" DIA.
EDGING:							
— — · —	E1	METAL EDGING	PERMALOC 1 (800) 356-9660	CLEANLINE XL 3/16" x 6"	BLACK	DURAFLEX	--

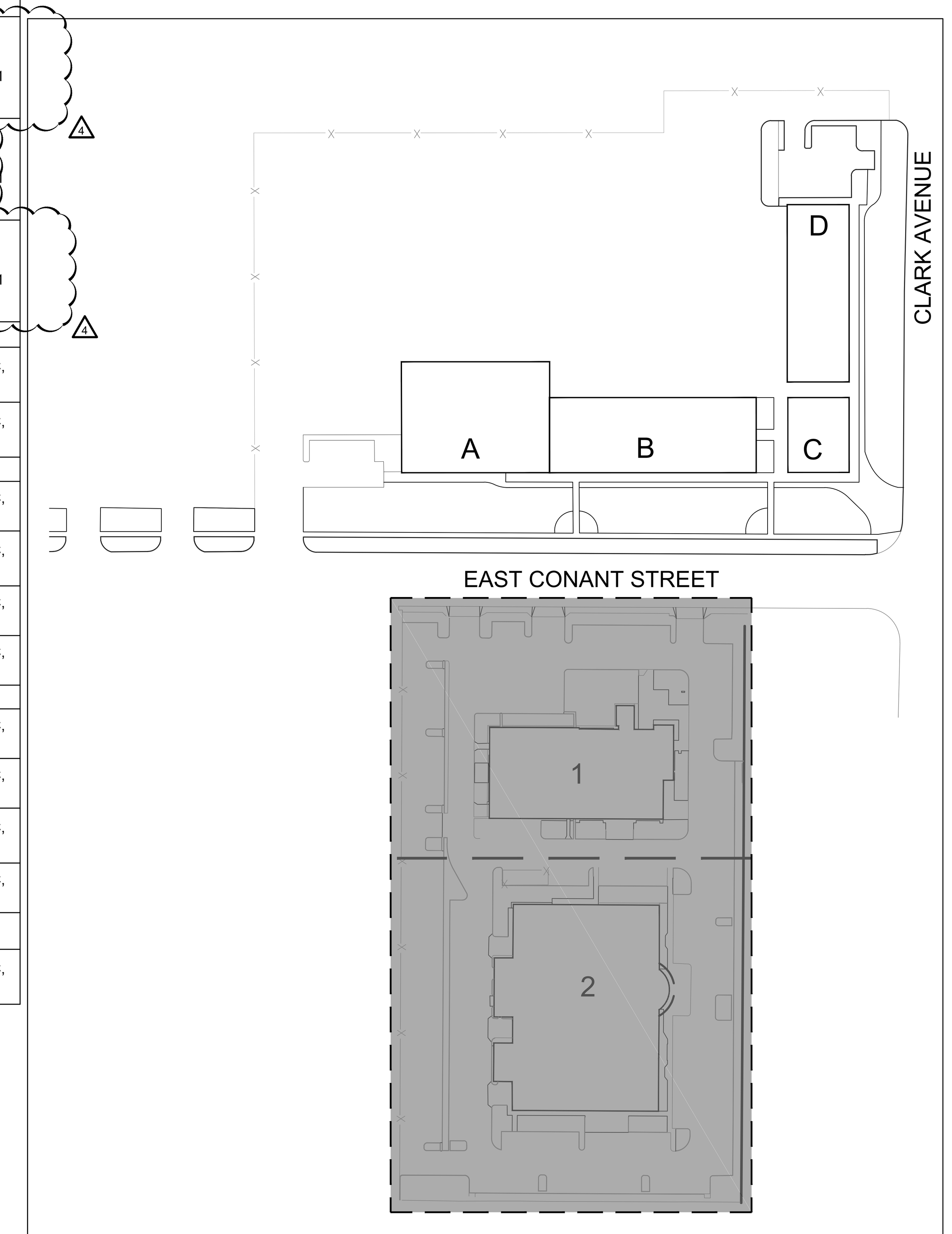
DENOTES SOIL SAMPLE LOCATION - REFER TO NOTE 'H' OF PLANTING NOTES, SHEET L7.1, FOR ADDITIONAL INFORMATION. FOUR (4) LOCATIONS TOTAL

DENOTES ROOT BARRIER, TO BE INSTALLED AT ALL TREES WITHIN 5 FEET OF ANY HARDSCAPE, PAVEMENT OR CURB. ROOT BARRIERS ARE TO BE 'UB24-2' BY DEEP ROOT CORPORATION, (800) 458-7668, INSTALLED PER MANUFACTURER'S SPECIFICATIONS. NOTE: ROOT BARRIERS SHALL NOT BE WRAPPED AROUND THE ROOTBALL. ROOT BARRIERS INSTALLED ADJACENT TO THE BIO-SWALE, SHALL NOT INTERFERE WITH DRAINAGE TO OR FROM THE BIO-SWALE SYSTEM.

NOTES:

1. ON-CENTER SPACING NOTED ON THE PLANT LEGEND TAKE PRECEDENCE OVER PLANT COUNTS OR SYMBOLS SHOWN ON THE DRAWING.
2. CONTRACTOR TO SUBMIT SOIL PREPARATION AND BACKFILL SPECIFICATIONS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO INSTALLATION OF SOIL PREPARATION OR PLANT MATERIALS.
3. SOIL PREPARATION AND BACKFILL AMENDMENTS PER SPECIFICATION AS RECOMMENDED BY AGRONOMIC SOIL TEST REPORT.
4. MULCH ALL SHRUB AND GROUNDCOVER AREA WITH A 3" DEEP LAYER OR APPROVED MULCH. (ORGANIC)





KEYMAP

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SEALS / APPROVALS

REGISTERED LANDSCAPE ARCHITECT
JAMES J. RIDGE
LIC. #2809
(Signature)
05/17/18
(Date)
05/31/19
(Exp. Date)
STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
DATE ____________________

PROJECT TITLE
BUILDINGS 1 & 2 Z
4901 EAST CARSON STREET
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LONG BEACH CITY COLLEGE
LONG BEACH CITY COLLEGE
LIBERAL ARTS CAMPUS

SUBMITTALS		
	07/ 24/ 2017	50% CD
	10/ 19/ 2017	95% CD
	11/ 17/ 2017	CONSTRUCTION DOCUMENTS
	12/ 19/ 2017	DISTRICT COMMENTS
4	05/ 17/ 2018	ADDENDUM 4

PROJECT IDENTIFICATION
THE ORIGINAL SIZE OF THIS SHEET IS 30" x 42"
DATE 05/17/2018
DRAWN BY MR
CHECKED BY TC

SHEET TITLE
PLANTING PLAN

SHEET NUMBER
L5.1

J:\Dwgs\HPI\LBCC Bldgs 1 & 2\cd\lac-hd.dwg Tue.,22 May.2018-9:03am Plotted by: Terri

HARDSCAPE NOTES

A. VISIT THE SITE PRIOR TO SUBMITTING BIDS.

B. SUBMIT A UNIT COST FOR IMPORT SOIL IN-PLACE AND BE COMPLETELY AWARE OF THE AMOUNT OF SOIL NECESSARY TO REACH THE SATISFACTORY GROUND LEVEL.

C. VERIFY ALL PROPERTY LINES OR OTHER LIMIT OF WORK LINES PRIOR TO COMMENCING WORK.

D. REPAIR OR REPLACE ANY DAMAGE TO ADJACENT PROPERTIES, CURBS, WALKS, PLANTING, WALLS, ETC. AT NO ADDITIONAL COST TO THE OWNER.

E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLAN.

F. REPORT DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTIONS SHALL BE ISSUED PRIOR TO THE CONTINUATION OF THIS WORK. ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY CORRECTIONS DUE TO FAILURE TO REPORT KNOWN DISCREPANCIES.

G. LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY THE OWNER IMMEDIATELY IF DAMAGE OCCURS AND ASSUME FULL RESPONSIBILITY FOR EXPENSE OF REPAIR OR REPLACEMENT.

H. COMPLY WITH ALL PROVISIONS OF THE LATEST BUILDING CODE, CURRENT EDITION OF THE ADA STANDARDS FOR ACCESSIBLE DESIGN, AND WITH OTHER CURRENT RULES, REGULATIONS AND ORDINANCES GOVERNING THE PLACE OF THE WORK. BUILDING CODE REQUIREMENTS TAKE PRECEDENCE OVER THE DRAWINGS AND IT SHALL BE THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR OR MATERIALS OR BOTH TO BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT ANY DISCREPANCIES OR CONFLICTS BETWEEN THE REQUIREMENTS OF THE CODE AND THE DRAWINGS.

I. LOCATIONS OF N.I.C. CONSTRUCTION ELEMENTS SUCH AS LIGHTS, SIGNS, VENTS, HYDRANTS, TRANSFORMERS, ETC., ARE APPROXIMATE. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD THE LOCATION OF THESE ITEMS INTERFERE WITH THE PROPER EXECUTION OF WORK.

J. VERIFY ALL PAVING AND HARDSCAPE CONSTRUCTION DRAWINGS WITH SOIL ENGINEER'S REPORT WITH REGARD TO BASE PREPARATION AND FOOTING REQUIREMENTS. NOTIFY THE OWNER IMMEDIATELY IF SOILS REPORT RECOMMENDATIONS DIFFER FROM DRAWINGS. THE SOILS REPORT RECOMMENDATIONS, IF MORE STRINGENT THAN THE DRAWINGS, SHALL TAKE PRECEDENCE.

K. BE RESPONSIBLE FOR COORDINATION BETWEEN SUBCONTRACTORS FOR PROPER AND TIMELY PLACEMENT OF SLEEVING, PIPING AND / OR CONDUIT INSTALLATION UNDER OR THROUGH LANDSCAPE ELEMENTS.

L. LANDSCAPE LIGHT FIXTURE LOCATIONS AS INDICATED ON THESE PLANS ARE APPROXIMATE. FINAL LOCATION TO BE VERIFIED BY LANDSCAPE ARCHITECT ON SITE.

M. DO NOT SCALE DRAWINGS.

N. PROVIDE A REPRESENTATIVE SAMPLE OF EACH PAINTED OR STAINED ELEMENT TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO APPLYING FINISH. REFER TO DETAILS AND SPECIFICATIONS FOR SPECIFIC SUBMITTAL REQUIREMENTS.

O. PROVIDE A SAMPLE OF EACH HARDSCAPE ELEMENT. ITEMS TO INCLUDE, BUT ARE NOT LIMITED TO PAVING AND WALL TYPES NOTED IN THE COLOR AND FINISH SCHEDULES. SAMPLES TO BE PLACED IN A LOCATION SPECIFIED BY THE OWNER'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND APPROVAL BY THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. REFER TO MOCK-UP REQUIREMENTS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

P. WHERE PAVING AND FINISH GRADE MEET, DEPRESS FINISH GRADE 1" IN TURF AREAS AND 1-1/2" IN GROUND COVER / SHRUB AREAS, UNLESS OTHERWISE INDICATED.

Q. PROJECT WALKS SHALL NOT EXCEED A SLOPE OF 20:1 (5% GRADIENT) UNLESS OTHERWISE INDICATED.

R. HANDICAP RAMPS SHALL NOT EXCEED 12:1 OR 8.33%.

S. PLANTER AREAS SHALL NOT EXCEED 2:1 SLOPE UNLESS OTHERWISE INDICATED.

T. HOLD FINISH GRADE A MINIMUM OF 6" BELOW FINISH FLOOR, UNLESS OTHERWISE INDICATED.

U. CONSTRUCT ALL CURVE TO CURVE AND CURVE TO TANGENT LINES TO BE NEAT, TRIM, SMOOTH AND UNIFORM.

V. CONSTRUCT ALL CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS, UNLESS OTHERWISE INDICATED.

W. ALL CONCRETE PAVING BANDS AND CONCRETE CAPS SHALL HAVE CONTROL JOINTS AT 5'-0" ON CENTER MAXIMUM UNLESS NOTED OTHERWISE ON THE PLANS. ALL WALLS SHALL HAVE CONTROL JOINTS AT 20'-0" O.C. MAXIMUM UNLESS NOTED OTHERWISE ON THE PLANS.

X. PROVIDE THE OWNER WITH ALL WARRANTIES, GUARANTEES, AND INSTRUCTION MANUALS FOR EQUIPMENT, APPLIANCES, FIXTURES, ETC. AS DESCRIBED IN THE SPECIFICATIONS.

MOCK-UP REQUIREMENTS

A. HARDSCAPE PAVING - PROVIDE (1) 4' x 4' SQUARE MOCK-UP FOR EACH PAVING TYPE NOTED IN THE HARDSCAPE AND PAVING SCHEDULE. EACH MOCK-UP TO INCLUDING THE SPECIFIED COLOR, FINISH, AND AN EXAMPLE OF EACH JOINTING TYPE NOTED IN THE CONSTRUCTION KEYNOTES AND DETAILS.

B. MOCK-UP LEAD TIMES. BE AWARE OF POSSIBLE LEAD TIMES FOR ITEMS SUCH AS BUT NOT LIMITED TO PRE-CAST CONCRETE PAVERS. SIMILAR COLORS AND SIZES WILL NOT BE ACCEPTED AS A MOCK-UP REVIEW.

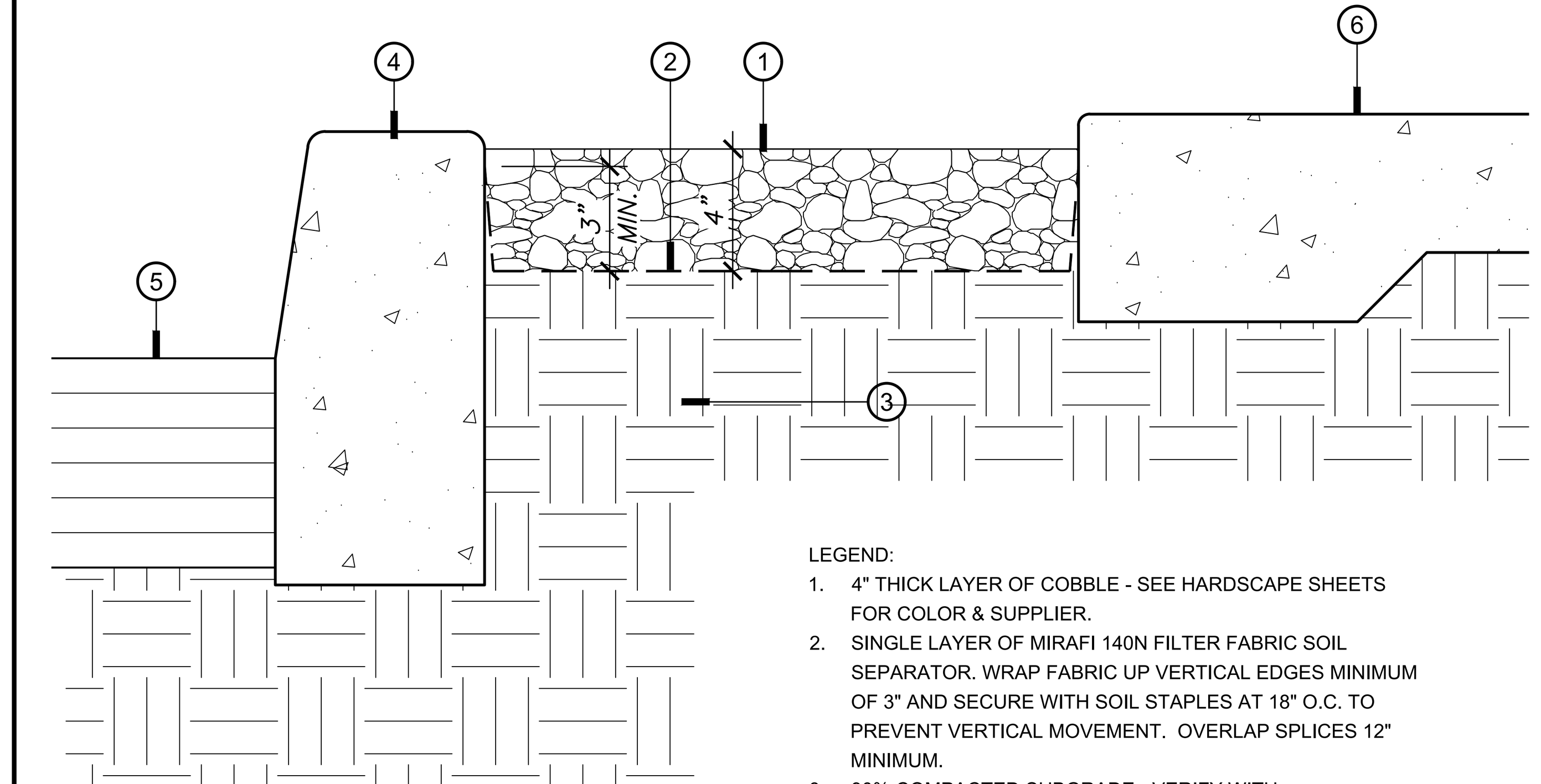
C. HARDSCAPE ELEMENTS - PROVIDE A PHYSICAL SAMPLE OF SPECIFIED MATERIALS (COLOR, FINISH, AND SEALER) TO THE OWNER AND LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO PLACING ORDER. ITEMS SUCH AS BUT NOT LIMITED TO PLANTER POTS AND OTHER SITE FURNISHINGS.

D. WALLS - PROVIDE (1) 3' TALL BY 3' LONG BY 8" WIDE MOCK-UP FOR EACH WALL TYPE NOTED IN THE WALL SCHEDULE. EACH MOCK-UP TO INCLUDING THE SPECIFIED COLOR, FINISH, JOINTING, EDGING, AND CAP AS NOTED IN CONSTRUCTION KEYNOTES AND DETAILS.

E. MOCK-UPS TO BE PROTECTED ON-SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION SCHEDULE.

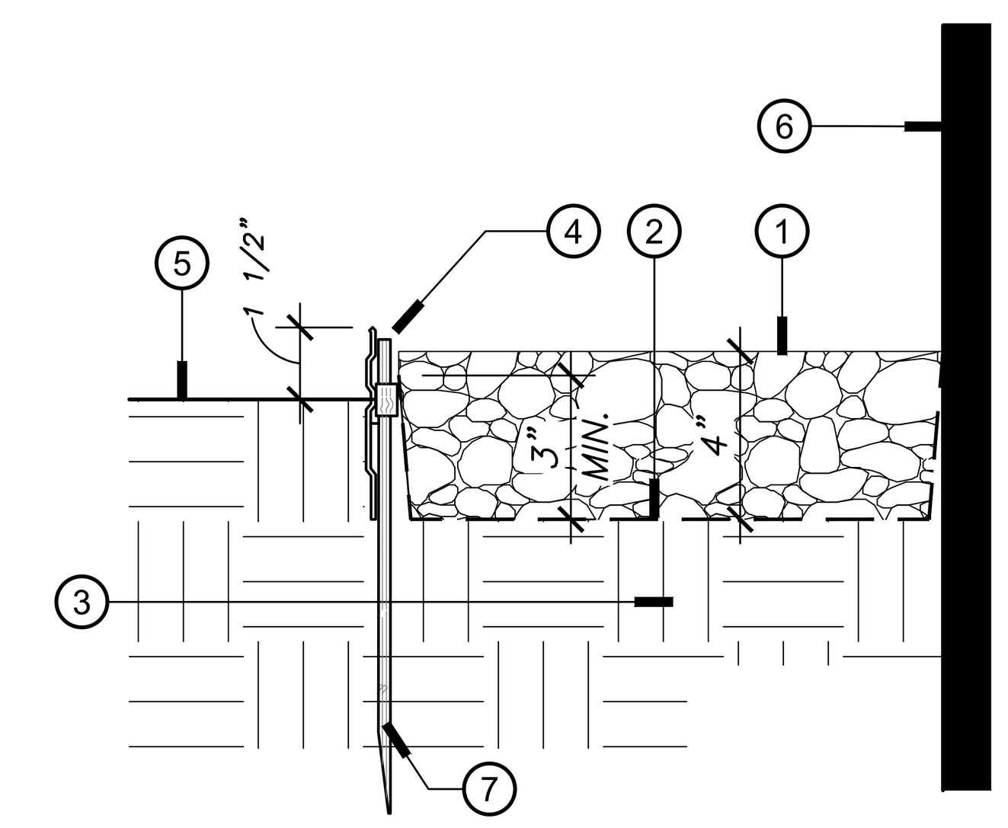
F. REMOVE MOCK-UPS AT COMPLETION OF CONSTRUCTION WHEN DIRECTED BY THE OWNER OR LANDSCAPE ARCHITECT.

G. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



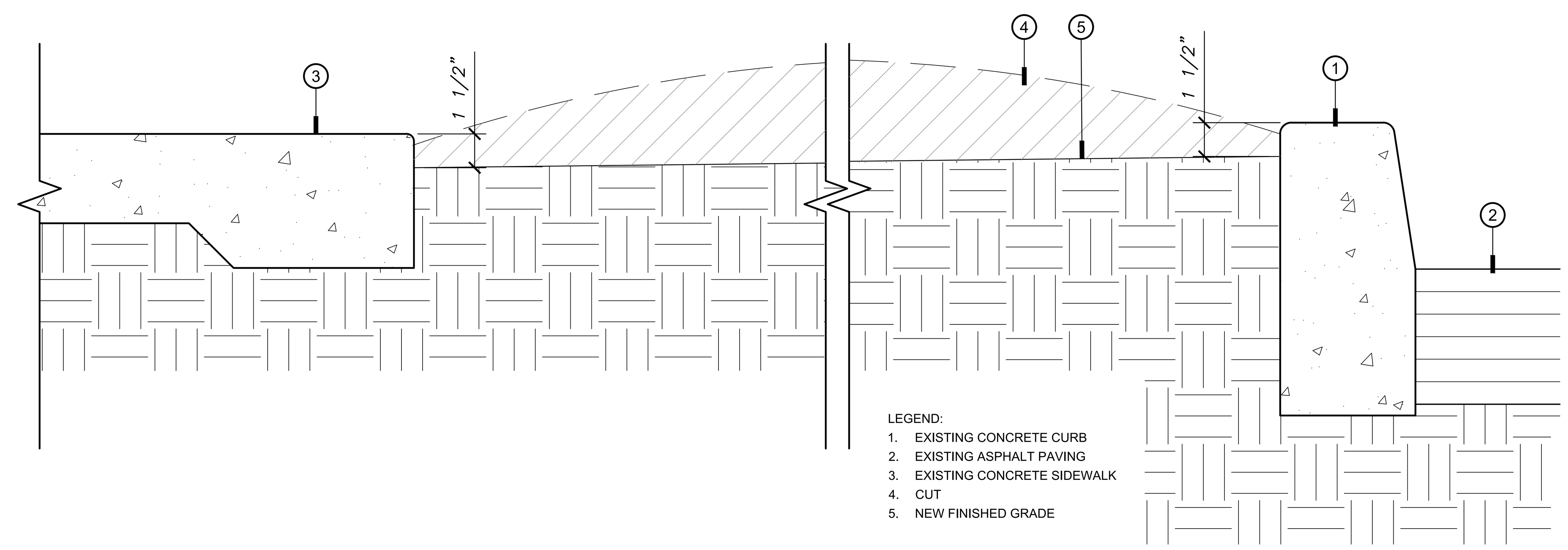
LEGEND:
1. 4" THICK LAYER OF COBBLE - SEE HARDSCAPE SHEETS FOR COLOR & SUPPLIER.
2. SINGLE LAYER OF MIRAFI 140N FILTER FABRIC SOIL SEPARATOR. WRAP FABRIC UP VERTICAL EDGES MINIMUM OF 3" AND SECURE WITH SOIL STAPLES AT 18" O.C. TO PREVENT VERTICAL MOVEMENT. OVERLAP SPLICES 12" MINIMUM.
3. 90% COMPACTED SUBGRADE - VERIFY WITH REQUIREMENMTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
4. EXISTING CONCRETE CURB.
5. EXISTING ASPHALT PAVING
6. ADJACENT EXISTING CONCRETE PAVING.

A DECORATIVE CONCRETE MULCH / DRAINAGE GRAVEL — SCALE = 3" = 1'-0"



LEGEND:
1. 4" THICK LAYER OF DRAINAGE COBBLE. SEE COLOR AND FINISH SCHEDULE FOR COLOR & SUPPLIER.
2. SINGLE LAYER OF MIRAFI 140N FILTER FABRIC SOIL SEPARATOR. WRAP FABRIC UP VERTICAL EDGES MINIMUM OF 3" AND SECURE WITH SOIL STAPLES AT 18" O.C. TO PREVENT VERTICAL MOVEMENT. OVERLAP SPLICES 12" MINIMUM.
3. 90% COMPACTED SUBGRADE - VERIFY WITH REQUIREMENMTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
4. METAL EDGING. SEE COLOR AND FINISH SCHEDULE FOR SPECIFICATIONS. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
5. FINISH GRADE.
6. BUILDING WALL.
7. 12" STAKES PER MANUFACTURER. PLACE STAKES ON SHRUB / GROUNDCOVER SIDE AND SET BELOW TOP OF EDGING.

B DRAINAGE GRAVEL WITH METAL EDGING. — SCALE = 3" = 1'-0"



LEGEND:
1. EXISTING CONCRETE CURB
2. EXISTING ASPHALT PAVING
3. EXISTING CONCRETE SIDEWALK
4. CUT
5. NEW FINISHED GRADE

C STRAIGHT GRADE SECTION — SCALE = 3" = 1'-0"

4

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o: 949. 675. 6442

CONSULTANTS

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IRVINE • CA 92618
949.387.1323
RIDGELA.COM

SEALS / APPROVALS

REGISTERED LANDSCAPE ARCHITECT — JAMES J. RIDGE — LIC. #3808 — 05/17/18 (Date) — 05/31/19 (Exp. Date) — STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
FILE:
A# 0 3 -
AC ________ FLS ________ SS ________
DATE ________________

PROJECT TITLE
BUILDINGS 1 & 2 Z
4901 EAST CARSON STREET
LONG BEACH, CA. 90808
T: (562) 938-4111
F: (562) 938-3912

LONG BEACH CITY COLLEGE
LONG BEACH CITY COLLEGE
LIBERAL ARTS CAMPUS

SUBMITTALS		
	07/ 24/ 2017	50% CD
	10/ 19/ 2017	95% CD
	11/ 17/ 2017	CONSTRUCTION DOCUMENTS
	12/ 19/ 2017	DISTRICT COMMENTS
4	05/ 17/ 2018	ADDENDUM 4

PROJECT IDENTIFICATION
THE ORIGINAL SIZE OF THIS SHEET IS 30" x 42"

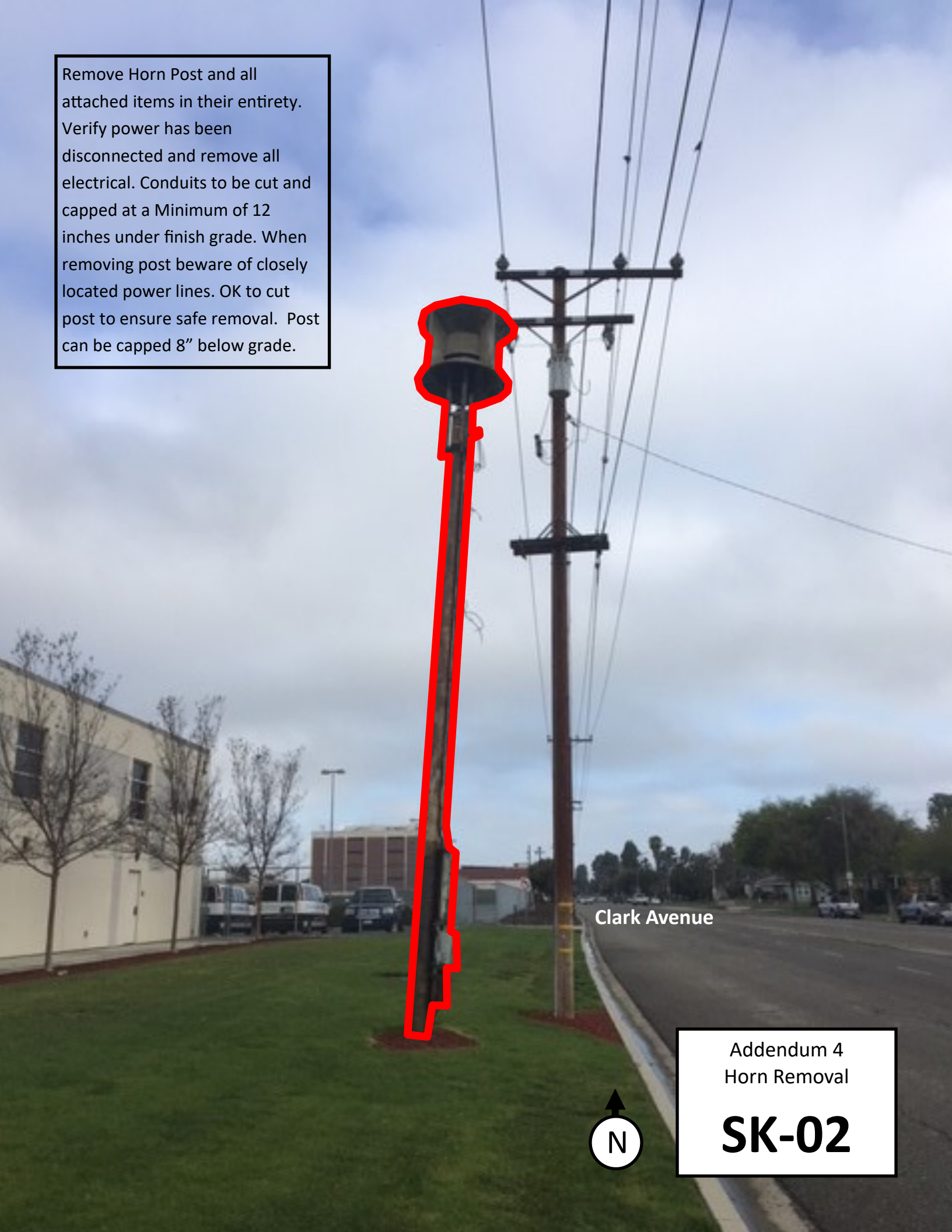
DATE 05/17/2018

DRAWN BY MR

CHECKED BY TC

SHEET TITLE
HARDSCAPE DETAILS

SHEET NUMBER
L6.1


Remove Horn Post and all attached items in their entirety. Verify power has been disconnected and remove all electrical. Conduits to be cut and capped at a Minimum of 12 inches under finish grade. When removing post beware of closely located power lines. OK to cut post to ensure safe removal. Post can be capped 8” below grade.
Clark Avenue
N
Addendum 4
Horn Removal
SK-02