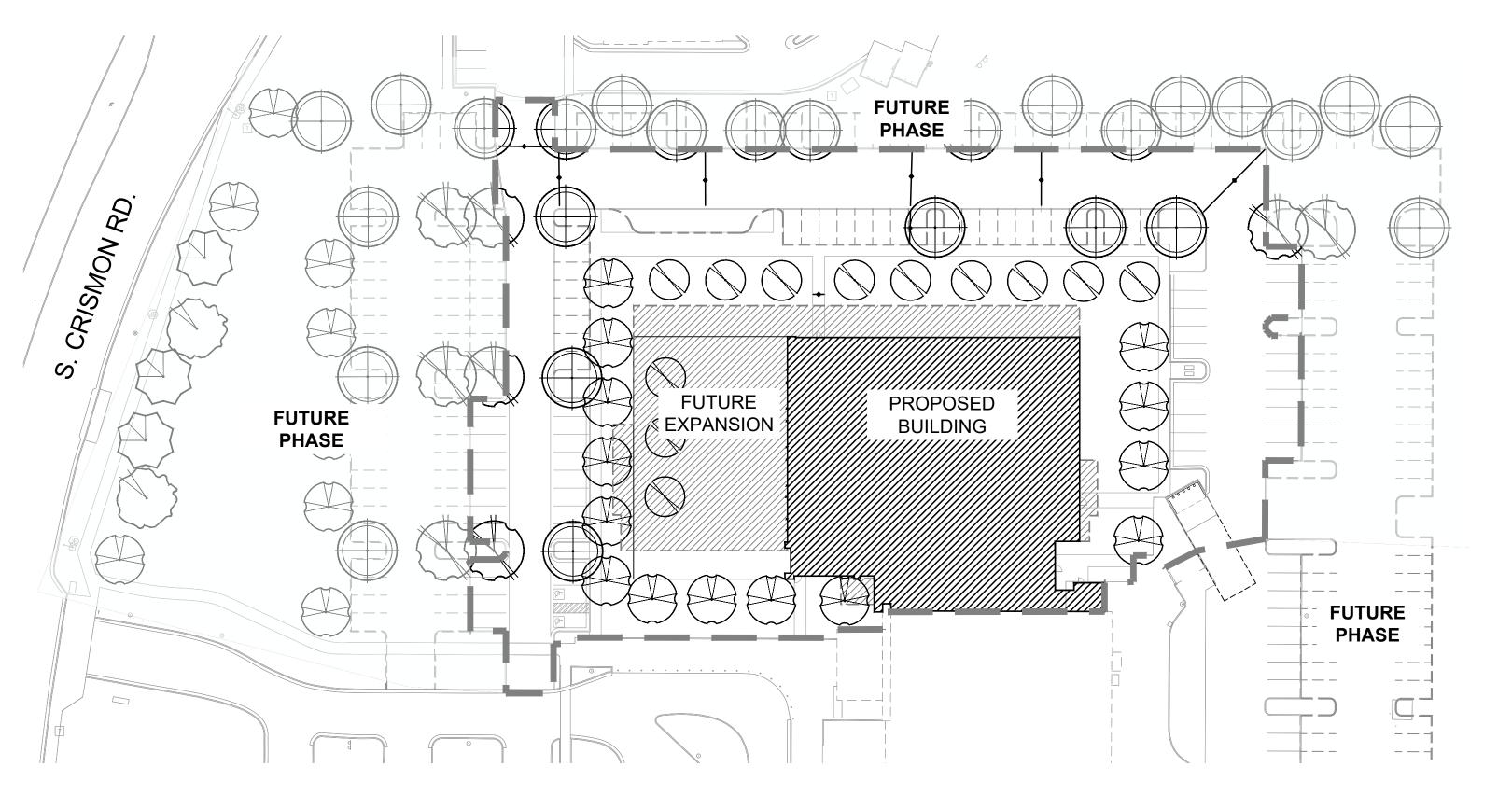
# BANNER HEALTH CENTER

Mesa, Arizona

RANGE 7 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA

## LANDSCAPE CONSTRUCTION DOCUMENTS

SUBMITTED: May 17, 2024



#### SHEET INDEX

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|                 |                             |          |

#### NOTES:

- I. NO DEMOLITION OR CONSTRUCTION WORK ON THE CRISMON RD MEDIAN SHALL TAKE PLACE BEFORE HAVING A MEETING WITH THE TRANSPORTATION LANDSCAPE DEPARTMENT.
- EXISTING IRRIGATION SYSTEM AND EQUIPMENT SHALL BE UTILIZED FOR THIS BUILDING EXPANSION PACKAGE.
- ALL FUTURE PHASED AREAS ARE SCREENED BACK AND SHOWN FOR REFERENCE ONLY.

#### PROJECT TEAM

OWNER/DEVELOPER: **BANNER HEALTH** 1441 N 12th St Phoenix, AZ 85006 (602) 747-7128

**ARCHITECT: DEVENNEY GROUP LTD., ARCHITECTS** 6900 E Camelback Rd, Suite 500 Scottsdale, AZ 85251 (602) 943-8950 CONTACT: Eric Ubersax eubersax@devenneygroup.com

LANDSCAPE ARCHITECT: **EPS GROUP, INC.** 

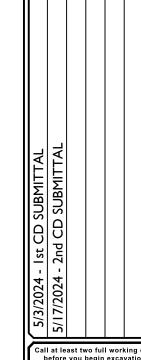
1130 N Alma School Rd, Suite 120 Mesa, AZ 85201 (480) 503-2250 CONTACT: Tom Snyder, RLA tom.snyder@epsgroupinc.com

CIVIL ENGINEER: **EPS GROUP, INC.** 1130 N Alma School Rd, Suite 120 Mesa, AZ 85201

(480) 503-2250 Cell: (586) 420-8545 CONTACT: Todd Leslie todd.leslie@epsgroupinc.com

**IRRIGATION DESIGN:** HINES INC 323 W Drake Rd, Suite 204 Fort Collins, CO 80526 (970) 282-1800 **CONTACT:** Nate Hines nate@hinesinc.com

Revisions:



Call at least two full working day before you begin excavation.

ARECONA 81

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24-0048 CONSTRUCTION DOCUMENTATION Sheet No.

L-CS

- 2. VERIFY ALL CONDITIONS AT JOB SITE AND NOTIFY LANDSCAPE ARCHITECT OF DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING ANY WORK. VERIFY EXISTING ELEVATIONS.
- CONTRACTOR TO OBTAIN NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- 4. ALL WORK SHALL CONFORM TO THE APPROPRIATE AGENCIES. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES, LINES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING. DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER. THE LANDSCAPE ARCHITECT DOES NOT ASSUME ANY RESPONSIBILITY FOR THE UTILITIES OR STRUCTURES NOT SHOWN ON THE DRAWINGS. CONTRACTOR TO VERIFY THE EXACT LOCATION OF UTILITIES PRIOR TO CONSTRUCTION (CALL BEFORE YOU DIG 602-263-1100). CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVER OR NEAR THE EXISTING GAS MAIN, WATER LINES AND ELECTRICAL LINES.
- ALL LAYOUT DIMENSIONS ARE FROM PLAN VIEW CALCULATIONS. ACTUAL FIELD DIMENSIONS MAY VARY FROM PLAN DUE TO ACTUAL LENGTHS ALONG A SLOPED SURFACE. HORIZONTAL LAYOUT AND DIMENSIONING ARE FROM FACE OF BUILDING UNLESS OTHERWISE NOTED.
- 6. IF THERE IS A CONFLICT WITH LAYOUT IN THE FIELD, NOTIFY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- DRAWING SYMBOLS: A SYSTEM OF DIAGRAMMATIC SYMBOLS AND NOTATIONS ARE USED IN THESE DRAWINGS. REVIEW NOTATIONS CAREFULLY, NOTIFY LANDSCAPE ARCHITECT AND REQUEST CLARIFICATION ON ANY UNCLEAR NOTATION OR DISCREPANCY PRIOR TO COMMENCING WORK.
- EXISTING AND PROPOSED GRADES ARE BASED ON FIELD OBSERVATIONS. VERIFY ALL GRADE ELEVATIONS IN FIELD PRIOR TO CONSTRUCTION.
- ALL FINISHED GRADES ARE TO MEET AND BLEND SMOOTHLY WITH EXISTING GRADES AT THE PROJECT LIMIT.
- 10. WORK PERFORMED WITHOUT LANDSCAPE ARCHITECT'S APPROVAL AND/OR IN COMPLIANCE WITH CONSTRUCTION DOCUMENTS IS SUBJECT TO REMOVAL AT CONTRACTOR'S EXPENSE.
- THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR FOR SAFETY PRECAUTIONS OR PROBLEMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 12. CONTRACTOR TO VERIFY ALL QUANTITIES. IN CASE OF ANY DISCREPANCIES, GRAPHICALLY SHOWN MATERIAL QUANTITIES SHALL TAKE PRECEDENCE.
- 13. CONDITIONS BEYOND THE PROPERTY LINE AND CONTRACT LIMITS ARE SHOWN FOR REFERENCE ONLY AND ARE NOT PART OF THIS LANDSCAPE CONSTRUCTION DOCUMENTATION SET.
- 14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE AND ALL SUCH IMPROVEMENTS AND STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED SATISFACTORY TO THE LANDSCAPE ARCHITECT AT THE CONTRACTOR'S EXPENSE.
- 15. SPECIAL CONSIDERATION HAS BEEN GIVEN TO THE DESIGN AND INTENDED RELATIONSHIP BETWEEN BUILDING, SITEWORK, AND CIRCULATION SYSTEMS.
- 16. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FLOW AWAY FROM ALL BUILDINGS TOWARD DRAIN INLETS, RETENTION BASINS, PLANTING/LAWN AREAS OR THE STREET.
- THE DRAWINGS REPRESENT THE FINISHED WORK. ALL BRACING, TEMPORARY SUPPORTS, SHORING, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. OBSERVATION VISITS TO THE JOB SITE BY THE LANDSCAPE ARCHITECT DO NOT INCLUDE INSPECTION OF CONSTRUCTION METHODS AND SAFETY CONDITIONS AT THE JOB SITE. THESE VISITS SHALL NOT BE CONSTRUED AS CONTINUOUS AND DETAILED INSPECTIONS.
- DIMENSIONS MARKED 'VERIFY' ARE TO BE FIELD MEASURED. ANY DISCREPANCY FROM THE NOTED DIMENSION IS TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO FURTHER WORK.

#### **MAINTENANCE NOTE:**

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ALL LANDSCAPE AREAS AND MATERIALS SHALL BE MAINTAINED IN A HEALTHY, NEAT, CLEAN, AND WEED-FREE CONDITION. THIS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

#### **LANDSCAPE PLANTING NOTES:**

- VERIFY ALL CONDITIONS AT THE JOB SITE AND NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES PRIOR TO ANY CONSTRUCTION TAKING PLACE.
- 2. PROVIDE MATCHING SIZES AND FORMS FOR EACH TREE TO BE INSTALLED.
- 3. PLANT MATERIAL TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
- 4. CONTRACTOR TO VERIFY ALL QUANTITIES. IN CASE OF ANY DISCREPANCIES, GRAPHICALLY SHOWN PLANT AND IRRIGATION QUANTITIES SHALL TAKE PRECEDENCE.
- 5. STAKE ALL TREE LOCATIONS BASED UPON THESE PLANS. OBTAIN LANDSCAPE ARCHITECT'S APPROVAL OF STAKED LOCATIONS PRIOR TO PLANTING.
- 6. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 7. ALL PLANTS SHALL BE BOXED, BALLED AND WRAPPED OR CONTAINER GROWN. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE ENTIRELY REMOVED AT TIME OF PLANTING.
- 8. ALL PLANT MATERIAL SHALL BE SELECTED AT NURSERIES THAT CARRY SPECIFIED PLANTS. THERE SHALL NOT BE ANY SUBSTITUTIONS OF PLANT MATERIAL FROM OTHER NON SPECIFIED PLANTS OR NURSERIES. PLANT MATERIAL IS SUBJECT TO REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.
- 9. NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO DELIVERY OF PLANT MATERIAL TO COORDINATE ACCEPTANCE AND APPROVAL
- 10. ALL PLANTS SHALL BE SET PLUMB UNLESS OTHERWISE NOTED.
- 11. ALL PLANT SPECIES SHALL CONFORM TO THE LANDSCAPE CONSTRUCTION DOCUMENTS. THERE WILL BE NO PLANT SUBSTITUTIONS, TYPE, OR QUANTITY DEVIATIONS FROM THE APPROVED LANDSCAPE PLANS WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT.
- 12. WALLS ARE NOT APPROVED AS PART OF THE LANDSCAPE PLAN BUT SHOWN FOR REFERENCE ONLY.
- 13. PER COM EDSM SECTION 1105.3, PLANT MATERIAL WITHIN THE SIGHT DISTANCE TRIANGLE SHALL NOT EXCEED 30-INCHES IN HEIGHT AT FULL MATURITY. PER SECTION 1105.4, TREES PLANTED WITHIN THE SIGHT DISTANCE TRIANGLES SHALL BE 24-INCH TO 42-INCH BOX SPECIMENS WITH NO BRANCHES LOWER THAN 8-FEET ABOVE THE SIDEWALK ELEVATION, AND 14-FEET OVER VEHICULAR TRAFFIC WAYS.
- 14. ALL TREES TO BE SELECTED BY CITY REPRESENTATIVES AT NURSERY. PHOTO SUBMITTAL REQUIRED FOR ALL OTHER PLANT MATERIALS.

#### **SITE ABBREVIATIONS:**

| ARCH  | ARCHITECT              | MIN | MINIMUM                 |
|-------|------------------------|-----|-------------------------|
| BC    | BOTTOM OF CURB         | NIC | NOT IN CONTRACT         |
| BW    | BOTTOM OF WALL         | NTS | NOT TO SCALE            |
| CL    | CENTER LINE            | OC  | ON CENTER               |
| CIP   | CAST IN PLACE          | OS  | OFF-SITE                |
| CONC  | CONCRETE               | PL  | PROPERTY LINE           |
| DIA   | DIAMETER               | PUE | PUBLIC UTILITY EASEMENT |
| DWG   | DRAWING                | QTY | QUANTITY                |
| EA    | EACH                   | R   | RADIUS                  |
| ESP   | ESPALIER               | R/W | RIGHT OF WAY            |
| FFE   | FINISH FLOOR ELEVATION | SF  | SQUARE FEET             |
| FG    | FINISH GRADE           | STD | STANDARD                |
| GAL   | GALLON                 | TC  | TOP OF CURB             |
| HC    | HANDICAP               | TW  | TOP OF WALL             |
| HP    | HIGH POINT             | TYP | TYPICAL                 |
| IRRIG | IRRIGATION             | W/  | WITH                    |
| LF    | LINEAR FOOT            | W/O | WITHOUT                 |
| LP    | LOW POINT              | 1   | FOOT (FEET)             |
| MAX   | MAXIMUM                | 11  | INCH (INCHES)           |
|       |                        |     |                         |

#### **CITY OF MESA GENERAL NOTES**

- ALL WORK AND MATERIALS SHALL CONFORM TO THE CURRENT UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION AS FURNISHED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS AND AS AMENDED BY THE CITY OF MESA. ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE AMENDED SPECIFICATIONS AND DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- SEPARATE RIGHT-OF-WAY PERMITS ARE REQUIRED FOR ALL PUBLIC UTILITIES, PUBLIC STREET IMPROVEMENTS, AND RIGHT-OF-WAY LANDSCAPING. FOR INFORMATION REGARDING AVAILABILITY AND COST OF RIGHT-OF-WAY PERMITS, CONTACT THE DEVELOPMENT SERVICES DEPARTMENT AT (480) 644-4273 OR AT
- HTTP://WWW.MESAAZ.GOV/DEVSUSTAIN/CONSTRUCTIONPERMITS.ASPX. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED UNLESS OTHERWISE NOTED. CONTRACTORS MUST HOLD THE APPROPRIATE CLASS OF LICENSE AND SHALL HAVE ON FILE WITH THE PERMIT SERVICES SECTION PROOF OF INSURANCE COVERAGE. PERMITS BECOME INVALID AND MUST BE UPDATED IF WORK HAS NOT BEGUN WITHIN NINETY (90) DAYS. PERMITS ALSO BECOME INVALID IF THE CONTRACTOR'S INSURANCE LAPSES OR IS VOIDED.
- TWENTY FOUR (24) HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK, CONSTRUCTION OR INSTALLATIONS ASSOCIATED WITH THIS PERMIT, THE PERMITTEE SHALL NOTIFY CITY OF MESA ENGINEERING DEPARTMENT AT (480) 644-2251 OF INTENT TO BEGIN AND REQUEST/SCHEDULE PRELIMINARY FIELD REVIEW AT THE PROJECT SITE WITH THE CITY OF MESA ENGINEERING DEPARTMENT CONSTRUCTION INSPECTOR (CITY INSPECTOR). FAILURE TO PROVIDE PROPER INSPECTION NOTIFICATION AS PRESCRIBED ABOVE SHALL RESULT IN THIS PERMIT BECOMING INVALID AND WORK BEING STOPPED.
- CONTRACTOR'S SHALL COMPLY WITH THE REQUIREMENTS TO OBTAIN THE NECESSARY RIGHT-OF-WAY PERMITS AND SHALL COMPLY WITH THE RIGHT-OF-WAY PERMIT CONDITIONS AS FOUND ON THE BACK OF THE PERMIT FORM.
- 5. THE CITY OF MESA PARKS & RECREATION DIVISION IS NOT REPRESENTED BY BLUE STAKE. WHEN THE CONTRACTOR EXCAVATES NEAR OR ADJACENT TO A CITY PARK, THE CONTRACTOR SHALL CONTACT THE PARKS & RECREATION ADMINISTRATION SECTION AT (480) 644-2354 TO REQUEST ASSISTANCE IN LOCATING ALL THEIR UNDERGROUND FACILITIES.
- 6. THE CONTRACTOR SHALL OBTAIN AN EARTH-MOVING PERMIT FROM THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT AND SHALL COMPLY WITH ITS REQUIREMENTS FOR DUST CONTROL
- 7. THE ENGINEER HEREBY CERTIFIES AS EVIDENCED BY A PROFESSIONAL SEAL & SIGNATURE, THAT ALL AFFECTED UTILITY COMPANIES BOTH PUBLIC AND PRIVATE HAVE BEEN CONTACTED AND ALL EXISTING AND/OR PROPOSED UTILITY LINES AND OTHER RELATED INFORMATION HAVE BEEN TRANSFERRED ONTO THESE PLANS. THE ENGINEER OR ARCHITECT ALSO HEREBY CERTIFIES THAT ALL EXISTING AND/OR PROPOSED PUBLIC RIGHT-OF-WAY AND EASEMENTS HAVE BEEN CORRECTLY PLOTTED/SHOWN.
- 8. THE ENGINEER, OR LAND SURVEYOR OF RECORD SHALL CERTIFY UPON COMPLETION OF CONSTRUCTION THAT ALL PAGE 2 OF 7 PUBLIC IMPROVEMENTS (WATER AND SEWER UTILITIES, STORM SEWER, CONCRETE, PAVING, STREET LIGHTS, ETC.) HAVE BEEN INSTALLED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE APPROVED PLANS. ANY CHANGES SHALL BE REFLECTED ON "AS-BUILT" DRAWINGS PROVIDED BY THE ENGINEER TO THE CITY'S ENGINEERING DEPARTMENT.
- 9. THE REGISTERED ENGINEER OR LAND SURVEYOR SHALL CERTIFY THAT THE MINIMUM HORIZONTAL AND VERTICAL SEPARATIONS BETWEEN UTILITIES WITHIN PUBLIC RIGHT-OF-WAY AND EASEMENTS HAVE BEEN MAINTAINED AS REOUIRED BY LAW OR POLICY.
- 10. THE DEVELOPER SHALL PROVIDE ALL CONSTRUCTION STAKING FOR THE
- 11. THE DEVELOPER OR THE ENGINEER IS RESPONSIBLE FOR ARRANGING FOR THE RELOCATION OR REMOVAL OF ALL UTILITIES OR FACILITIES THAT ARE IN CONFLICT WITH THE PROPOSED PUBLIC IMPROVEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ALL UTILITIES, POWER POLES, IRRIGATION DRY-UPS, RESETS REMOVALS BY OTHERS, ETC.
- 12. THE CONTRACTORS SHALL LOCATE ALL UTILITIES PRIOR TO EXCAVATION AND AVOID DAMAGE TO SAME. CALL (602) 263-1100 FOR BLUE STAKE TWO WORKING DAYS PRIOR TO DIGGING. CALL SALT RIVER PROJECT FOR POLE BRACING, ELECTRIC SERVICE OR CONSTRUCTION SCHEDULING AT (602)
- 13. WHEN GAS MAINS AND/OR SERVICES ARE EXPOSED, CONTACT THE CITY OF MESA AT (480) 644-2261 FOR INSPECTION OF THE EXPOSED PIPE AND COATING PRIOR TO BACKFILLING OF THE TRENCH.
- 14. CONTRACTORS SHALL COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AND BARRICADING PER THE CURRENT CITY OF MESA TRAFFIC **BARRICADE MANUAL**
- 15. IF A FIRE HYDRANT IS NEEDED TO OBTAIN CONSTRUCTION WATER, THE CONTRACTOR SHALL OBTAIN A FIRE HYDRANT METER FROM PERMIT SERVICES AND PAY ALL APPLICABLE FEES AND CHARGES.
- 16. IF DURING THE CONSTRUCTION OF A PUBLIC FACILITY, THE CONTRACTOR FAILS TO OR IS UNABLE TO COMPLY WITH A REQUEST OF THE CITY INSPECTOR, AND IT IS NECESSARY FOR CITY FORCES TO DO WORK THAT IS NORMALLY THE CONTRACTOR'S RESPONSIBILITY, THE CITY SHALL BE JUSTIFIED IN BILLING THE CONTRACTOR. EACH INCIDENT REQUIRING WORK BY CITY FORCES SHALL BE COVERED BY A SEPARATE BILLING AT THE CURRENT APPLICABLE RATES.
- 17. THE CONTRACTOR IS ADVISED THAT DAMAGE TO PUBLIC SERVICES OR SYSTEMS AS A RESULT OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AND INSPECTED BY THE CITY INSPECTOR. UNLESS OTHERWISE APPROVED BY THE CITY, ALL REPAIRS SHALL BE DONE WITHIN 24 HOURS. THE CONTRACTOR IS ADVISED THAT ANY COSTS RELATED TO REPAIR OR REPLACEMENT OF DAMAGED PUBLIC SERVICES AND SYSTEMS AS A RESULT OF CONTRACTOR'S ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.

#### PROJECT DATA

SITE GROSS TOTAL S.F. / AC: 453,425 S.F. / 10.409 AC **ZONING: EXISTING BUILDING:** PROPOSED EXPANSION: TOTAL S.F:

220-81-962 LC CITY OF MESA 21,719 S.F. 19,571 S.F. 41,290 S.F.

#### **CITY OF MESA LANDSCAPE NOTES**

- REQUIRED TREES SHALL BE MINIMUM SIZE AS SPECIFIED IN THE ARIZONA NURSERY ASSOCIATION "RECOMMENDED TREE SPECIFICATIONS" LATEST EDITION. 11-33-2(B).
- 2. ALL LANDSCAPE MATERIAL INSTALLED SHALL BE MAINTAINED BY OWNER OR LESSEE IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN. 11-33-2(I).
- NOTE EITHER A "FORMAL" OR "NATURAL" LANDSCAPE MAINTENANCE PROGRAM AND THAT THE LANDSCAPE SHALL BE MAINTAINED IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICE OF THE LANDSCAPING INDUSTRY. 11-33-2(I)4.
- 4. ALL SHRUBS LOCATED IN THE LINE-OF-SIGHT SHALL NOT EXCEED 30-INCHES IN HEIGHT AT FULL MATURITY AND ALL TREES LOCATED IN THE LINE-OF-SIGHT SHALL BE 24"-42" BOX SPECIMENS WITH NO BRANCHES LOWER THAN 8' ABOVE THE SIDEWALK ELEVATION, AND 14' OVER VEHICULAR TRAFFIC WAYS.
- REQUIRED LANDSCAPE AREAS SHALL BE FREE FROM ENCROACHMENT BY ANY USE, STRUCTURE, VEHICLE, OR FEATURE NOT A PART OF THE LANDSCAPING DESIGN. 11-33-2(A).
- BACKFLOW PREVENTERS 2" OR LARGER SHALL BE SCREENED WITH LANDSCAPE MATERIAL LOCATED WITHIN A 6' RADIUS OF THE BACKFLOW PREVENTERS. ALL BACKFLOW PREVENTERS LESS THAN 2" SHALL BE PLACED IN A WIRE MESH BASKET AND PAINTED GREEN. THE POLICE DEPARTMENT'S CRIME PREVENTION DIVISION HAS REQUESTED THE CHANGE TO GREEN TO DISCOURAGE

#### LANDSCAPE DATA

**GROSS SITE AREA:** 10.4 A.C. (453,425 S.F.) LANDSCAPE AREA: 63,262 SF. LANDSCAPE COVERAGE:

GROSS SITE AREA: LANDSCAPE AREA: LANDSCAPE COVERAGE:

LANDSCAPE DATA

**CURRENT SCOPE** 

2.1 A.C. (93,940 S.F.) 33,094 SF.

#### CITY OF MESA PLANT DATA

| S CRISMON ROAD FRONTAGE (200 L.F.) | <b>REQUIRED</b> | PROVIDED   |
|------------------------------------|-----------------|------------|
| I TREE PER 25 L.F.                 | 8 TREES         | 8 TREES    |
| 6 SHRUBS PER 25 L.F.               | 48 SHRUBS       | 48 SHRUBS  |
| PROPERTY PERIMETER (603 L.F.)      | REQUIRED        | PROVIDED   |
| 3 NON DECIDUOUS TREE & 20          | 18 TREES        | 18 TREES   |
| SHRUBS PER 100 L.F. OF ADJACENT    | 121 SHRUBS      | 121 SHRUBS |
| PROPERTY LINE                      |                 |            |
| FOUNDATION PLANTING (504 L.F.)     | REQUIRED        | PROVIDED   |
| I TREE PER 50 L.F. OF EXTERIOR     | 10 TREES        | 10 TREES   |
| BUILDING WALL                      |                 |            |
| 10% OF FOUNDATION BASE TREES       | I TREES         | I TREES    |
| TO BE 36" BOX SIZE TREES           |                 |            |
|                                    |                 |            |
| TREE SIZE (31 TREES TOTAL)*        | REQUIRED        | PROVIDED   |
| 36" BOX (25% MIN.)                 | 9 TREES         | 16 TREES   |
| 24" BOX (50% MIN.)                 | 18 TREES        | 20 TREES   |

#### NOTE:

ALL LANDSCAPE CALCULATIONS ARE BASED OFF OF THE FULL SITE FOR PROPOSED IMPROVEMENTS AND BUILDING EXPANSION. THE CURRENT PLANTING SCOPE AND QUANTITIES WITHIN THE PLANTING LEGEND SHOW THE ANTICIPATED IMPROVEMENTS TO BE BUILT AT AN EARLIER TIME.

#### CITY OF MESA PLANT DATA CURRENT SCOPE

| S CRISMON ROAD FRONTAGE (0 L.F.)                         | REQUIRED            | PROVIDED             |
|--|---------------------|----------------------|
| NOT REQUIRED IN SCOPE                                    |                     |                      |
| PROPERTY PERIMETER (0 L.F.)                              | REQUIRED            | PROVIDED             |
| NOT REQUIRED IN SCOPE                                    |                     |                      |
| FOUNDATION PLANTING (504 L.F.)                           | REQUIRED            | PROVIDED             |
| I TREE PER 50 L.F. OF EXTERIOR<br>BUILDING WALL          | 10 TREES            | 10 TREES             |
| 10% OF FOUNDATION BASE TREES<br>TO BE 36" BOX SIZE TREES | I TREES             | I TREES              |
| TREE SIZE (31 TREES TOTAL)*                              | REQUIRED            | PROVIDED             |
| 36" BOX (25% MIN.)<br>24" BOX (50% MIN.)                 | 8 TREES<br>16 TREES | 16 TREES<br>15 TREES |
| TREE SIZE (31 TREES TOTAL)*                              | REQUIRED            | PROVIDED             |
| 36" BOX (25% MIN.)<br>24" BOX (50% MIN.)                 | 8 TREES<br>16 TREES | 16 TREES<br>15 TREES |

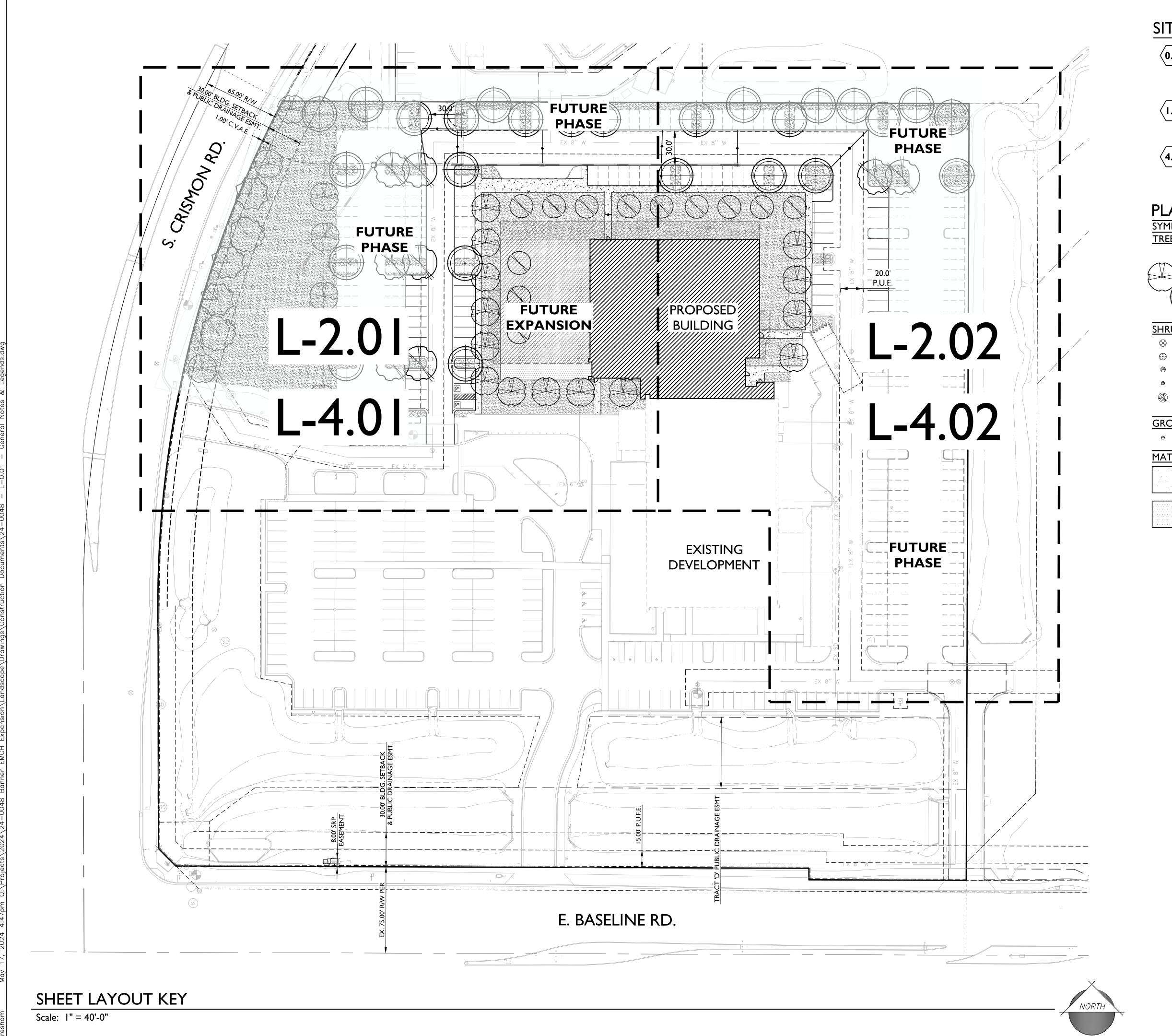
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24-0048 CONSTRUCTION DOCUMENTATION

Sheet No. L-0.0

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SITE DETAIL KEYNOTES

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**S** 

 $\langle 0.1 \rangle$  Existing conditions

EXISTING ROAD TO REMAIN EXISTING SIDEWALK TO REMAIN EXISTING WALL TO REMAIN

EXISTING LANDSCAPE TO REMAIN

(I.0) PAVEMENTS

DECOMPOSED GRANITE L-3.01/5 DUST CONTROL STANDARD CONCRETE PAVING SEE CIVIL

**4.0** PLANTING AND LANDSCAPE

'Madison Gold' Dust Control

TREE PLANTING L-3.01/1&2 SHRUB PLANTING L-3.01/3 L-3.01/4 GROUNDCOVER PLANTING

#### PLANT LEGEND

| SYMBO     | L SCIENTIFIC NAME                   | COMMON NAME             | SIZE    | QT` |
|-----------|-------------------------------------|-------------------------|---------|-----|
| TREES     |                                     |                         |         |     |
|           | Acacia salicina                     | Willow Acacia           | 24" Box | 12  |
|           | Olneya tesota                       | Desert Ironwood         | 36" Box | 13  |
|           | Ulmus parvifolia                    | Evergreen Elm           | 24" Box | 6   |
| SHRUB     | S/ACCENTS                           | COMMON NAME             | SIZE    | QTY |
| $\otimes$ | Callistemon citrinus 'Litttle John' | Little John Bottlebrush | 5 Gal   | 7   |
|           |                                     |                         |         |     |

| <u> 31 1170</u> | DOIACCLIVIO                          | COLLICIATION            | <u> </u> | <u>Qii</u> |  |
|-----------------|--------------------------------------|-------------------------|----------|------------|--|
| $\otimes$       | Callistemon citrinus 'Litttle John'  | Little John Bottlebrush | 5 Gal    | 7          |  |
|                 | Agave palmeri                        | Palmer Agave            | 5 Gal    | 15         |  |
| <b>(4)</b>      | Eremophila maculata 'Valentine'      | Valentine Bush          | 5 Gal    | 24         |  |
| •               | Muhlenbergia capillaris 'Regal Mist' | Regal Mist Grass        | 5 Gal    | 9          |  |
|                 | Tecoma stans                         | Gold Star               | 5 Gal    | 16         |  |
|                 |                                      |                         |          |            |  |
| <u>GRO</u> l    | JNDCOVERS                            | COMMON NAME             | SIZE     | QTY        |  |

| $\Theta$ | Lantana species 'New Gold' | New Gold Lantana | I Gal | 53 |
|----------|----------------------------|------------------|-------|----|
| MAT      | ERIALS                     |                  |       |    |
|          |                            |                  |       |    |

| 'Madison Gold' Decomposed Granite | 3/4" Screened<br>2" Depth, Min. | 23,465 S.F. |
|-----------------------------------|---------------------------------|-------------|
|                                   |                                 |             |

I/4" Minus

I" Depth, Min.

BANNER

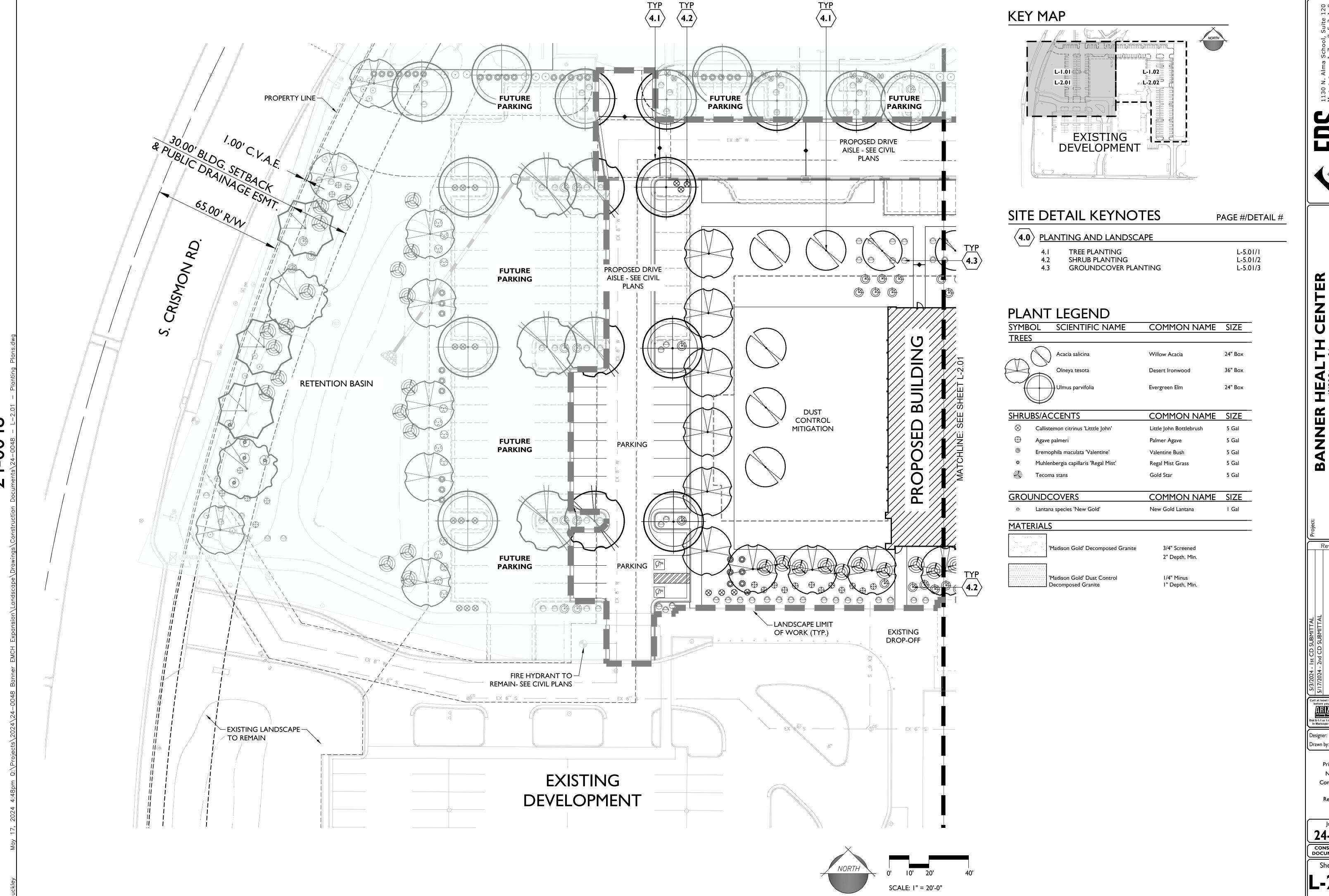
9,629 S.F.

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24-0048 CONSTRUCTION DOCUMENTATION

Sheet No.

4 of I I



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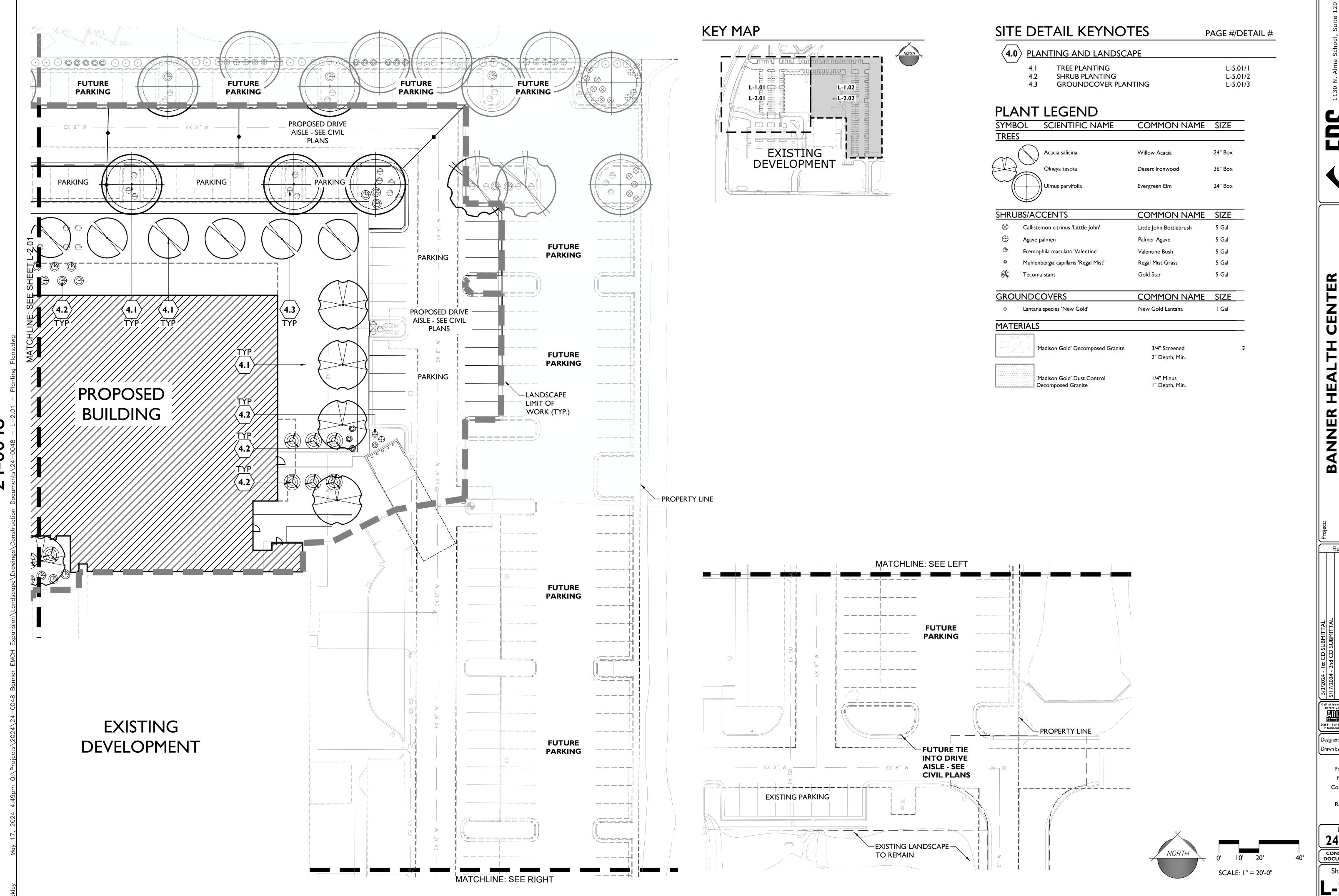
Revisions:

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24-0048 CONSTRUCTION DOCUMENTATION Sheet No.

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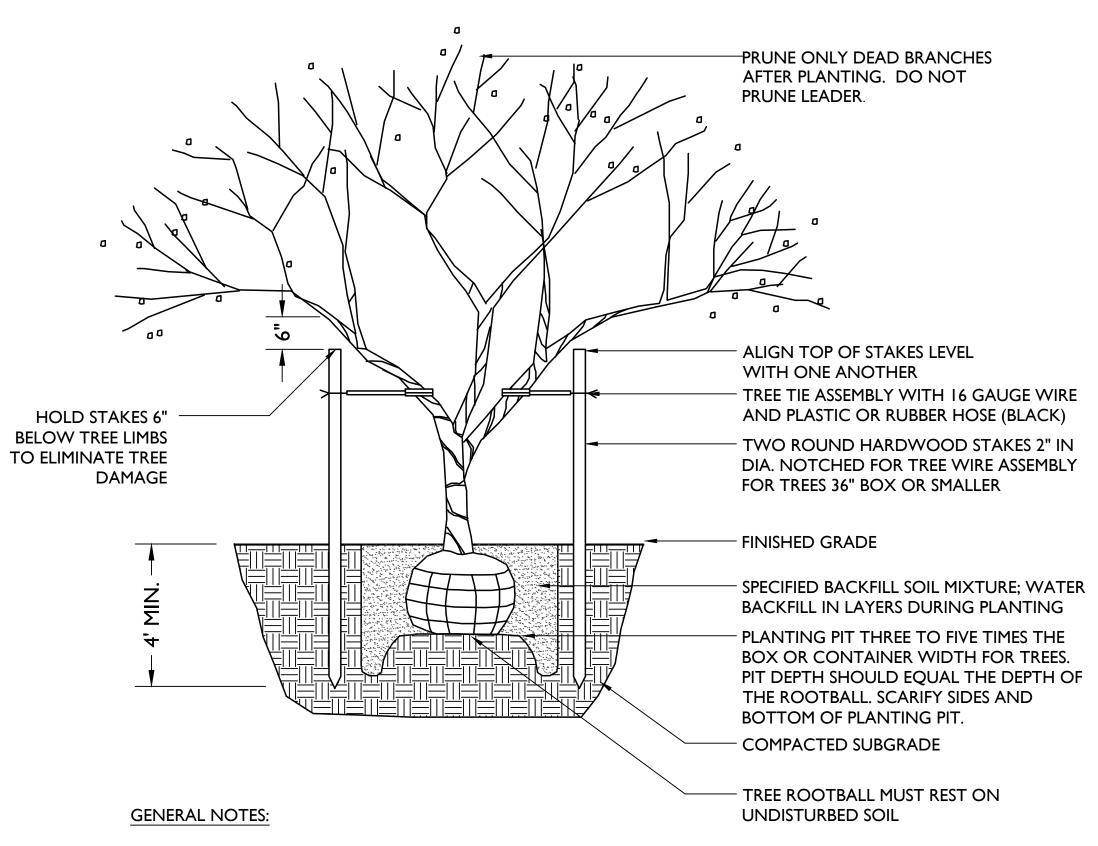
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I. SET CROWN OF ROOTBALL 2" ABOVE FINISH GRADE AFTER SETTLEMENT. DO NOT COVER CROWN WITH SOIL.

2. FOR TREES ADJACENT TO SIDEWALK, LOWER MOST BRANCH HEIGHT SHALL BE 7'-0" MIN FROM

SIDEWALK GRADE

3. HANDLE BY ROOTBALL ONLY, DO NOT HANDLE TREE TOP.

4. REMOVE STAKING ASSEMBLY AND TREE STAKES AFTER FIRST FULL YEAR GROWING SEASON.

GROUNDCOVER SPACING

(SEE PLANTING PLAN)

5. ONLY SINGLE TRUNK TREES WILL BE PLANTED ALONG STREET FRONTAGES.

6. A ROOT BARRIER SHALL BE PROVIDED FOR ALL TREES ADJACENT TO THE PUE.

TREE PLANTING Scale: 3/4" = 1'-0"





**GENERAL NOTES:** 

TREE STAKING Scale: 3/4" = 1'-0"

ENDS OF WIRE AT CENTER TWISTS TO BE FOLDED AROUND TWISTS.

MULTI-TRUNK TREES TO HAVE ALL MAJOR LEADERS STAKED OR SUPPORTED.

MAINTAIN ENOUGH SLACK AROUND TREE TRUNK TO ALLOW GENTLE MOVEMENT.

ONLY STAKE TREES GROWN WITH NURSERY STAKES.

ENDS OF WIRE AROUND STAKE TO BE PRESSED INTO STAKE.

PREVAILING WIND

DO NOT TWIST (TYP.)

1/2" INSIDE DIAMETER

- DOUBLE STRAND NO.

**16 GALVANIZED WIRE** 

STAPLE WIRE TO STAKE

WRAP ENDS AROUND TWISTS.

 $\langle 4.1 \rangle$ 

 $\langle I.I \rangle$ 

TWIST CENTERS.

WRAP ENDS AROUND TWISTS.

**RUBBER HOSE** 

TWIST CENTERS.

TRUNK TYP.

- WRAP WIRE AROUND ITSELF 5 TIMES

MIN. PRESS ENDS INTO STAKE (TYP)

- 2" DIA. HARDWOOD STAKE



PAGE #/DETAIL #

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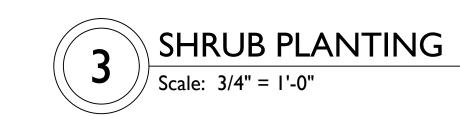
DETAIL

(I.0) PAVEMENTS

DECOMPOSED GRANITE L-3.01/5 DUST CONTROL STANDARD CONCRETE PAVING SEE CIVIL (4.0) PLANTING AND LANDSCAPE

L-3.01/1&2 TREE PLANTING SHRUB PLANTING L-3.01/3 L-3.01/4 GROUNDCOVER PLANTING

-SET CROWN OF ROOTBALL I" ABOVE FINISHED GRADE FOR PLANTS UP TO 15 GAL, AND 2" ABOVE FINISHED GRADE FOR BOXED MATERIAL 24" BOX AND LARGER. DO NOT COVER CROWN WITH SOIL. FINISHED GRADE -NATIVE OR PREPARED BACKFILL SETTLE SOIL BY WATERING, AND COMPACT TO ELIMINATE AIR **POCKETS** -SCARIFY SIDES OF HOLE PRIOR TO PLANTING -COMPACTED SUBGRADE PLANTING PIT EQUALS 2 TIMES DIA OF -SHRUB ROOTBALL MUST REST ON CONTAINER UNDISTURBED SOIL

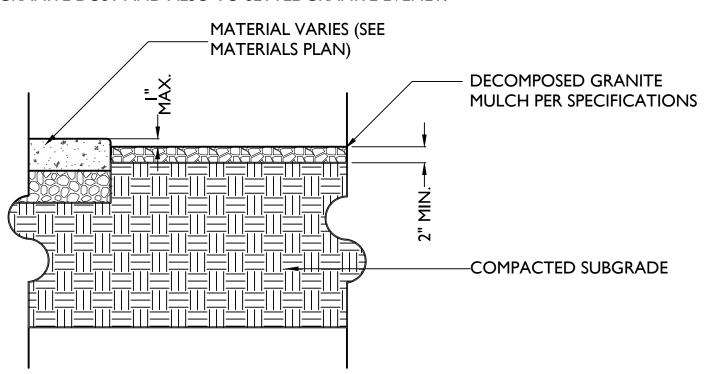


**GENERAL NOTES:** 

I. APPLY PRE-EMERGENT HERBICIDE AT SUBGRADE AFTER FINAL GRADE HAS BEEN ESTABLISHED AND PRIOR TO SPREADING DECOMPOSED GRANITE (2 APPLICATIONS).

2. EVENLY SPREAD 2" MIN. OF GRANITE ON COMPACTED FINISHED GRADE. 3. GRANITE TO BE SPRAYED WITH WATER TO CLEAN SMALLER DEPOSITS AND

GRANITE DUST AND ALSO TO SETTLE GRANITE EVENLY.



**DECOMPOSED GRANITE** 

BANNE

Revisions:

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GROUNDCOVER PLANTING

-2" OF DECOMPOSED GRANITE MULCH IN PLANTING BED AREAS

-NATIVE OR PREPARED BACKFILL. SETTLE SOIL BY WATERING, AND COMPACT TO ELIMINATE AIR POCKETS

-COMPACTED SUBGRADE



<sup>/</sup> Scale: | | = | | -0"

L-1.01

EXISTING

**DEVELOPMENT** 

**L-2.02 ∋** 

L-3.02 =

L-2.01

L-3.01

#### **INSTALLATION GENERAL NOTES**

- 1. THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 55 PSI, AT A DESIGN FLOW OF 6 GPM AT THE POINT-OF-CONNECTION (POC) TO THE EXISTING MAINLINE. TAP, METER, BACKFLOW PREVENTER ARE EXISTING. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO
- 2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
- 3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- 4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE **OWNER'S REPRESENTATIVE.**
- 5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE
- A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
- B. TREE AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
- C. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF TEES IN THE BULLNOSE CONFIGURATION, OR USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.
- 6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
- A. TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.
- 7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR. PIPE SLEEVES SHALL BE SIZED TWICE THE NOMINAL SIZE OF THE PIPE PASSING THROUGH.
- 8. THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
- 9. INSTALL ONE (1) #14 AWG TWO-WIRE PAIR FOR USE AS SPARES. INSTALL SPARE WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE. COIL 3 FEET OF WIRE IN VALVE BOX.

#### **IRRIGATION LEGEND**

SLEEVES: CLASS 200 PVC

POINT-OF-CONNECTION ASSEMBLY

MAINLINE PIPE: CLASS 200 PVC 1 1/2-INCH TO MATCH EXISTING MAINLINE SIZE

——— LATERAL PIPE TO SHRUB EMITTERS: CLASS 315 PVC 3/4-INCH SIZE UNLESS OTHERWISE INDICATED

— — LATERAL PIPE TO TREE EMITTERS: **CLASS 315 PVC** 3/4-INCH SIZE UNLESS OTHERWISE INDICATED

— UNCONNECTED PIPE CROSSING

REMOTE CONTROL DRIP VALVE ASSEMBLY: **HUNTER ICZ-101 W/ ICD-100 DECODER** 

QUICK COUPLING VALVE ASSEMBLY: HUNTER HQ-44LRC

ISOLATION GATE VALVE ASSEMBLY: MATCO 514

M WATER METER AND CURB STOP ASSEMBLY: **EXISTING** 

♦ FLUSH CAP ASSEMBLY WITH DRIP INDICATOR

A EXISTING IRRIGATION CONTROLLER **HUNTER ICC-99D** 

INDICATES CONTROLLER AND STATION NUMBER INDICATES LATERAL DISCHARGE (GPM) INDICATES VALVE SIZE (INCHES)

INDICATES LANDSCAPE APPLICATION

#### **CONSTRUCTION NOTES**

- THE IRRIGATION SYSTEM POINT-OF-CONNECTION (POC) SHALL BE TO THE EXISTING IRRIGATION MAINLINE AT THE APPROXIMATE LOCATION SHOWN. VERIFY **EXACT LOCATION OF POC ON SITE WITH OWNER'S REPRESENTATIVE.**
- (2) EXISTING IRRIGATION WATER METER
- (3) EXISTING IRRIGATION CONTROLLER

#### **ESTIMATED ANNUAL WATER USE**

THE IRRIGATION SYSTEM AS SHOWN ON THIS PLAN HAS AN ESTIMATED ANNUAL WATER USE OF 129,628 GALLONS. TO VERIFY EFFICIENT IRRIGATION SYSTEM OPERATION, THE OWNER SHALL COMPARE THIS ESTIMATED IRRIGATION WATER USE WITH ACTUAL WATER USE, AS RECORDED ON SITE, AFTER ALL PLANT MATERIAL HAS BEEN ESTABLISHED.

THE ESTIMATED ANNUAL IRRIGATION WATER USE OF THIS SYSTEM IS BASED ON 30-YEARS AVERAGE EVAPOTRANSPIRATION RATES (ET) FOR THE LOCAL AREA AND TYPICAL NEW IRRIGATION SYSTEM EQUIPMENT EFFICIENCIES. MAJOR DEVIATIONS FROM THIS ESTIMATE USE SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER AND CURRENT IRRIGATION MAINTENANCE COMPANY AT THE TIME OF THE DEVIATION.

TO VERIFY EFFICIENT IRRIGATION SYSTEM OPERATION AND WATER USE, AN IRRIGATION SYSTEM EVALUATION AND AUDIT SHOULD BE PERFORMED.

#### **IRRIGATION SYSTEM DESIGN PARAMETERS**

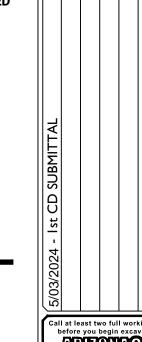
THE FACTORS IN THE TABLE BELOW WERE UTILIZED IN THE IRRIGATION SYSTEM DESIGN TO DETERMINE TAP CAPACITY REQUIREMENTS AND MAINLINE SIZE AND ARE MADE AVAILABLE TO GUIDE DECISIONS ON THE SYSTEM OPERATION BY THE CONTRACTOR. MULTIPLE ZONES WILL BE REQUIRED TO OPERATE AT THE SAME TIME UP TO A COMBINED TOTAL EQUAL TO THE MINIMUM FLOW REQUIRED AT THE POC WHEN ZONE SIZES ARE LOWER THAN THE MINIMUM FLOW REQUIRED AT THE POC.

| MINIMUM PRESSURE<br>REQUIREMENT AT POC        | 55 PSI  |
|---|---------|
| MINIMUM FLOW REQUIRED AT POC                  | I.8 GPM |
| MAXIMUM FLOW AT FURTHEST POINTS OF THE SYSTEM | 5.3 GPM |
| TOTAL IRRIGATION DAYS PER<br>WEEK             | 6 DAYS  |
| WATER WINDOW PER DAY                          | 8 HRS   |

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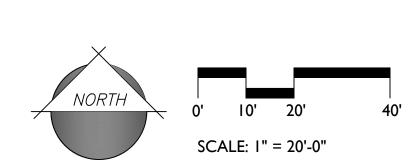
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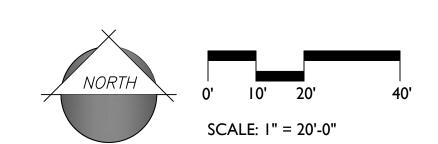
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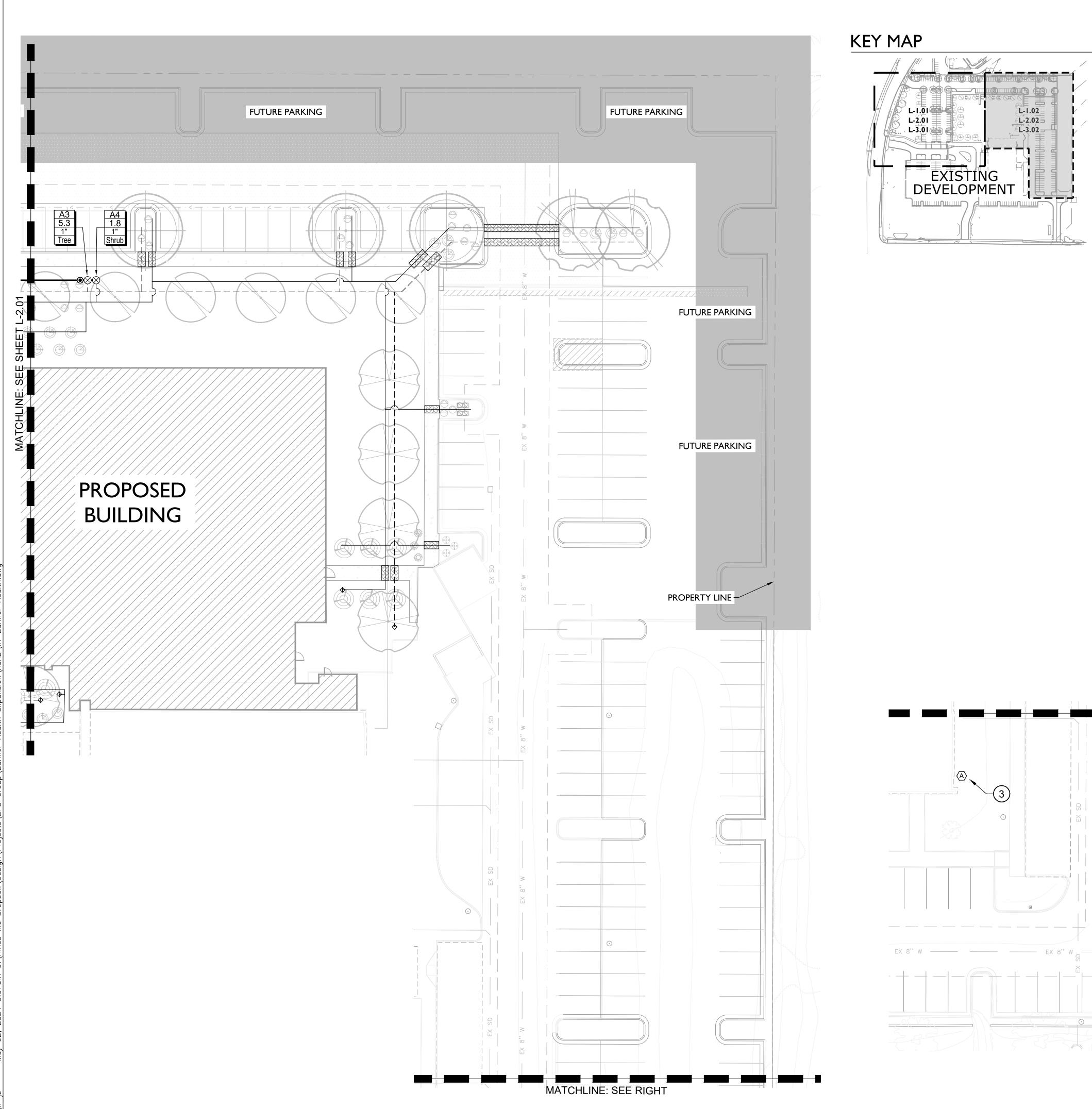
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**IRRIGATION LEGEND** 

SLEEVES: CLASS 200 PVC

POINT-OF-CONNECTION ASSEMBLY

MAINLINE PIPE: CLASS 200 PVC
1 1/2-INCH TO MATCH EXISTING MAINLINE SIZE

------ LATERAL PIPE TO SHRUB EMITTERS: CLASS 315 PVC 3/4-INCH SIZE UNLESS OTHERWISE INDICATED

— — LATERAL PIPE TO TREE EMITTERS: CLASS 315 PVC 3/4-INCH SIZE UNLESS OTHERWISE INDICATED

— UNCONNECTED PIPE CROSSING

REMOTE CONTROL DRIP VALVE ASSEMBLY: **HUNTER ICZ-101 W/ ICD-100 DECODER** 

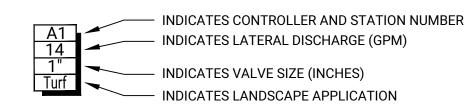
QUICK COUPLING VALVE ASSEMBLY: HUNTER HQ-44LRC

ISOLATION GATE VALVE ASSEMBLY: MATCO 514

M WATER METER AND CURB STOP ASSEMBLY: **EXISTING** 

♦ FLUSH CAP ASSEMBLY WITH DRIP INDICATOR

(A) EXISTING IRRIGATION CONTROLLER HUNTER ICC-99D



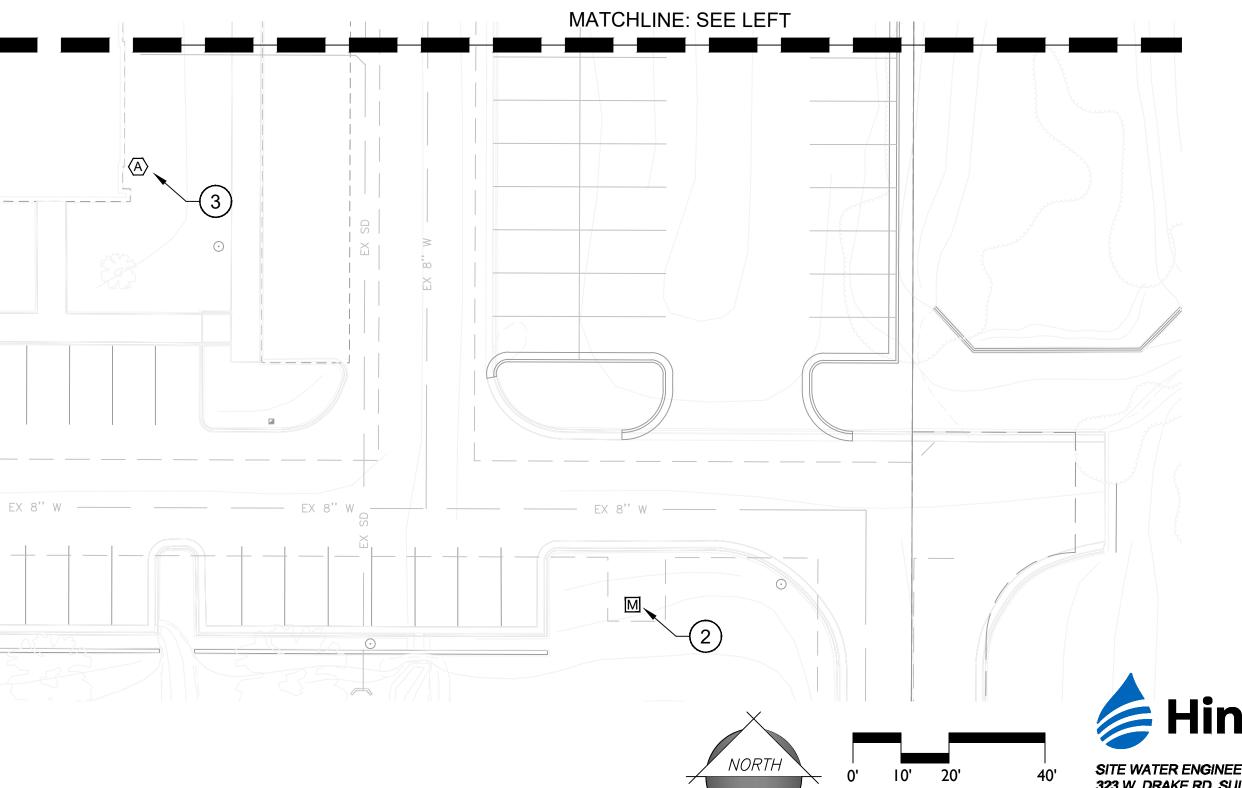
#### **CONSTRUCTION NOTES**

THE IRRIGATION SYSTEM POINT-OF-CONNECTION (POC) SHALL BE TO THE EXISTING IRRIGATION MAINLINE AT THE APPROXIMATE LOCATION SHOWN. VERIFY EXACT LOCATION OF POC ON SITE WITH OWNER'S REPRESENTATIVE.

2 EXISTING IRRIGATION WATER METER

SCALE: I" = 20'-0"

(3) EXISTING IRRIGATION CONTROLLER



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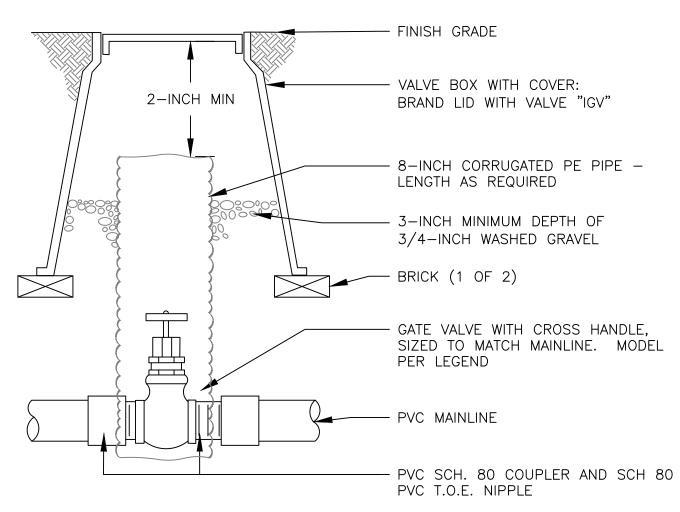
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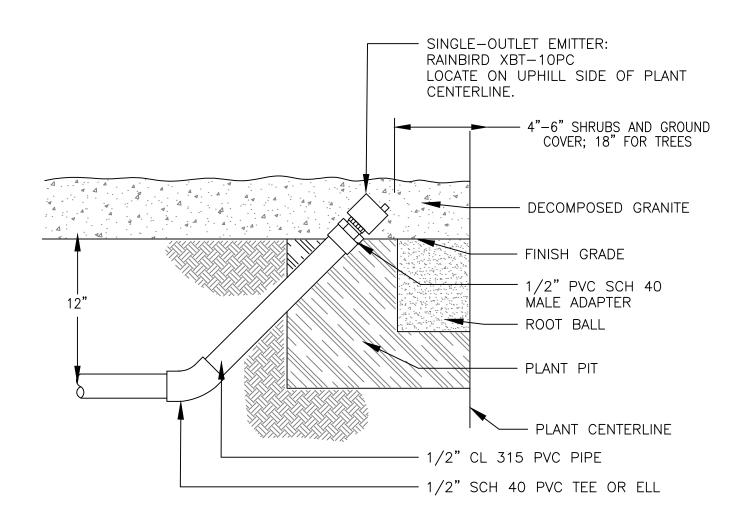
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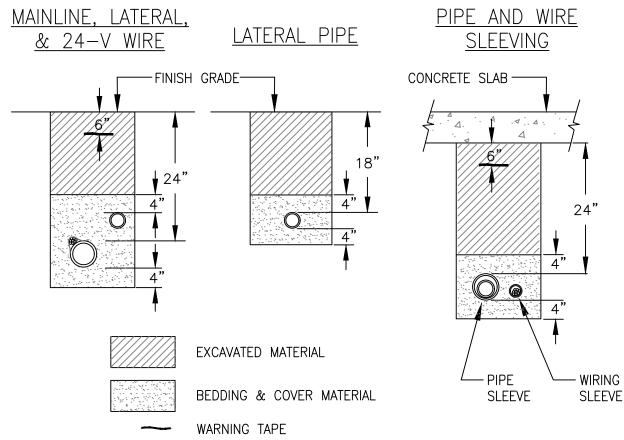
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.

#### ISOLATION GATE VALVE ASSEMBLY I.5-INCH MAINLINE AND SMALLER



1. 90 DEGREE ELL MAY BE USED IN LIEU OF 45 DEGREE IF PLANTER WIDTH IS LESS THAN SHOWN.

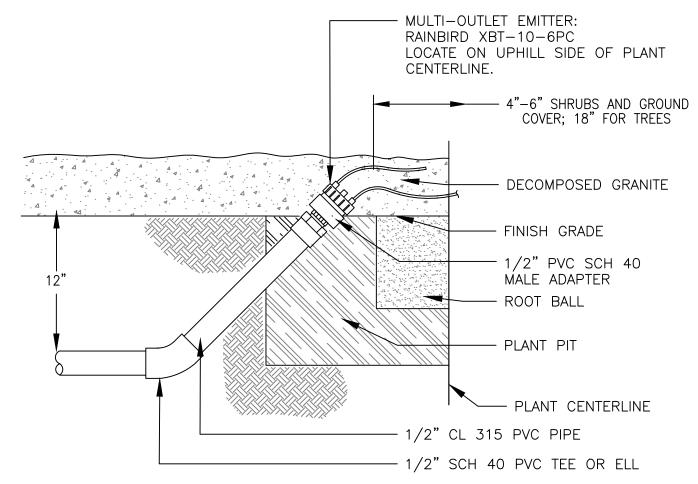
SINGLE OUTLET DRIP EMITTER ASSEMBLY FOR SHRUBS



1. SLEEVE ALL PIPE AND WIRE SEPARATELY. 2. ALL PIPE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS."SNAKE" UNSLEEVED PLASTIC PIPE IN TRENCH. PROVIDE A MINIMUM OF 2" CLEARANCE TO SIDE OF TRENCH

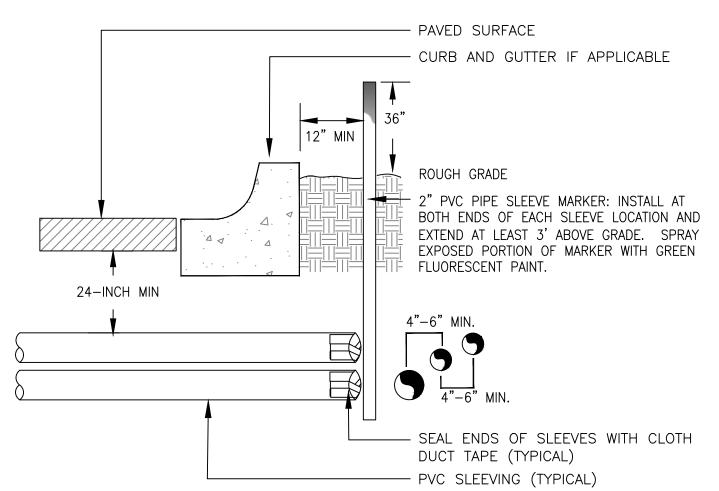
3. ALL 120-V WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS. TAPE AND BUNDLE 24-V WIRE EVERY 10' AND PROVIDE LOOSE 20" LOOP AT ALL CHANGES OF DIRECTION OVER 30 DEGREES.

### TYPICAL TRENCHING



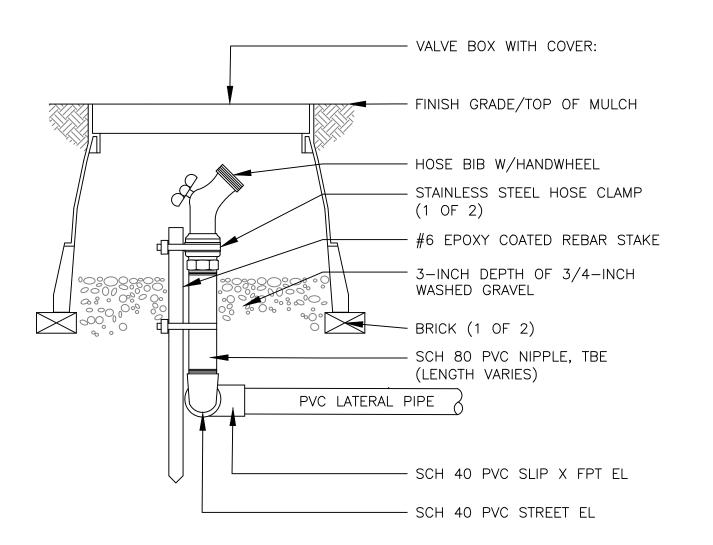
1. EMITTER TUBING EMISSION POINTS SHALL BE EQUALLY SPACED AND LOCATED TO DIRECT WATER FLOW TO PLANT ROOTBALL. 2. AT LEAST ONE EMITTER TUBE TO BE LOCATED WITHIN 4 INCHES OF PLANT CENTERLINE. 3. FOUR HOLES OPEN INITIALLY.

### MULTI-OUTLET DRIP EMITTER ASSEMBLY FOR TREES



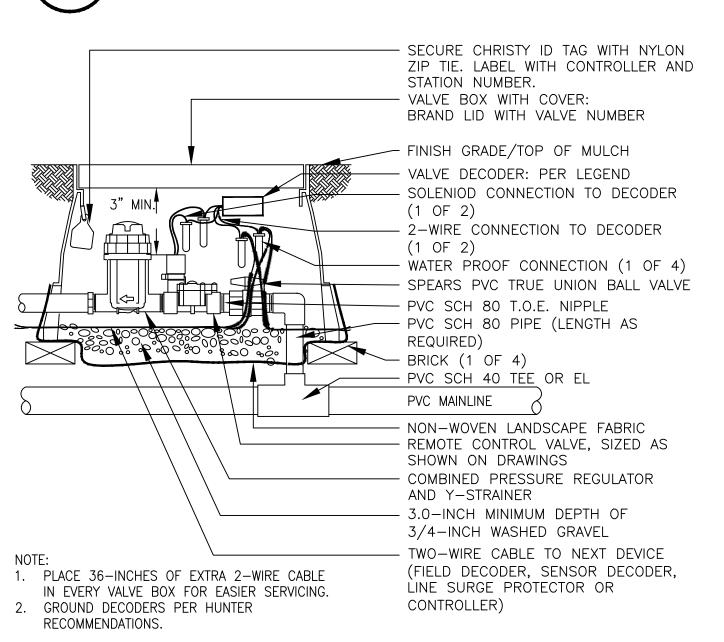
1) ALL SLEEVING TO BE CLASS 200 BE PVC, SIZED AS NOTED. 2) INSTALL SLEEVES IN SIDE-BY-SIDE CONFIGURATION WHERE MULTIPLE SLEEVES ARE TO BE INSTALLED. SPACE SLEEVES 4" TO 6" APART. DO NOT STACK SLEEVES VERTICALLY.

### TYPICAL SLEEVING

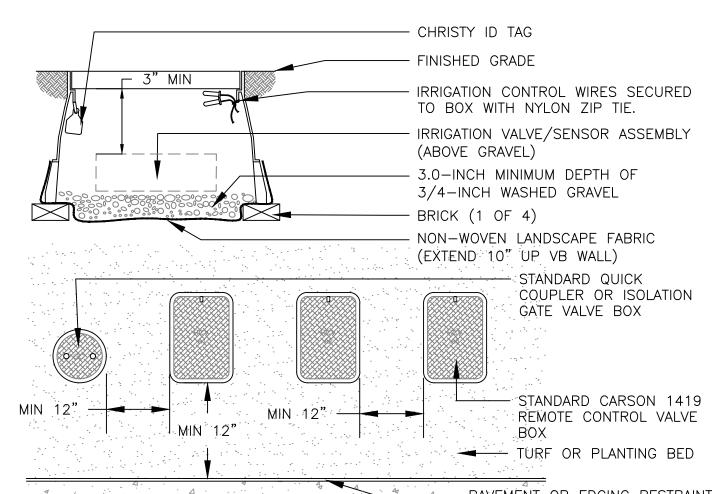


1. TAN COLORED BOX LIDS SHALL BE UTILIZED IN DG MULCHED AREAS. GREEN LIDS SHALL BE UTILIZED IN TURF AREAS.

### DRIP FLUSH CAP **ASSEMBLY**







PAVEMENT OR EDGING RESTRAINT 1. INSTALL ONLY ONE RCV TO VALVE BOX. LOCATE AT LEAST 12-INCHES FROM AND ALIGN WITH NEARBY WALLS OR EDGES OF PAVED AREAS. GROUP RCV

ASSEMBLIES TOGETHER WHERE PRACTICAL 4. GROUP RCV ASSEMBLIES TOGETHER WHERE PRACTICAL, BUT AVOID GROUPING MORE THAN THREE (3) STANDARD VALVE BOXES TOGETHER IN A SERIES. ARRANGE GROUPED VALVE BOXES IN RECTANGULAR PATTERNS.

#### TYPICAL VALVE BOX INSTALLATION

| PLANT<br>TYPE   | PLANT<br>SIZE | EMITTERS<br>PER PLANT | GPH PER<br>POUTLET | NUMBER<br>OF<br>OUTLETS | TOTAL GPH<br>PER PLANT |
|-----------------|---------------|-----------------------|--------------------|-------------------------|------------------------|
| TREES           | 15 GAL        | 1 MULTI               | 2 GPH              | 3                       | 6 GPH                  |
| TREES           | 24" BOX       | 1 MULTI               | 2 GPH              | 4                       | 8 GPH                  |
| TREES           | 36" BOX       | 2 MULTI               | 2 GPH              | 4                       | 16 GPH                 |
| TREES           | 42" BOX       | 2 MULTI               | 2 GPH              | 5                       | 20 GPH                 |
|                 |               |                       |                    |                         |                        |
| SHRUBS          | 1 GAL         | 1 SINGLE              | 1 GPH              | 1                       | 1 GPH                  |
| SHRUBS          | 5 GAL         | 2 SINGLE              | 1 GPH              | 1                       | 2 GPH                  |
|                 |               |                       |                    |                         |                        |
| GROUND<br>COVER | 1 GAL         | 1 SINGLE              | 1 GPH              | 1                       | 1 GPH                  |
|                 |               |                       |                    |                         |                        |
| CACTI           |               | 1 SINGLE              | 0.6 GPH            | 1                       | 0.6 GPH                |

NOTE: ALL EMISSION POINTS TO BE LOCATED ON THE UPHILL SIDE OF PLANT





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