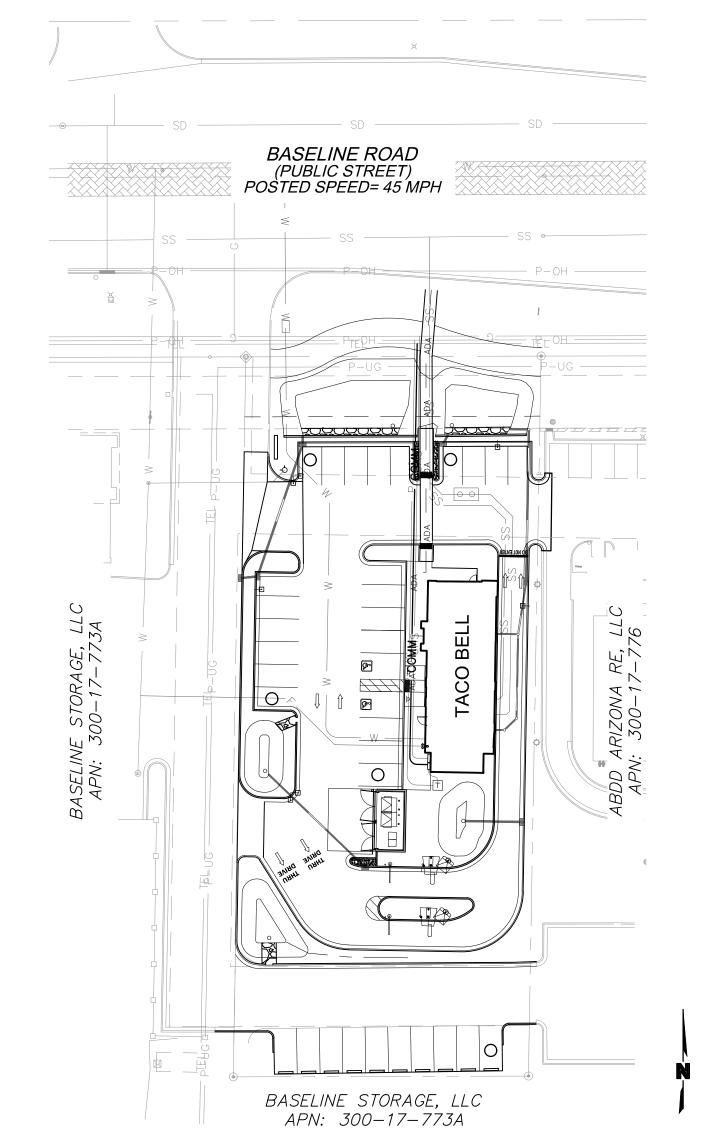
#### CITY OF PHOENIX GENERAL LANDSCAPE NOTES:

- 1. THE CITY OF PHOENIX GENERAL NOTES ARE THE ONLY NOTES APPROVED ON THIS PLAN. ADDITIONAL GENERAL NOTES GENERATED BY THE SEALANT AND PLACED ON THE PLANS ARE NOT APPROVED AND ARE NOTED AS SUCH ON THE PLANS.
- 2. THE DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY OR OTHER DESIGN ISSUES.
- 3. CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS AND THE LATEST CITY OF PHOENIX SUPPLEMENT TO THE MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS.
- 4. FINAL BUILDING PERMIT CANNOT BE OBTAINED UNTIL BONDING OR APPROVED ASSURANCES ARE PROVIDED FOR THE LANDSCAPING WITHIN THE RIGHT-OF-WAY.
- 5. NO PLANT SUBSTITUTIONS, TYPE, SIZE OR QUANTITY OR DEVIATION FROM THE APPROVED LANDSCAPE OR IRRIGATION PLANS ARE ALLOWED WITHOUT PRIOR APPROVAL FROM THE CITY OF PHOENIX LANDSCAPE SECTION AT 602-262-7811.
- 6. ALL PLANT MATERIAL AND SPECIFICATIONS SHALL CONFORM TO THE ARIZONA NURSERYMAN ASSOCIATION STANDARDS.
- 7. ALL RIGHT—OF—WAY AND CITY REQUIRED (PERIMETER, RETENTION AND PARKING) PLANT MATERIAL SHALL BE IN COMPLIANCE WITH THE DEPARTMENT OF WATER RESOURCES LOW WATER USE PLANT LIST.
- 8. CONTACT THE PARKS & RECREATION DEPARTMENT FORESTRY SUPERVISOR AT 602-262-6862 TO VERIFY OWNERSHIP OF ANY PLANT MATERIAL IN THE PUBLIC R.O.W. PRIOR TO ANY PLANT RELOCATIONS OR REMOVALS. OBTAIN WRITTEN PERMISSION FROM THE PARKS AND RECREATION DEPARTMENT PRIOR TO THE RELOCATION OR REMOVAL OF ANY CITY PLANT MATERIAL OR EQUIPMENT.
- 9. CONTACT THE STREET TRANSPORTATION DEPARTMENT HORTICULTURIST AT 602-262-6284 PRIOR TO THE RE-LOCATION OR REMOVAL OF EXISTING PLANT MATERIAL IN THE A.D.O.T. R.O.W. THAT IS ON THE CITY'S SIDE OF THE SOUND WALL. OBTAIN WRITTEN PERMISSION FROM THE STREET TRANSPORTATION DEPARTMENT PRIOR TO THE RE-LOCATION OR REMOVAL OF ANY PLANT MATERIAL OR EQUIPMENT.
- 10. ALL EXISTING TREES AND SHRUBS IN THE RIGHT-OF-WAY DESIGNATED TO REMAIN BUT ARE DAMAGED OR DESTROYED WILL BE REPLACED IN LIKE SIZE AND KIND BY THE CONTRACTOR.
- 11. THE PROPOSED IRRIGATION SYSTEM SHALL INCLUDE ANY MODIFICATION REQUIRED TO TIE THE EXISTING CITY OF PHOENIX IRRIGATION SYSTEM IN RIGHT-OF-WAY TO THE PROPOSED SYSTEM. ALL THROUGH IRRIGATION SYSTEMS IN THE RIGHT-OF-WAY SHALL BE MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CAPPING AND/OR ABANDONING EXISTING IRRIGATION TO PLANT MATERIALS AND PROVIDING NEW IRRIGATION TO THE EXISTING PLANT MATERIAL IN RIGHT-OF-WAY PER THE APPROVED PLAN.
- 12. WALLS ARE NOT APPROVED AS PART OF THE LANDSCAPE PLAN BUT ARE SHOWN FOR REFERENCE ONLY.
- 13. TREES ADJACENT TO PEDESTRIAN WALKWAYS SHOULD HAVE A MINIMUM CANOPY CLEARANCE OF SIX FEET EIGHT INCHES (6'-8")PER SECTION 507 TAB A.II.A.3.1.10 OF THE CITY OF PHOENIX ZONING ORDINANCE.
- 14. P.V.C. PIPE LATERALS ARE REQUIRED. A MAXIMUM OF FIVE FEET (5') OF POLY TUBING OFF THE P.V.C. PIPE LATERAL IS ALLOWED. NO POLY TUBING LATERALS ARE ALLOWED.
- 15. PLANT QUANTITIES AND CALIPER SIZES, PER THE SPECIFIC ZONING REQUIREMENTS FOR THIS SITE. PROVIDED IN THE LEGEND ON THE APPROVED PLANS ARE REQUIRED TO BE INSTALLED IN THE FIELD. ANY DEVIATIONS FROM THE PLAN WILL REQUIRE A REVISION TO THE APPROVED PLAN.
- 15.1. NOTE: MINIMUM CALIPER SIZE IS A ZONING REQUIREMENT. IF THE MINIMUM CALIPER CANNOT BE MET AT BOX SIZE THAT IS SPECIFIED, THEN THE BOX SIZE MUST BE INCREASED TO MEET CALIPER REQUIREMENTS.
- 16. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION EXTENSION AND REINSTATEMENT OF LANDSCAPE PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTIONS 105.3 FOR BUILDING PERMITS.

# LANDSCAPE PLANS FOR TACO BELL

# 1919 W. BASELINE ROAD

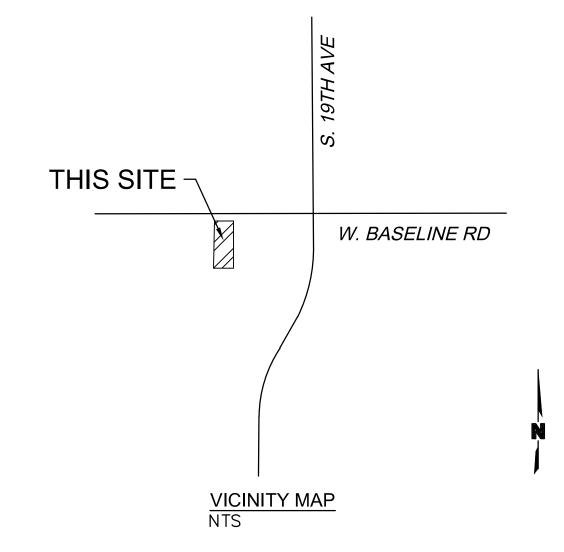
LOT 1 OF THE FINAL PLAT OF "QUIKTRIP" #497, BOOK 624, PAGE 46, RECORDS OF MARICOPA COUNTY, ARIZONA. BEING SITUATED WITHIN THE SOUTHEAST QUARTER OF SECTION 15. TOWNSHIP 4 NORTH. RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



PLAN VIEW/KEY MAP SCALE : 1" = 40"

#### LANDSCAPE REQUIREMENTS: ORDINANCE 622.E.4.e FOR ZONING C-1 REQUIRED PROVIDED STREETSCAPE N/A N/A OVERHEAD POWER - NO TREES PARKING LOT AREA LANDSAPE MIN 10% OF SURF AREA (4,925 SF) 493 SF 918 SF TREES: 60% MIN 2" CAL / 40% MIN 1" CAL 6/4 6/6 30 SHRUBS: MIN 5 PER TREE 41 PERIM PROP LINES NOT ADJACENT TO ST LOT LINES IN PARKING ADJACENT TO A BUILDING (ST FRONTAGE ONLY) 27 LF MIN 25% EXTERIOR WALL PLANTED OR ARCADE (108 LF) 108 LF TREES 20' OC 25 SHRUBS: MIN 5 PER TREE

	LANDSCAPE APPRO	V/AI
<u>×</u>		V / \L
PHOENIX		
$  \Box  $	LANDOGADE ADOLUTEGE OLEV OF BUILDENIN	DATE
」エ	LANDSCAPE ARCHITECT, CITY OF PHOENIX	DATE
	ESTIMATED RIGHT OF WAY COST:	\$0 (EXIST)
╵╙╴╵	ESTIMATED S.F. OF LANDSCAPE IN RIGHT OF WAY:	2,844 SF (EXIST)
OF		
	MAINTENANCE BY:	CITY ( ) / OWNER (X)
	TOTAL ACREAGE (OR PORTIONS) OF LANDSCAPED AREAS:	1.13 AC (49,161 SF)
	TOTAL COLLADE FOOTA OF OF TURE	0.85
	TOTAL SQUARE FOOTAGE OF TURF:	0 SF
	DATE OF PRELIMINARY SITE PLAN APPROVAL:	XX/XX/2022



# **DESIGN TEAM CONTACTS**

OWNER GEN2A2 PROPERTIES LLC 3845 STOCKTON HILL RD

KINGMAN, AZ 86409 PH: (928-263-0861 CONTACT: JASON GRAHAM EMAIL: JASONGRAHAM@DDOFOODS.COM

#### **ARCHITECT** EXA ARCHITECTS 4544 E CAMP LOWELL DR. TUCSON, AZ 85712 PH: (520) 877-3177 CELL: (520) 440-4941 FAX: (520) 457-5830 CONTACT: JOSE CEJA

CIVIL/LANDSCAPE ARCHITECT/SURVEY OLSSON, INC.

EMAIL: JOSE@EXAARCHITECTS.COM

7878 NORTH 16TH ST. SUITE 105 PHOENIX, ARIZONA 85020 PH: (602) 748-1000 FAX: (602) 748-1001 CONTACT ÉNG: ROD HANSON, PE EMAIL: RHANSON@OLSSON.COM CONTACT LSC: AMY SCHWENNER, PLA EMAIL: ASCHWENNER@OLSSON.COM CONTACT SVY: BILL ZIEGLER, PLS EMAIL: BZIEGLER@OLSSON.COM

	SHEET INDEX	
PAGE	DESCRIPTION	SHEET
1	LANDSCAPE COVER	L001
2	LANDSCAPE PLAN	L101
3	IRRIGATION PLAN	L201
4-5	DETAILS	L301-302
6-9	SPECIFICATIONS	L401-404

919 021-08522 06.07.2022

L001

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Arizona Blue Stake, Inc.

oial 8-1-1 or 1-800-STAKE-IT (782-5

In Maricopa County: (602) 263-1100

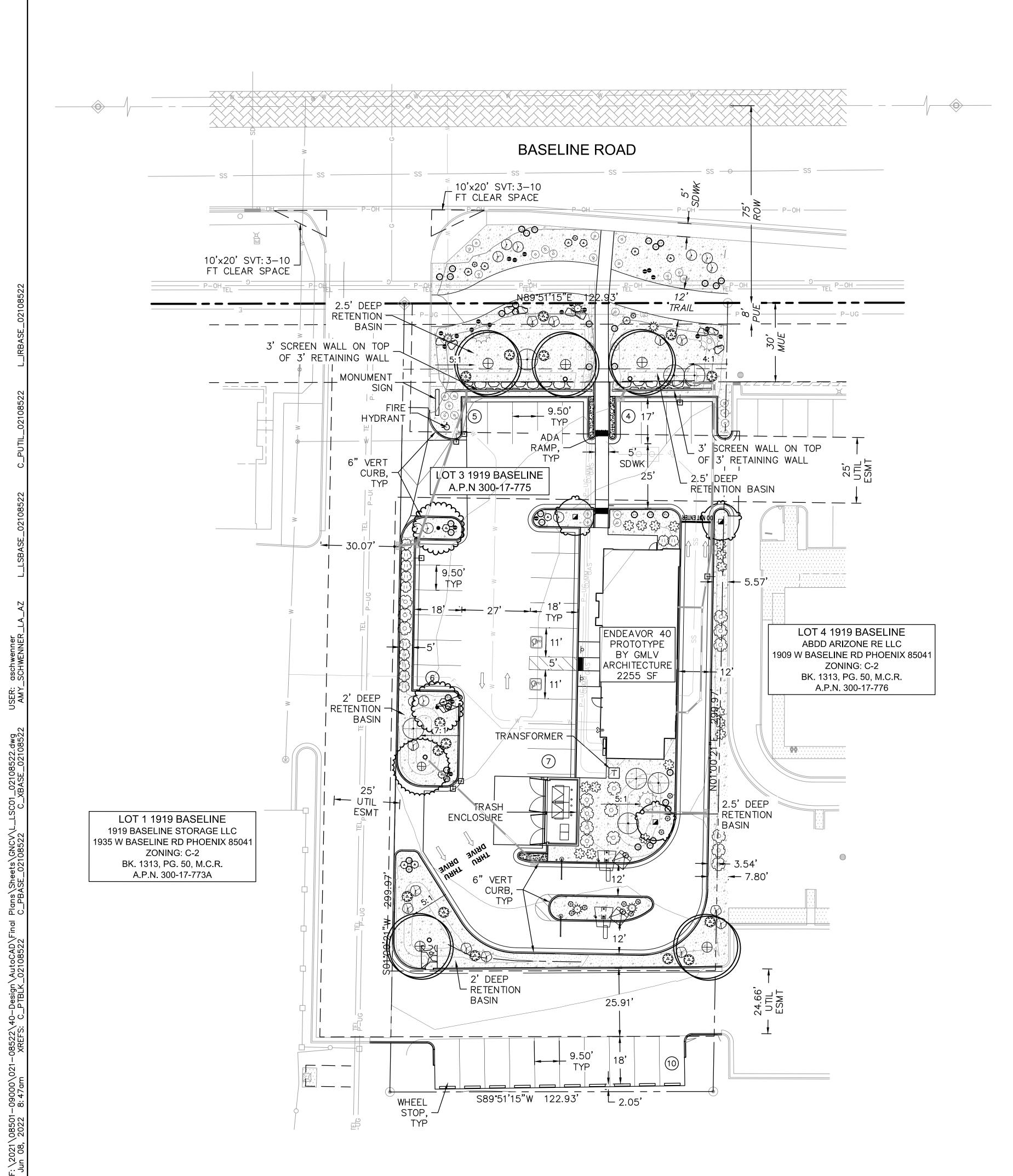
SCHWENNER

ZONING: <u>C-2</u> REZONING: <u>Z-101-76</u> ZA CASES: 34419/49820/10017

LSPL:

LSIS:

PAPP #: 2201538 KIVA #: 17-287A3 ' SDEV #:<u>1700061</u> CCPR Q.S. #: Q01-24



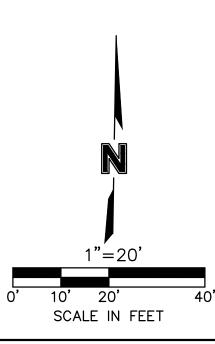
#### **OLSSON LANDSCAPE NOTES**

- 1. THE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND THE MOST CURRENT EDITION(S) OF THE COUNTY STANDARDS AND THE CITY ADDENDUMS TO THOSE STANDARDS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF THESE STANDARDS, SPECIFICATIONS AND DRAWINGS, AS WELL AS ALL OTHER STANDARDS AND SPECIFICATIONS WHICH MAY BE NECESSARY TO COMPLETELY AND ACCURATELY INTERPRET THESE PLANS.
- 2. ALL QUANTITIES SHOWN ARE APPROXIMATE AND ARE FURNISHED SOLELY FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVERRIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES.
- 3. SITE GRADING NECESSITATED BY THE WORK AS IT PROGRESSES AND NOT SPECIFICALLY CALLED OUT ON THE PLANS WILL BE CONSIDERED INCIDENTAL WORK.
- 4. ALL LANDSCAPE AREAS SHALL BE UNIFORMLY GRADED SO THAT FINISHED SURFACES CONFORM TO THE TYPICAL SECTIONS AND PROPOSED GRADES SHOWN. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED AND FREE FROM IRREGULAR SURFACE DRAINAGE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE FINISH GRADE AND SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS.
- 5. PRIOR TO COMMENCEMENT OF ANY WORK, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY THE PRESENT LOCATION OF ANY AND ALL EXISTING OVERHEAD AND/OR UNDERGROUND UTILITIES THAT MAY INTERFERE WITH THIS CONSTRUCTION, WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE CONSTRUCTION PLANS FOR THIS PROJECT AND TO ADEQUATELY PROTECT AND MAINTAIN ANY SUCH UTILITIES. HAND EXCAVATE, AS REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES CAUSED AS A RESULT OF HIS WORK.
- 6. EXCAVATE PITS, AS SHOWN ON DRAWINGS AND SCHEDULES. LOOSEN HARD SUBSOIL IN BOTTOM OF PIT. TEST DRAINAGE OF TREE, SHRUB AND PLANT PITS BY FILLING WITH WATER TWICE IN SUCCESSION. CONDITIONS PERMITTING THE RETENTION OF WATER IN PLANTING PITS FOR MORE THAN TWENTY-FOUR (24) HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. SUBMIT IN WRITING A PROPOSAL FOR THE CORRECTION TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE PROCEEDING WITH WORK.
- 7. IF UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF TREES, SHRUBS, OR PLANTS NOTIFY LANDSCAPE ARCHITECT. NEW LOCATIONS MAY BE SELECTED BY LANDSCAPE ARCHITECT OR INSTRUCTIONS MAY BE ISSUED TO DIRECT REMOVAL OF OBSTRUCTION. PROCEED WITH WORK ONLY AFTER APPROVAL OF LANDSCAPE ARCHITECT.
- 8. ALL VALVES, CLEAN-OUTS, METERS, AND BOXES (INCLUDING IRRIGATION) SHALL BE ADJUSTED TO FINISH GRADE AND SHALL BE INCIDENTAL TO CONSTRUCTION WORK.
- 9. DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST THREE SOURCES TO LANDSCAPE ARCHITECT WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.

## PLANT SCHEDULE

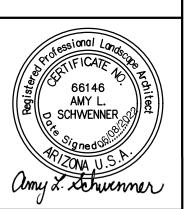
PLANT SCHEL	PULE			
TREES	BOTANICAL NAME COMMON NAME	CONT CAL/HT	QTY	REMARKS
<b>+</b>	PARKINSONIA X 'DESERT MUSEUM' DESERT MUSEUM PALO VERDE	36" BOX 1.5" CAL.	1	MULTI-TRUNK
	PROSOPIS GLANDULOSA 'THORNLESS AZT' THORNLESS HONEY MESQUITE	24" BOX 1" CAL.	5	MULTI-TRUNK
£. 3	QUERCUS VIRGINIANA 'HERITAGE' HERITAGE LIVE OAK	36" BOX 2" CAL.	2	SINGLE TRUNK
	SOPHORA SECUNDIFLORA TEXAS MOUNTAIN LAUREL	36" BOX 1.25" CAL.	3	MULTI-TRUNK
SHRUBS	CAESALPINIA GILLIESEII YELLOW BIRD OF PARADISE	#5	7	CAN FULL
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	CALLIANDRA ERIOPHYLLA 'MARICOPA RED' FAIRY DUSTER	#5	15	CAN FULL
	EREMOPHILA MACULATA 'VALENTINE' VALENTINE BUSH	#5	11	CAN FULL
( <u>`</u> )	LEUCOPHYLLUM REVOLUTUM 'HOUDINI' HOUDINI SAGE	#5	14	CAN FULL
	RUELLIA PENNINSULARIS DESERT RUELLIA	<b>#</b> 5	12	CAN FULL
£3	RUSSELIA EQUISETIFORMIS CORAL FOUNTAIN	<b>#</b> 5	18	CAN FULL
(1)	SIMMONDSIA CHINENSIS 'VISTA' DWARF JOJOBA	<b>#</b> 5	12	CAN FULL
ACCENTS	AGAVE DESMETIANA SMOOTH AGAVE	<b>#</b> 5	5	CAN FULL
	DASYLIRION LONGISSIMUM TOOTHLESS DESERT SPOON	<b>#</b> 5	3	CAN FULL
↔	HESPERALOE PARVIFLORA 'BRAKELIGHTS' BRAKELIGHTS RED YUCCA	<b>#</b> 5	12	CAN FULL
<u> </u>	HESPERALOE PARVIFLORA YELLOW YELLOW HESPERALOE	<b>#</b> 5	13	CAN FULL
GROUND COVERS ⊙	LANTANA X 'NEW GOLD' NEW GOLD LANTANA	#1	30	CAN FULL
0	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	#1	38	CAN FULL
•	TETRANEURIS ACAULIS ANGELITA DAISY	#1	22	CAN FULL
INERTS	DECOMPOSED GRANITE MULCH 1/2" SCREENED / EXPRESS CARMEL		11,666 SF	2" DEPTH MIN
				İ

- THERE ARE OVERHEAD LINES ON THIS SITE
- NO EXISTING TRANSFORMERS
- 3. NO EXISTING NATIVE SPECIES; NO INVENTORY/SALVAGE PLAN REQUIRED



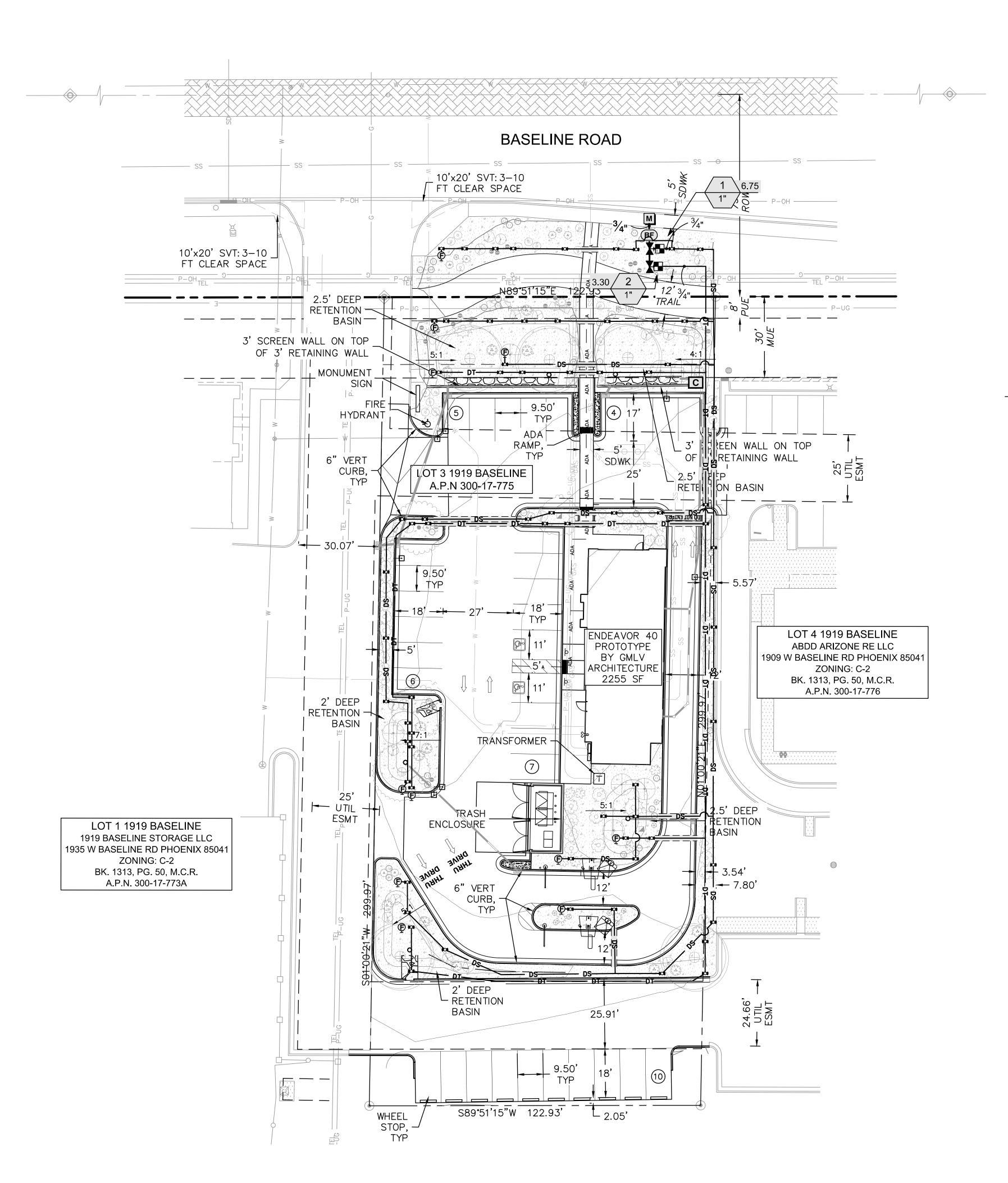
ZONING: <u>C-2</u> REZONING: <u>Z-101-76</u> ZA CASES: <u>34419/4982</u>0/10017 LSPL: LSIS:

PAPP #: 2201538 KIVA #: 17-287A3 SDEV #: 1700061 CCPR #: Q01-24



ROVEMENT PLANS		REV.	DATE	REVISIONS DESCRIPTION	Call at befo Arizo Dial 8-1-1 In Mari	(In
SCAPE PLAN					na B	y
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	2022			REVISIONS	348)	,

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### **OLSSON IRRIGATION NOTES**

- 1. THE SYSTEM DESIGN ASSUMES A MINIMUM AVAILABLE STATIC PRESSURE FOR THE IRRIGATION SYSTEM OF 75 PSI AT THE POINT OF CONNECTION.
- 2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION. ALL LANDSCAPE AND IRRIGATION MATERIALS AND INSTALLATION SHALL COMPLY WITH THE
- 3. COORDINATE LOCATION AND MARKING ("BLUE STAKE") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- 4. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
  - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION COMPONENTS WITHIN THE PROPERTY BOUNDARY AND IN LANDSCAPED AREAS WHENEVER POSSIBLE. B. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT PERMITTED.
- 5. ALL MATERIALS AND WORKMANSHIP SHALL BE TRUE TO TYPE, FORM, FINISH AND OF THE HIGHEST STANDARDS OF THE TRADE. DAMAGED OR INFERIOR MATERIALS SHALL BE REMOVED FROM THE SITE WITHOUT DELAY. CONTRACTOR SHALL FURNISH AND INSTALL MATERIAL AND EQUIPMENT PERTAINING TO THE IRRIGATION SYSTEM HEREIN SPECIFIED OR SHOWN ON THE DRAWINGS. THIS SHALL INCLUDE ALL ITEMS OF A MINOR NATURE NECESSARY TO COMPLETE INSTALLATION.
- 6. IF THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS DO NOT THOROUGHLY DESCRIBE THE METHOD OR TECHNIQUES TO BE USED, THEN THE CONTRACTOR SHALL INSTALL AS PER MANUFACTURERS SPECIFICATIONS. IF A CONTRADICTION OCCURS, NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY.
- IRRIGATION CONTRACTOR TO CAP ALL FLUSH CAP ENDS HAND TIGHT BEFORE BACKFILL.
- 8. MANUAL GATE VALVES SHALL BE PORTED TO PROVIDE FOR FULL FLOW. GATE VALVES SHALL BE THE SAME SIZE AS THE MAINLINE AND LABELED PER SPECIFICATIONS.
- 9. INSTALL PRESSURE REGULATING MODULE FOR ALL DRIP VALVE ASSEMBLIES. SET DISCHARGE PRESSURE TO 40 PSI UNLESS NOTED.
- 10. EXTEND ALL SLEEVES 18 INCHES INTO EACH PLANTING AND TURF AREA.
- 11. COORDINATE AND INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
- 12. IRRIGATION CONTRACTOR TO UTILIZE CONTROLLERS AS PER IRRIGATION SCHEDULE. CONFIRM FINAL PLACEMENT WITH ON-SITE OWNER'S REPRESENTATIVE.
- 13. PROVIDE TOOLS/COMPONENTS TO THE OWNER'S REPRESENTATIVE PER SPECIFICATIONS.

# IDDICATION COLIEDIUS

IRRIGATION SCH	EDULE	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	IRRITROL 2500DK-1-LF ELECTRIC DRIP ZONE VALVE KIT: 1" 2500 VALVE, FILTER, LOW FLOW REGULATOR & FITTINGS.	2
<b>P</b>	TORO T-FCH-H-FIPT FLUSH VALVE, PLUMBED TO FLUSH MANIFOLD AT LOW POINT.	11
-0- tot -0- 0.6 1.0 2.0	BOWSMITH ML200 SERIES MULTI OULTET EMITTER, 1/2" FPT INLET BLUE=1.0GPH	69
	NIBCO T-113 CLASS 125 BRONZE GATE SHUT OFF VALVE SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION.	2
BF	FEBCO 825Y 3/4" REDUCED PRESSURE BACKFLOW PREVENTER	1
C	IRRITROL TC-06-EX-R HYBRID CONTROLLER, 6- STATION, OUTDOOR MODEL, CLIMATE LOGIC COMPATIBLE, AND REMOTE-READY.	1
М	WATER METER 3/4"	(PER CIVIL)
DS	SHRUB DRIPLINE LATERAL	1,062 L.F.
DT	TREE DRIPLINE LATERAL	757.5 L.F.
	IRRIGATION MAINLINE: PVC SCHEDULE 40	25.0 L.F.
	PIPE SLEEVE: EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	226.3 L.F.

Valve Callout

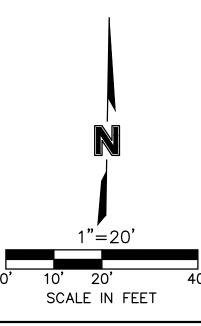
— Valve Number

— Valve GPM

- Valve Size

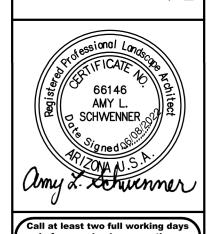
# **CRITICAL ANALYSIS**

Generated:	2022-05-
P.O.C. NUMBER: 01 Water Source Information:	
FLOW AVAILABLE Water Meter Size: Flow Available	3/4" 22.5 GPM
PRESSURE AVAILABLE Static Pressure at POC: Elevation Change: Service Line Size: Length of Service Line: Pressure Available:	75.00 PSI 5.00 ft 2" 20 ft 73.00 psi
DESIGN ANALYSIS Maximum Station Flow: <u>Flow Available at POC:</u> Residual Flow Available:	6.75 GPM 22.5 GPM 15.75 GPM
Critical Station: Design Pressure: Friction Loss: Fittings Loss: Elevation Loss: Loss through Valve: Pressure Req. at Critical Station: Loss for Fittings: Loss for Main Line: Loss for POC to Valve Elevation: Loss for Backflow: Loss for Water Meter: Critical Station Pressure at POC: Pressure Available: Residual Pressure Available:	1 30 PSI 1.63 PSI 0.16 PSI 0 PSI 3 PSI 34.8 PSI 0.06 PSI 0.61 PSI 0 PSI 12.19 PSI 0.84 PSI 48.5 PSI 73 PSI 24.5 PSI



ZONING: <u>C-2</u> REZONING: <u>Z-101-76</u> ZA CASES: <u>34419/4982</u>0/10017 LSPL: LSIS:

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of

' ID RUBBER HOSE LOOPED WITH 12 GUAGE DOUBLE STRAND GALVANIZED AND ANNEALED WIRE 2" DIA LODGE POLE PINE STAKES. 8 FT HEIGHT MIN. DRIVE AT ANGLE 3 FT MIN BELOW FINISH GRADE -FINISH GRADE OF MULCH OR TURF -SOIL SUBGRADE -WATER BASIN 6 FT DIA X 2 IN DEPTH. SMOOTH, GENTLE TRANSITION OF BASIN EDGE - AGRIFORM 21 GRAM TABLETS AS SPECIFIED, 6 IN BELOW FINISH GRADE -PLANTING PIT DEPTH NOT TO EXCEED SIZE OF ROOTBALL. SCARIFY SIDES OF PIT AND FILL WITH PREPARED BACKFILL AS SPECIFIED -NATIVE SOIL

1. MULTI-TRUNKED TREES TO HAVE ALL MAJOR LEADERS STAKED OR SUPPORTED. ALL WIRE TO WRAP A MIN OF 5 TIMES AROUND ITSELF. 2. 15 GAL AND 24" BOX (SMALL CALIPER) SPECIMEN TO HAVE DOUBLE TIES BETWEEN STAKES. 36" BOX AND LARGER TO HAVE SINGLE TIE BETWEEN STAKES.

— TREE TRUNK IRRIGATION SAUCER -12 GAUGE GALVANIZED AND GREATER THAN ANNEALED GUYWIRE OR EQUAL TO PLANT DIAMETER · - 3" ID RUBBER HOSE -IRRIGATION RISER ASSEMBLY OR EMITTER TUBING PER PLAN -2 IN DIA LODGEPOLE STAKE -FINISH GRADE OF MULCH. APPLY PRE-EMERGENT WEED SUPPRESSANT PER SPECIFICATIONS -20-10-5 PLANT FERTILIZER TABLETS TREE TRUNK PLACED MAX 6 IN DEEP. (1) TABLET EACH PER 1 GAL SHRUB; (2) TABLETS PER 5 GAL SHRUB —12 GAUGE GALVANIZED AND ANNEALED GUYWIRE -ROOT BALL -PREPARED SOIL AS SPECIFIED -NATIVE SOIL — 2 IN DIA LODGEPOLE STAKE " ID RUBBER HOSE

1. SCARIFY PERIMETER OF PLANT PITS PRIOR TO BACKFILL 2. TEST PLANT PITS FOR DRAINAGE: CONSTRUCT AN EXAMPLE IRRIGATION SAUCER FOR ENGINEER'S APPROVAL PRIOR TO PLACING MULCH

SINGLE TRUNK TREE PLANTING

CM-AZ-2021-02108522-01

MULTI-TRUNK TREE PLANTING

CM-AZ-2021-02108522-05

TREE STAKING - PLAN VIEW

CM-AZ-2021-02108522-06

SHRUB PLANTING

CM-AZ-2021-02108522-07

-3 IN MOUND FOR POSITIVE DRAINAGE AWAY FROM PLANT -FINISH GRADE OF MULCH. APPLY PRE-EMERGENT WEED SUPPRESSANT PER SPECIFICATIONS -SUCCULENT BACKFILL MIX AS SPECIFIED 75% OF ROOT BALL MUST BE FREE OF DAMAGE -NATIVE SOIL

NOTES:

1. THE ROOT SYSTEM SHALL BE SEALED BEFORE PLANTING BY ALLOWING TIME FOR SELF—SEALING OR APPLICATION OF WETTABLE DUSTING SULFUR

SELF—SEALING OR APPLICATION OF GROUND FOR MORE THAN FIVE DAYS BEFORE THE PROPERTY OF T 2. BARE ROOTS SHALL NOT BE OUT OF GROUND FOR MORE THAN FIVE DAYS BEFORE

3. APPLY NAPTHYL ACETIC ACID, 'BI' OR APPROVED EQUAL ROOTING HORMONE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR TWO WATERINGS IMMEDIATELY AFTER PLANTING

4. PLANTING DEPTH SHALL BE THE SAME AS ORIGINALLY GROWN AND ORIENTED (NORTH SIDE FACING NORTH)

X = SPACING PER PLANTSCHEDULE Y = 0.86X

NOTES:

1. PLANT ALL GROUNDCOVERS ON CENTER AND IN A TRIANGLE PATTERN 2. SIZE OF PLANT MATERIAL SHALL BE AS NOTED ON PLANT SCHEDULE

SIDEWALK, CURB OR RIGHT-OF-WAY -SUBGRADE LEVEL PRIOR TO PLACEMENT OF MULCH OR TURF ELEVATION TO MATCH ADJACENT POINT AT RIGHT-OF-WAY, SIDEWALK OR CURB AS APPLICABLE

NOTE: IRRIGATION SWALE TO BE APPROVED PRIOR TO PLACEMENT OF PLANTS, TURF OR MULCH

CM-AZ-2021-02108522-10

-SIDEWALK, CURB OR EDGING AS APPLICABLE -DEPTH OF MULCH PER PLAN. FINISH GRADE TO BE RAKED SMOOTH, WATERED AND SETTLED AS SPECIFIED - APPLY PRE-EMERGENT HERBICIDE (SURFLAN OR APPROVED EQUAL) PRIOR TO SPREADING AND UPON FINAL RAKING OF MULCH AS PER MANUFACTURER'S RECOMMENDATION -FINE GRADED SUBGRADE WITH ALL EXTRANEOUS MATERIAL LARGER THAN 1 IN REMOVED

1. MULCH TYPE, SIZE AND COLOR AS NOTED IN LANDSCAPE SCHEDULE 2. CONTRACTOR TO SUBMIT MULCH SAMPLE FOR APPROVAL PRIOR TO CONSTRUCTION

**GROUNDCOVER SPACING** 

CM-AZ-2021-02108522-09

**IRRIGATION SWALE** 

**MULCH APPLICATION** 

CM-AZ-2021-02108522-11

ACCENT / SUCCULENT PLANTING

NTS

CM-AZ-2021-02108522-08

CM-AZ-2021-02108522-21

EXCAVATE AND PLACE MIN  $\frac{1}{3}$  OF BOULDER BELOW FINISH GRADE -FINISH GRADE

1. BOULDERS TO BE SURFACE SELECT, NATIVE GRANITE, CLEAN AND UNSCARRED.

2. CONTRACTOR TO SET SAMPLE GROUPINGS OF BOULDERS WITH LANDSCAPE ARCHITECT'S DIRECTION PRIOR TO BEGINNING BOULDER WORK TO DETERMINE AESTHETIC DIRECTION FOR COMPLETION OF WORK.

COLOR AND SIZE TO BE AS INDICATED ON PLANS.

**BOULDER PLACEMENT** 

ZONING: <u>C-2</u> REZONING: <u>Z-101-76</u> ZA CASES: <u>34419/4982</u>0/10017

PAPP #: 2201538 KIVA #: 17-287A SDEV #: 1700061 CCPR

Q.S. #: Q01-24

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> 021-08522 06.07.2022

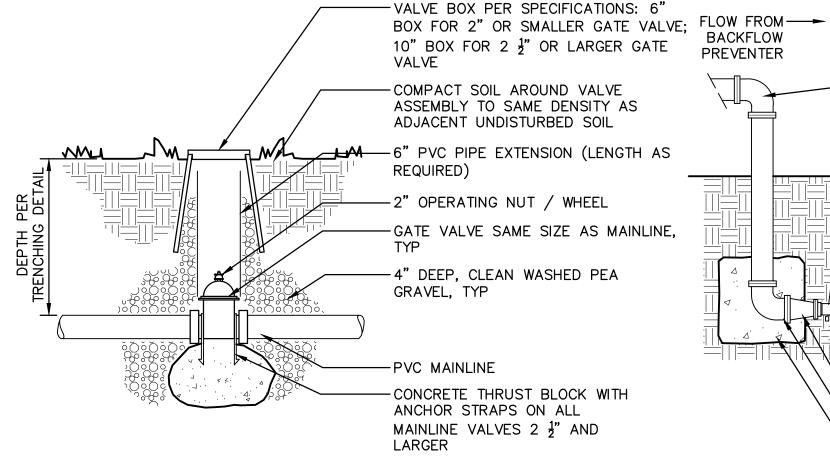
> > of

LSPL: LSIS:

- 1. ALL FITTINGS TO BE SCH 40 PVC SAME SIZE AS MAINLINE ADJUST PRESSURE REGULATOR FOR PROPER FLOW TO EMITTERS. PRESSURE IN LATERAL SHOULD NOT EXCEED 30 PSI
- 3. ALL WIRING TO BE INSTALLED AS PER LOCAL CODE: TAPE AND BUNDLE WIRE EVERY 10'. PROVIDE 2' EXPANSION CELLS AT EACH WIRE CONNECTION IN VALVE BOX

# IRRITROL 700DK DRIP VALVE KIT

CM-AZ-2021-02108522-03



NOTES:
1. PROVIDE VALVE AND SENSOR DECODERS FOR THESE ASSEMBLIES AS RECOMMENED BY CONTROL SYSTEM MANUFACTURER

-MASTER VALVE PER PLAN

— FLANGED REDUCER

-GALVANIZED ELL

MASTER CONTROL VALVE ASSEMBLY

MAINLINE —

MANUAL DRAIN

QUICK COUPLER-

BUILDING -

BUILDING —

VALVE

WATER MAIN-

LINE ISOLATION

GATE VALVE

WATER METER-

LOCATION PER

CIVIL PLANS,

SERVICE LINE

PER CIVIL PLAN

ISOLATION GATE

IF REQUIRED

IF REQUIRED

FLOW SENSOR -

MASTER VALVE -

IF REQUIRED

IF REQUIRED

IRRIGATION-

MAINLINE

-BACKFLOW

PREVENTER

VALVE

ISOLATION GATE

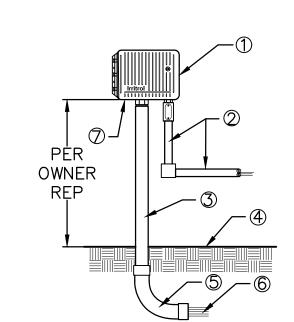
CONTROL VALVE

ASSEMBLY PER

DRIP REMOTE -

— THRUST BLOCK

# GATE / BALL SHUT-OFF VALVE CM-AZ-2021-02108522-16



① IRRITROL TC-EX TOTAL CONTROL SERIES AUTOMATIC SPRINKLER CONTROLLER (EXTERIOR WALL MOUNT) 2 1/2" UL APPROVED ELECTRICAL CONDUIT, RING NUT AND JUNCTION BOX FOR 120V AC ELECTRICAL

3 PVC SCHEDULE 40 CONTROL WIRE CONDUIT (SIZE AS REQUIRED) (4) FINISH GRADE

⑤ PVC SWEEP ELL (DEPTH AS REQUIRED) 6 CONTROL WIRES TO ELECTRIC VALVES

DEXTERIOR SURFACE FOR MOUNTING OF SPRINKLER CONTROLLER

1. ALL ELECTRICAL WORK MUST CONFORM TO LOCAL CODES. REFER TO PRODUCT LITERATURE FOR ADDITIONAL INSTALLATION REQUIREMENTS.

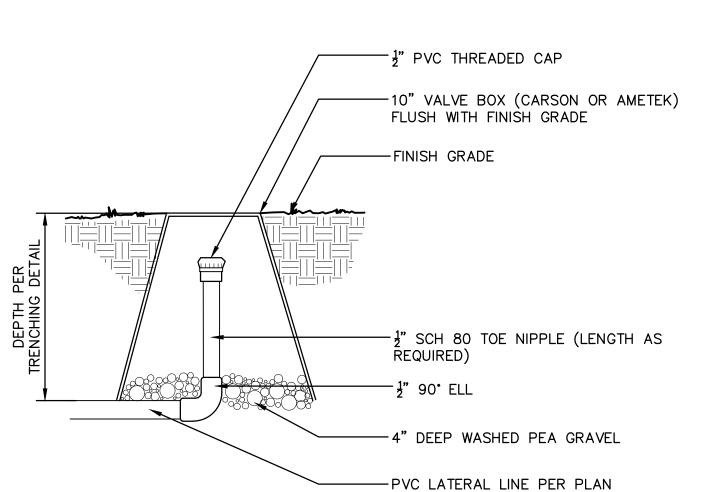
POWER

- 2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 3. DO NOT SCALE DRAWING.
- 4. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
- 5. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

# **CONTROLLER - TOTAL CONTROL SERIES**

IRRITROL (NTS)

CM-AZ-2021-02108522-02



CM-AZ-2021-02108522-13

GALVANIZED ELL

-FINISHED GRADE

NEEDED, TYP

GRAVEL, TYP

CM-AZ-2021-02108522-24

-REMOTE CONTROL VALVE PER PLAN

— TURF LATERAL

TURF SPRAY /

ROTOR PER

PLAN, TYP

-MANUAL GATE

VALVE, TYP

FLUSH CAP

LINE

CM-AZ-2021-02108522-17

-DRIP LATERAL

-MULTI-OUTLET

DRIP EMITTER,

VALVE FOR EACH

REMOTE CONTROL

DRIPLINE —

LINE

-VALVE BOXE WITH EXTENSIONS AS

- WATERPROOF CONNECTOR, TYP

3" MIN DEPTH ¾" WASHED PEA

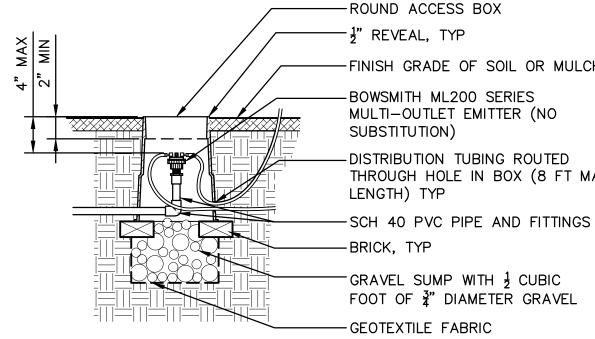
FLUSH CAP

NTS

BACKFLOW

**PREVENTER** 

# **BOWSMITH**.

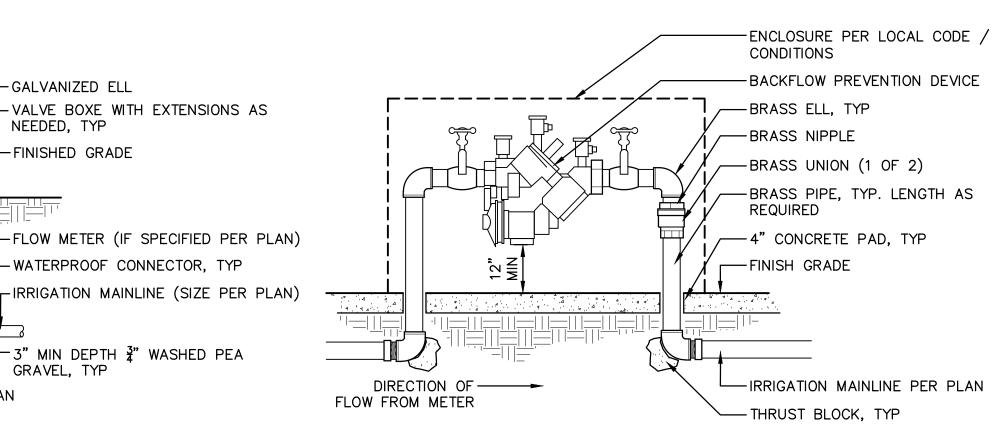


	PLANT SIZE	FLOW / PLANT	EMITTER	# OF EMITTERS
	#1 (1 GAL)	1 GPH	BOWSMITH ML210	1*
IL OR MULCH	#5 (5 GAL)	1 GPH	BOWSMITH ML210	1*
TE SIX MISESIT	15 GAL	4 GPH	BOWSMITH ML210	1
RIES	24" BOX	6 GPH	BOWSMITH ML210	2
ER (NO	36" BOX	8 GPH	BOWSMITH ML210	2
	48" BOX	12 GPH	BOWSMITH ML220	2
	> 48" BOX	16 GPH	BOWSMITH ML220	3
ROUTED	PALMS	0.5 GPM	BUBBLER / PLAN	2
OX (8 FT MAX		•	· · · · · · · · · · · · · · · · · · ·	

\* MAXIMUM 5 SHRUBS PER EMITTER BOWSMITH EMITTER ONLY - NO SUBSTITUTIONS

# **MULTI-PORT DRIP EMITTER**

CM-AZ-2021-02108522-14



NOTES:

1. FITTINGS AND PIPING TO BE SIZED IDENTICALLY TO NOMINAL BACKFLOW PREVENTION DEVICE

2. SIZE AND MODEL PER PLANS 3. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES AND INSPECTIONS PER GOVERNING CODE

# **BACKFLOW PREVENTOR**

CM-AZ-2021-02108522-23

18" MIN 12"		<ul> <li>FINISH GRADE</li> <li>LATERAL LINE</li> <li>MAINLINE</li> <li>MAINLINE TRACER WIRE PER SPECIFICATIONS; CONTROL WIRE TAPED EVERY 10 FT</li> <li>BACKFILL</li> <li>BEDDING PER SPECIFICATIONS</li> </ul>
T	EXTRA WIRE FOR FUTURE SPLIC TE A LOOSE 20" LOOP IN ALL DIRECTION AND AT 30 FT INTE OFTER CONNECTIONS HAVE BEE	<u>CING:</u> . WIRING CHANGES OF RVALS. UNTIE ALL LOOPS

I. PLANS ARE DIAGRAMMATIC. PLACE ALL PIPE IN WITHIN PROPERTY LINES 2. INSTALL WIRING PER LOCAL CODE 3. SNAKE PLASTIC PIPING IN TRENCHES

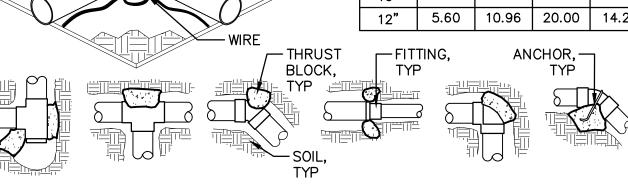
4. COMPACT TRENCH THOROUGHLY TO MATCH ADJACENT SOIL DENSITIES

# TRENCHING DEPTH

EMITTER SIZING SCHEDULE

\_\_\_\_EXISTING OR MODIFIED | THRUST BLOCK MINIMUM BEARING SOIL PER SPECS, TYP BLOCK SURFACE AREA FITTING | 22.5° | 45° | 90° | TEE/ SIZE | BEND | BEND | BEND | PLUG 3" | 0.43 | 0.84 | 1.52 | 1.08 4" | 0.70 | 1.37 | 2.49 | 1.77 6" | 1.51 | 2.95 | 5.39 | 3.83 8" | 2.56 | 5.02 | 9.16 | 6.50 10" | 3.97 | 7.79 | 14.21 | 10.10 12" | 5.60 | 10.96 | 20.00 | 14.21

CM-AZ-2021-02108522-15



1. INSTALL AND TEST MAINLINE ACCORDING TO MANUFACTURER'S INSTALLATION SPECIFICATIONS.

REFER TO SPECIFICATIONS FOR ALL TRENCH DEPTHS AND WIDTHS. 3. USE #4 REBAR WITH MASTIC COATING WHERE PIPE MUST BE ANCHORED TO

THRUŜT BLOCK. 4. INSTALL THRUST BLOCK SO THE HORIZONTAL (X) AND VERTICAL (Y) DIMENSIONS

OF THE THRUST BLOCK ARE APPROXIMATELY EQUAL. 5. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO PIPE, FITTINGS OR BOLTS.

WIRES IN COMMON TRENCH WITH PIPE SHALL NOT BE ENCASED IN CONCRETE 7. THRUST BLOCK SIZING ASSUMES A MAXIMUM OPERATING PRESSURE OF 90 PSI, A MAXIMUM VELOCITY OF 5 FEET PER SECOND, AND A SOIL BEARING CAPACITY OF 1000 LBS/FT (SANDY SOIL).

# THRUST BLOCK

8 NTS

CM-AZ-2021-02108522-19

# SLEEVING SCHEDULE

PIPE SIZE	MIN. SLEEVE SIZE	PIPE SIZE	MIN. SLEEVE SIZE
<u>1</u> "	2"	2", 2 ¼"	4"
3" 4	2 1"	3", 4"	6"
1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ "	3"		

ALL PIPE SLEEVES SHALL BE SCHEDULE 40 PVC AND INSTALLED WITH A MINIMUM OFFSET AT THE JOINTS TO PERMIT EASY INSTALLATION AND REMOVAL OF THE IRRIGATION LINES. ALL PLASTIC LINES SHALL BE INSTALLED IN SLEEVES UNDER PAVED AREAS. SLEEVES SHALL EXTEND AT LEAST 12" BEYOND THE EDGES OF THE PAVEMENT. SIZE OF SLEEVES SHALL BE AS FOLLOWS:

# PIPE SIZING SCHEDULE

_				
	PIPE SIZE	FLOW (GPM)	PIPE SIZE	FLOW (GPM)
_	1"	0-5	2"	36-60
	3" 4	6-10	$2\frac{1}{2}$	61-80
	1"	11–15	3"	81-120
	1 <del>1</del> "	16-25	3 <del>1</del> "	121-150
	1 ½"	26-35	4"	151-200

ALL MAINLINE PIPE 2 1/2" AND LARGER SHALL BE A MINIMUM CLASS 200 RING-TIGHT PIPE. MAINLINE 2" AND LESS SHALL BE A MINIMUM SCHEDULE 40 PVC. ALL LATERAL PIPE ABOVE 1/2" SHALL BE MINIMUM CLASS 200. ALL 1/2" LATERAL PIPE SHALL BE CLASS 315.

SLEEVE / PIPE SIZING SCHEDULE

CM-AZ-2021-02108522-20

ZONING: C-2REZONING:  $\overline{Z-101-76}$ ZA CASES: 34419/49820/1001 CCPR LSPL: LSIS:

PAPP #: 2201538 KIVA #: 17-287A ′SDEV ″#:<u>1700061</u> Q.S. #: Q01-24

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021-08522

06.07.2022

NOTES:

1. DRIP EMITTER SYSTEM TO BE TOTALLY RIGID PVC UNLESS OTHERWISE NOTED

PLAN

PIPE LAYOUT - SERVICE LINE CONNECTION

CM-AZ-2021-02108522-18

PROJECT SITE

THE PROJECT SITE IS LOCATED IN PHOENIX, MARICOPA COUNTY, ARIZONA. IN THE EVENT A DISCREPANCY IS FOUND BETWEEN THE FOLLOWING SPECIFICATIONS AND THE CITY SPECIFICATIONS, THE CITY DOCUMENTS SHALL TAKE PRECEDENCE.

### WORK INCLUDED

WORK OF THIS CONTRACT SHALL INCLUDE ALL WORK INDICATED OR SPECIFIED AS REQUIRED FOR THE CONSTRUCTION OF THE LANDSCAPE AND IRRIGATION AS PER CONTRACT DOCUMENTS.

TIME IS OF THE ESSENCE FOR COMPLETION OF THE WORK AND WILL BE CONSIDERED IN THE AWARD OF THE CONTRACT.

MAKE EVERY EFFORT TO HOLD TO THE TIMETABLE SUBMITTED BY CONTRACTOR AND APPROVED BY OWNER AND PRESENTED AT THE START OF CONSTRUCTION. AS DELAYS OCCUR, PROVIDE WRITTEN REPORT, IN WRITING, DURING THE PAY PERIOD IN WHICH THE DELAYS OCCUR. LACK OF COMPLIANCE MAY BE CAUSE FOR DELAY OF PAYMENT.

#### **SPECIFICATIONS**

IN THE PREPARATION OF THE DRAWINGS AND SPECIFICATIONS, AN EFFORT HAS BEEN MADE TO SEGREGATE THE VARIOUS BRANCHES OF THE WORK UNDER HEADINGS, BY TRADES. THIS IS DONE ONLY FOR CONVENIENCE AND SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING EVERY ITEM INDICATED OR SPECIFIED WHETHER PROPERLY SEGREGATED OR NOT.

# SPECIFICATION ARRANGEMENT IS IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATION INSTITUTE MASTERFORMAT, 1983 EDITION.

NO RESPONSIBILITY WILL BE ASSUMED BY THE OWNER OR THE ARCHITECT FOR OMISSIONS OR DUPLICATIONS BY THE CONTRACTOR IN THE COMPLETION OF THE CONTRACT DUE TO ANY ALLEGED ERROR IN THE ARRANGEMENT OF THE MATERIAL IN THE DRAWINGS OR SPECIFICATIONS NOR SHALL ANY SUCH SEGREGATION OF WORK AND MATERIALS OPERATE TO MAKE THE ARCHITECT AN ARBITER IN DEFINING LIMITS TO THE AGREEMENT BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS OR SUPPLIERS.

THE MISPLACEMENT, ADDITION OR OMISSION OF ANY LETTER, WORD OR PUNCTUATION MARK SHALL IN NO WAY DAMAGE THE TRUE SPIRIT OF THESE SPECIFICATIONS.

THE WORDS "SHOWN", "INDICATED", "NOTED", "SCHEDULED", OR WORDS OF LIKE EFFECT SHALL BE UNDERSTOOD TO MEAN THAT REFERENCE IS MADE TO THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS.

WHERE REFERENCE HEREIN IS MADE TO COLOR OF FINISHES "AS SELECTED", THE REFERENCE IS TO THE ARCHITECT.

#### REFERENCE TO STANDARDS

REFERENCE TO KNOWN STANDARDS MEANS AND INTENDS SPECIFICATIONS, UNLESS NOTED OTHERWISE, AND TO SUCH PORTIONS OF IT THAT RELATE AND APPLY DIRECTLY TO THE MATERIAL OR INSTALLATION CALLED FOR ON THE PROJECT.

WHERE MATERIAL IS SPECIFIED SOLELY BY REFERENCE TO STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL, IF REQUESTED BY THE ARCHITECT, SUBMIT TO THE ARCHITECT FOR HIS APPROVAL, DATA ON ALL SUCH MATERIAL PROPOSED TO BE INCORPORATED INTO THE WORK OF THE CONTRACT LISTING THE NAME AND ADDRESS OF THE VENDOR, THE MANUFACTURER OR PRODUCER, AND THE TRADE OR BRAND NAMES OF SUCH MATERIALS.

# DISPOSITION OF UTILITIES

OBSERVE RULES AND REGULATIONS GOVERNING THE RESPECTIVE UTILITIES IN EXECUTING ALL WORK UNDER THIS HEADING.

ADEQUATELY PROTECT EXISTING UTILITIES FROM DAMAGE, AND REMOVE OR RELOCATE ONLY AS INDICATED OR SPECIFIED.

# ARCHITECTURAL AND ENGINEERING SERVICES

IT IS UNDERSTOOD THAT NORMAL ARCHITECTURAL AND ENGINEERING LIAISON FOR THE PURPOSE OF INTERPRETATION OF THE DRAWINGS AND SPECIFICATIONS IS PROVIDED FOR BY THE OWNER. SHOULD ANY SERVICES OF THE ARCHITECT BE REQUIRED TO ASSIST IN THE CORRECTIONS OF ERRORS OR OMISSIONS IN THE CONSTRUCTION BY THE CONTRACTOR, OR SERVICES OF THE ARCHITECT BE REQUIRED BECAUSE OF CHANGES IN STRUCTURE OR EQUIPMENT WHERE THE CONTRACTOR HAS REQUESTED APPROVAL OF SUBSTITUTE METHODS OR MATERIALS, THESE SERVICES WILL BE PROVIDED BY THE ARCHITECT AT HIS STANDARD HOURLY RATES, AND SHALL BE PAID FOR BY THE CONTRACTOR.

# CONSTRUCTION SAFETY PROGRAM AND REGULATIONS

THE MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION, NINTH EDITION, 2009, AS PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC. AND THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION CONSTRUCTION STANDARDS AND REGULATIONS, 2017 SHALL CONSTITUTE THE OUTLINE FOR THE SAFETY PROGRAM TO BE ADHERED TO DURING THE COURSE OF THE PROJECT. PROVIDE COPY OF THESE PUBLICATIONS AT THE JOB SITE FOR REFERENCE.

# DUST CONTROL

PROVIDE CONTROLS AND TAKE MEASURES TO WATER SITE AS NECESSARY TO PREVENT DUST FROM BECOMING A NUISANCE TO THE COMMUNITY IN ACCORDANCE WITH GOVERNING AGENCY REGULATIONS.

# MATERIALS NOT SPECIFIED

IT HAS BEEN ATTEMPTED THROUGH THE WRITING OF THESE SPECIFICATIONS TO COVER MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT. HOWEVER, THE POSSIBILITY EXISTS THAT AN ITEM OR ITEMS MAY BE DETAILED OR INDICATED ON THE DRAWINGS THAT HAVE NOT BEEN SPECIFIED. IF SUCH AN ITEM CLEARLY APPEARS ON THE DRAWINGS AND IS NOT SPECIFIED, IT SHALL BE PROVIDED AS A PART OF THE CONTRACT, UNLESS THE ITEM IS NOTED AS NOT—IN—CONTRACT (N.I.C.). SEEK CLARIFICATION IMMEDIATELY TO AVOID DELAY OF THE WORK.

# PAYMENT OF FEES AND PERMITS

GENERAL CONTRACTOR SHALL PAY FOR BUILDING PERMITS, DEVELOPMENT FEES, AND WATER METER (S). LANDSCAPE CONTRACTOR TO BE RESPONSIBLE FOR ALL ADDITIONAL PERMITS WHICH FALL UNDER HIS SCOPE OF WORK.

# END OF SECTION 01010

SECTION 01011

SPECIFIED PRODUCTS AND SUBSTITUTIONS

## LISTED MANUFACTURERS

IF A MANUFACTURER IS LISTED BY NAME WITHIN A SECTION OF THE SPECIFICATIONS OR DRAWINGS HE IS APPROVED TO BID HIS PRODUCT WITH THE UNDERSTANDING THAT THE PRODUCT MEETS THE MINIMUM STANDARDS LISTED FOR THE PRODUCT DESIRED. IF MODIFICATIONS TO HIS STANDARD LINE ARE REQUIRED TO MEET THE MINIMUM STANDARDS LISTED, IT WILL BE UNDERSTOOD THAT IT IS A PART OF THE CONTRACT DOCUMENT REQUIREMENTS AND IS INCLUDED IN HIS BID.

THE CONTRACT DOCUMENTS MAY DEPICT THE DETAILING OF A SINGLE MANUFACTURER'S PRODUCT IN ORDER TO CLARIFY THE INTENT OF THE END PRODUCT DESIRED. IF, DURING THE COURSE OF CONSTRUCTION, THE PRODUCT USED AFFECTS OTHER TRADES' WORK, THE USER OF THE PRODUCT WILL BE RESPONSIBLE TO THE OTHER TRADES FOR ANY ADDITIONAL COSTS THAT MAY BE REQUIRED TO MEET THE INTENT OF THE CONTRACT DOCUMENTS.

#### NON-LISTED MANUFACTURERS

IF A MANUFACTURER IS NOT LISTED BY NAME WITHIN A SECTION OF THE SPECIFICATIONS, OBTAIN PRIOR APPROVAL FROM THE ARCHITECT BEFORE THE PRODUCT WILL BE ALLOWED TO BE USED ON THE PROJECT.

IF THE ARCHITECT PRIOR APPROVES A MANUFACTURER, THE MANUFACTURER WILL BE CONSIDERED AS THOUGH HE IS A LISTED MANUFACTURER AND WILL HAVE THE SAME RESPONSIBILITIES AS A LISTED MANUFACTURER.

#### PERFORMANCE SPECIFICATION

WHEN NO MANUFACTURER IS LISTED WITHIN A SECTION OF THE SPECIFICATIONS, IT IS INTENDED AS A PERFORMANCE SPECIFICATION AND ANY MANUFACTURER CAN BID A PRODUCT THAT MEETS THE STANDARDS AND REQUIREMENTS OF THE WORK AS IF LISTED BY NAME.

# IF THE MANUFACTURER ELECTS TO BID HIS PRODUCT, IT WILL BE DONE WITH THE UNDERSTANDING THAT HE HAS ALL OF THE SAME RESPONSIBILITIES THAT A LISTED MANUFACTURER HAS.

#### PROPRIETARY SPECIFICATION

IT IS NOT THE INTENT OF THESE SPECIFICATIONS TO HAVE ANY PROPRIETARY PRODUCTS. IF A SINGLE PRODUCT IS SPECIFIED, IT IS BECAUSE THE ARCHITECT MAY NOT KNOW OF ANOTHER PRODUCT THAT WILL MEET THE PROJECT REQUIREMENTS.

IN THE EVENT THAT A MANUFACTURER DESIRES TO OFFER A PRODUCT THAT WILL MEET THE PROJECT REQUIREMENTS, HE IS INVITED TO SUBMIT FOR PRIOR APPROVAL.

#### PRIOR APPROVAL REQUIREMENTS

PRODUCTS THAT REQUIRE PRIOR APPROVAL MUST CONFORM TO THE FOLLOWING PROCEDURES AND REQUIREMENTS BEFORE THE ARCHITECT WILL CONSIDER APPROVAL OF A PRODUCT.

IN ADDITION TO A COMPLETE SUBMITTAL OF INFORMATION TO THE ARCHITECT THE SUBMITTER SHALL SEND COPIES TO THE APPROPRIATE ENGINEERS (I.E. MECHANICAL, ELECTRICAL, STRUCTURAL) AS REQUIRED.

IF, PRIOR TO SUBMITTAL OF BID PROPOSAL, THE CONTRACTOR WISHES TO MAKE SUBSTITUTIONS, SUCH SUBSTITUTIONS WILL BE CONSIDERED ONLY WHEN WRITTEN REQUEST HAS BEEN SUBMITTED TO THE ARCHITECT. PRIOR APPROVAL MUST BE OBTAINED FOR ITEMS NOT DESIGNATED BASE MANUFACTURED ITEMS OR QUALIFIED MANUFACTURER ITEMS. PRIOR APPROVAL IS NOT REQUIRED FOR ITEMS INDICATED BY REFERENCE TO PUBLISHED STANDARDS BY DETAILED DESCRIPTIVE REQUIREMENTS, OR BY PERFORMANCE REQUIREMENTS. THESE ITEMS WILL, HOWEVER, BE SUBJECT TO FINAL ACCEPTANCE AS REQUIRED ELSEWHERE IN THE CONTRACT DOCUMENTS.

# PRIOR APPROVAL

PRIOR TO SUBMITTAL OF BID PROPOSAL, BIDDERS WISHING TO PROPOSE THE USE OF PARTICULAR PRODUCT, EQUIPMENT OR MATERIAL, IN LIEU OF THOSE SPECIFIED AS BASE MANUFACTURED ITEMS OR QUALIFIED MANUFACTURED ITEMS, MAY DO SO BY SUBMITTING TO THE ARCHITECT, A WRITTEN REQUEST FOR PRIOR

# REQUESTS FOR PRIOR APPROVAL SHALL BE SUBMITTED TO AND RECEIVED BY THE ARCHITECT, NO LATER THAN 8 CALENDAR DAYS PRIOR TO BID DATE. REQUESTS FOR PRIOR APPROVAL RECEIVED AFTER THIS DATE WILL NOT BE CONSIDERED.

EACH REQUEST FOR PRIOR APPROVAL MUST BE ACCOMPANIED BY COMPLETE DESCRIPTIVE AND TECHNICAL DATA TO ENABLE THE ARCHITECT TO MAKE A DIRECT COMPARISON OF ESSENTIAL CHARACTERISTICS OF THE PROPOSED ITEM TO THE SPECIFIED ITEM.

BURDEN OF PROOF OF MERIT OF REQUESTED SUBSTITUTION IS UPON THE SUBMITTER. IT IS THE SOLE RESPONSIBILITY OF SUBMITTER TO ESTABLISH CONTENT OF SUBMITTAL DATA. VAGUENESS OF SUBMITTAL, INADEQUATE WARRANTY INFORMATION OR INSUFFICIENT DATA MAY BE CAUSE FOR DISAPPROVAL OF REQUEST.

APPROVED SUBSTITUTIONS SHALL CONFORM WITH FULL PROVISIONS OF THE CONTRACT DOCUMENTS, INCLUDING MODIFICATIONS THERETO. AS SUCH, SUBSTITUTIONS SHALL MATCH STANDARDS OF BASE MANUFACTURER ITEMS WITH RESPECT TO MATERIALS, WORKMANSHIP, DESIGN, SIZE CAPACITY, TYPE, FUNCTION, FINISH, QUALITY, AND WARRANTY.

THE ARCHITECT'S APPROVAL OF SUBSTITUTIONS WILL BE BASED UPON HIS KNOWLEDGE, INFORMATION AND TRUST IN SUBMITTAL DATA; SUCH APPROVAL SHALL THEREFORE BE CONSIDERED INTERIM IN NATURE AND SUBJECT TO RECONSIDERATION, AS ADDITIONAL DATA, MATERIAL, WORKMANSHIP AND COORDINATION WITH OTHER WORK IS OBSERVED AND REVIEWED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY REVISIONS TO UTILITIES, MODIFICATIONS OF OPENINGS, ADDITIONAL MATERIAL, AND ANY WORK WHICH MAY BE REQUIRED DUE TO INCORPORATING APPROVED SUBSTITUTIONS INTO THE WORK.

AFTER REVIEW OF REQUEST FOR PRIOR APPROVAL, THE ARCHITECT WILL ISSUE AN ADDENDUM STATING WHICH ITEMS HAVE BEEN ACCEPTED FOR USE IN THE WORK AS ADDITIONAL QUALIFIED MANUFACTURED ITEMS. THIS ADDENDUM WILL BE ISSUED NO LATER THAN 5 CALENDAR DAYS PRIOR TO BID DATE.

# END OF SECTION 01011

# SECTION 01300

SUBMITTALS: SHOP DRAWINGS

SHOP DRAWINGS ARE REQUIRED FOR WORK AS INDICATED IN THE SUBMITTAL PART OF EACH SECTION OF THESE SPECIFICATIONS.

WHEN SHOP DRAWINGS ARE REQUIRED THEY SHALL BE PACKAGED AS A SINGLE SUBMITTAL AND IDENTIFIED CLEARLY AS TO PROJECT AND SECTION OF THE SPECIFICATIONS THEY ARE SUBMITTED UNDER.

SHOP DRAWINGS ARE DUE IN THE ARCHITECT'S OFFICE WITH SUCH PROMPTNESS AS NOT TO CAUSE DELAY IN THE WORK.

PROCEDURE FOR SHOP DRAWING REVIEW SHALL BE AS FOLLOWS:

THE GENERAL CONTRACTOR SHALL REVIEW, APPROVE, AND STAMP SHOP DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS PRIOR TO FORWARDING COPIES TO THE ARCHITECT FOR REVIEW. ANY SUBMITTALS NOT APPROVED BY THE GENERAL CONTRACTOR SHALL NOT BE FORWARDED TO THE ARCHITECT, BUT RETURNED FOR ANY REQUIRED CORRECTIONS.

SHOP DRAWINGS APPROVED BY THE GENERAL CONTRACTOR SHALL BE FORWARDED TO THE ARCHITECT FOR REVIEW.

THE ARCHITECT WILL CHECK DRAWINGS FOR CONFORMANCE WITH AND INTENT OF THE CONTRACT DOCUMENTS ONLY. FIELD MEASUREMENTS AND QUANTITIES TO REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

THE REVIEW OF SHOP DRAWINGS IS TO HELP ELIMINATE ERRORS IN CONSTRUCTION AND SHALL NOT IN ANY WAY BE CONSTRUED AS PERMISSION TO DEVIATE FROM THE CONTRACT DOCUMENTS, OR THAT THE ARCHITECT ACCEPTS ANY RESPONSIBILITY FOR ERRORS THAT MAY BE ON THE SHOP DRAWINGS.

THE ARCHITECT WILL RETURN TO THE CONTRACTOR ONE SET OF MARKED AND STAMPED REPRODUCIBLE PLANS FOR HIM TO PRINT AND DISTRIBUTE AS REQUIRED.

ANY SHOP DRAWING MARKED TO BE RESUBMITTED SHALL FOLLOW THE ABOVE PROCEDURES.

#### PRODUCT DATA

SUBMIT PRODUCT DATA FOR PRODUCTS AND MATERIALS AS INDICATED IN THE SUBMITTAL PART OF EACH SECTION OF THESE SPECIFICATIONS.

WHEN PRODUCT DATA IS REQUIRED, SUBMIT IN ORIGINAL FORM.

BIND MORE THAN ONE PAMPHLET OR CATALOG CUT TO BE SUBMITTED IN A THREE—HOLE NOTEBOOK IDENTIFIED ON THE COVER WITH THE SECTION NUMBER DESIGN CALCULATIONS

SUBMIT DESIGN CALCULATIONS FOR PRODUCTS AND MATERIALS AS INDICATED IN THE SUBMITTAL PART OF EACH SECTION OF THESE SPECIFICATIONS FOR REVIEW.

STRUCTURAL CALCULATIONS REQUIRED FOR APPROVAL OF SHOP DRAWINGS MUST BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PROJECT SITE. THE SOLE RESPONSIBILITY FOR THIS DESIGN WORK WILL REMAIN WITH THE ENGINEER WHO SEALS AND SIGNS THE SUBMITTED WORK FOR REVIEW.

#### TEST REPORTS

TEST REPORTS ARE REQUIRED FOR ALL PRODUCTS AND MATERIALS AS INDICATED IN THE SUBMITTAL PART OF EACH SECTION OF THESE SPECIFICATIONS.

WHERE INDEPENDENT TESTING LABORATORY TESTING REPORTS ARE REQUIRED, THEY ARE TO BE MAILED DIRECTLY TO THE OFFICE OF THE ARCHITECT.

MATERIAL TESTING WILL BE PAID FOR BY THE OWNER, UNLESS NOTED OTHERWISE, IN INDIVIDUAL SECTIONS OF SPECIFICATIONS. TESTING LAB WILL BE SELECTED BY OWNER.

TESTS PAID FOR BY THE OWNER THAT INDICATE FAILURE AND RESULT IN THE NEED TO RETEST OR TO TEST AGAIN THE REPLACED DEFECTS THE COST WILL BE PAID FOR AS A PART OF THIS CONTRACT.

END OF SECTION 01300

# SECTION 01400

# CLEANING UP

WORK SPECIFIED HEREIN

LABOR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY TO PERFORM CLEANING UP OF THE PROJECT SITE.

THIS SECTION IS COMPLEMENTARY TO THE GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS.

# REQUIREMENTS OF REGULATORY AGENCIES

MEET ALL REQUIREMENTS OF THE STATE INDUSTRIAL COMMISSION (OSHA).

HANDLE AND STORE VOLATILE WASTE INCOMPLIANCE WITH GOVERNING AGENCY REQUIREMENTS AND IN COVERED METAL CONTAINERS AWAY FROM AREAS OF DANGER. REMOVE DAILY AND PROPERLY DISPOSE OF OFFSITE.

CONDUCT CLEAN UP AND DISPOSAL OPERATIONS TO COMPLY WITH LOCAL ORDINANCE AND ANTI-POLLUTION LAWS.

NO BURNING OR BURYING OF RUBBISH OR WASTE MATERIAL IS ALLOWED ON THE SITE.

DUMPING OF VOLATILE LIQUIDS OR HARMFUL CHEMICALS IN THE SANITARY OR STORM SEWER SYSTEMS UNDER TREES AND ONSITE IS PROHIBITED.

# CLEANING UP DURING CONSTRUCTION

FREQUENTLY REMOVE REFUSE, RUBBISH, SCRAP MATERIALS AND DEBRIS IN AND AROUND THE PROJECT SITE TO THE END THAT AT ALL TIMES THE SITE OF THE WORK SHALL PRESENT A SAFE, NEAT, AND ORDERLY APPEARANCE. IF IN THE OPINION OF THE OWNER, THE SITE IS NOT MAINTAINED IN A NEAT AND ORDERLY APPEARANCE, THE OWNER MAY CONTRACT TO PERFORM CLEAN UP AS REQUIRED AND BACKCHARGE THE CONTRACTOR.

KEEP STORED MATERIALS, TOOLS AND EQUIPMENT NEAT AND ORDERLY AT ALL TIMES AND ONLY IN DESIGNATED AREAS APPROVED BY THE OWNER. SECURITY FOR STORED MATERIALS AND EQUIPMENT IS THE CONTRACTORS RESPONSIBILITY.

PROTECT INSTALLED WORK FROM DAMAGE DURING OPERATIONS.

# FINAL CLEANING UP

CONSTRUCTION MARKS.

PERFORM FINAL CLEANING JUST PRIOR TO FINAL INSPECTION.

USE EXPERIENCED WORKMEN OR PROFESSIONAL CLEANERS WHO ARE SKILLED IN BUILDING AND GROUNDS CLEAN UP.

CLEAN EXTERIOR GROUNDS OF CONSTRUCTION DEBRIS, MATERIALS, EQUIPMENT AND TRAILERS.

THE EXTERIOR OF THE BUILDING(S) AND FINISHED SURFACES SHALL BE CLEAN AND NEAT WITH NO MARKS OR STAINS FROM CONSTRUCTION OPERATIONS OR POOR CLEAN UP.

HOSE DOWN EXTERIOR WALKS AND PAVING AND LEAVE FREE OF DIRT AND

HOSE DOWN PARKING LOTS AND LEAVE FREE OF DIRT AND DEBRIS.

END OF SECTION 01400

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

#### WORK SPECIFIED HEREIN

PROVIDE LABOR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, INSTALL AND MAINTAIN TEMPORARY FACILITIES AND CONTROLS AT THE PROJECT SITE

#### MAINTENANCE AND REMOVAL

MAINTAIN TEMPORARY FACILITIES AND CONTROLS IN A PROPER, SAFE, OPERATING AND SANITARY CONDITION FOR THE DURATION OF THE CONTRACT UPON COMPLETION OF THE CONTRACT, REMOVE TEMPORARY FACILITIES AND CONTROLS FROM THE PREMISES.

#### TOILET FACILITIES

PROVIDE AND MAINTAIN AND PAY FOR COSTS FOR ADEQUATE, SANITARY, WATERPROOF TOILET FACILITIES FOR THE DURATION OF THE CONTRACT FOR USE BY ALL PERSONS WHO ARE ON THE PROJECT SITE. LOCATE FACILITIES IN A REMOTE, PRIVATE LOCATION ON THE SITE AND STRICTLY ENFORCE ITS PROPER USE AT ALL TIMES.

#### TEMPORARY WATER

WITH PRIOR APPROVAL, CONTRACTOR MAY USE THE OWNER'S WATER AT THE SITE AT THE OWNER'S EXPENSE. ANY REVISIONS TO THE WATER PIPING IS TO BE BY CONTRACTOR AT THE CONTRACTOR'S COST.

#### TEMPORARY ELECTRICAL POWER

WITH PRIOR APPROVAL, CONTRACTOR MAY USE THE OWNER'S ELECTRICITY AT THE SITE AT THE OWNER'S EXPENSE. ANY TEMPORARY ADJUSTMENTS TO SERVICE IS TO DONE BY CONTRACTOR AT HIS EXPENSE.

#### TEMPORARY FENCES

PROVIDE AND MAINTAIN A MINIMUM SIX FOOT HIGH WOVEN WIRE FABRIC FENCE AROUND THE CONSTRUCTION SITE. WITH PERMISSION FROM THE ARCHITECT, THE FENCING MAY BE REMOVED TO FACILITATE LANDSCAPING, PARKING AND OTHER FINISH SITE WORK.

#### SECURITY

AS SOON AS PRACTICAL AS DETERMINED BY THE ARCHITECT, THE CONTRACTOR SHALL INSTALL AND MAINTAIN PROVISIONS FOR CLOSING, LOCKING AND PROTECTING THE SITE FORM INTRUSION BY UNAUTHORIZED PERSONS AFTER NORMAL CONSTRUCTION HOURS.

### TEMPORARY DRINKING WATER

SUPPLY ADEQUATE, COOL, PURE DRINKING WATER WITH INDIVIDUAL DRINKING CUPS OR SANITARY BUBBLER FOUNTAIN FOR THE USE OF ALL PERSONS ON THE PROJECT SITE. THE QUALITY OF THE DRINKING WATER SHALL MEET THE STATE STANDARDS FOR PUBLIC WATER SUPPLIES.

## TEMPORARY ENCLOSURES & BARRIERS

PROVIDE AND MAINTAIN FENCES, BARRICADES, LIGHTS, SHORING AND OTHER PROTECTIVE STRUCTURES OR DEVICES NECESSARY FOR THE SAFETY OF WORKMEN, EQUIPMENT, THE PUBLIC AND PROPERTY AS REQUIRED BY STATE OR MUNICIPAL LAWS AND REGULATIONS, AND LOCAL ORDINANCES. THESE SHALL CONFORM TO ALL REGULATIONS, ORDINANCES, LAWS AND OTHER REQUIREMENTS OF THE COUNTY, STATE AND OTHER AUTHORITIES HAVING JURISDICTION WITH REGARD TO SAFETY PRECAUTIONS, OPERATION AND FIRE HAZARDS.

# NOISE & DUST CONTROL

EXERCISE ALL POSSIBLE CARE TO CONTROL EXCESSIVE NOISE AND DUST DURING THE CONSTRUCTION TO KEEP THESE PROBLEMS TO A MINIMUM. TRAFFIC OR CONSTRUCTION AREAS SHALL BE SPRINKLED WITH WATER OR CHEMICALS AS REQUIRED AND IN ACCORDANCE WITH APPLICABLE COUNTY REQUIREMENTS. NOTIFY THE OWNER PRIOR TO USING AIR COMPRESSORS, JACK HAMMERS, AND NOISY EQUIPMENT. IN SUFFICIENT TIME TO PERMIT REMOVAL OF ANY OCCUPANTS CLOSE ENOUGH TO BE AFFECTED BY SUCH DISTURBANCES. SCREEN NOISY EQUIPMENT WITH TEMPORARY ENCLOSURES TO SHIELD ADJACENT AREAS AS MUCH AS POSSIBLE.

# PROTECTION & CARE OF EXISTING SITE IMPROVEMENTS

TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING SITE IMPROVEMENTS THAT EXIST AT THE TIME OF MOVING ON THE SITE. THIS PROTECTION INCLUDES, BUT IS NOT LIMITED TO, EXISTING CURBS, WALKS, LANDSCAPE MATERIALS AND UTILITIES.

IDENTIFY IN WRITING TO THE ARCHITECT ANY BROKEN CONCRETE CURBS AND WALKS OR DAMAGED IMPROVEMENTS THAT MAY LATER BE DEEMED THE CONTRACTOR'S RESPONSIBILITY TO REPAIR. IF NOT IDENTIFIED PRIOR TO WORK COMMENCING AND DAMAGE CANNOT EASILY BE REPAIRS TO CORRECT THE DAMAGE. ALTHOUGH IT IS NOT A REQUIREMENT OF THIS SPECIFICATION, IT MAY BE TO THE CONTRACTOR'S ADVANTAGE TO PHOTOGRAPH THE EXISTING DAMAGE AND INCLUDE COPIES OF THE PHOTOGRAPHS IN THE IDENTIFICATION LETTER WHICH SHALL BE SUBMITTED TO OWNER PRIOR TO MOVING ONTO THE SITE.

PROTECT FROM DAMAGE LANDSCAPE, HARDSCAPE, AND EXISTING IMPROVEMENTS THAT ARE WITHIN THE PROJECT CONSTRUCTION FENCING. CONTRACTOR SHALL WATER AT HIS DISCRETION, THE RESPONSIBILITY FOR SUCH WATERING. REPLACE IMPROVEMENTS AND LANDSCAPING DAMAGED WHILE UNDER THE CARE OF THE CONTRACTOR. REPLACE PLANTS WITH SAME SIZE AND SPECIES AND OTHER IMPROVEMENTS WITH LIKE KIND AT NO COST TO THE OWNER.

ZONING: C-2

LSPL:

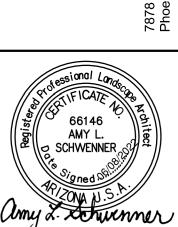
LSIS:

**REZONING: Z-101-76** 

ZA CASES: <u>34419/4982</u>0/1001

# END OF SECTION 01500

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WORK SPECIFIED HEREIN

LABOR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY TO PROVIDE THE RECORD DRAWINGS, OPERATION/MAINTENANCE MANUALS, LIEN WAIVERS AND UTILITY RECEIPTS. SUBMIT PROJECT CLOSE DOCUMENTS NEATLY ORGANIZED IN THREE RING BINDER.

RECORD DRAWINGS

PRIOR TO REQUESTING A FINAL WALK THROUGH FOR PROVISIONAL ACCEPTANCE TO BEGIN WARRANTY PERIOD, PROVIDE ONE SET OF THE RECORD DRAWINGS TO THE ARCHITECT FOR USE BY THE OWNER. PREPARE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 01701.

OPERATION & MAINTENANCE MANUALS

PROVIDE TO THE ARCHITECT FOUR COMPLETE MANUALS FOR USE BY THE OWNER. PREPARE MANUALS IN ACCORDANCE WITH SECTION 01702,

LIEN WAIVERS

PROVIDE FOUR SETS OF "PAID IN FULL" LIEN WAIVERS FROM THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS.

UTILITY RECEIPTS

PROVIDE FOUR COPIES OF EACH "PAID IN FULL" UTILITY RECEIPTS FROM UTILITIY COMPANIES THAT PROVIDED TEMPORARY UTILITIES DURING THE CONSTRUCTION PERIOD

ASBESTOS CERTIFICATIONS

PROVIDE FOUR SETS OF CERTIFICATION LETTERS WHICH ASSURE THE OWNER THAT NO MATERIALS CONTAINING ASBESTOS WERE USED ON THIS PROJECT. CERTIFICATION LETTERS SHALL BE PROVIDED BY THE CONTRACTOR AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS WHO HAVE FURNISHED OR INSTALLED MATERIALS ON THIS PROJECT.

FINAL ACCEPTANCE

NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 7 DAYS IN ADVANCE OF REQUESTED FINAL INSPECTION. THE SITE MUST BE IN COMPLETE, CLEAN, AND ACCEPTABLE CONDITION, WITH LAWN, PLANTED AREAS, AND WALKS AND DRIVES FREE FROM REFUSE. MANUALLY OPERATE REMOTE CONTROL VALVES FROM THE CONTROLLER, IN SEQUENCE, AND PROVIDE ENOUGH TIME FOR THE LANDSCAPE ARCHITECT TO INSPECT AREAS BEING WATERED. INSTRUCT OWNER ON THE SUGGESTED WATERING TIMES AND CYCLES FOR IRRIGATED AREAS. IF ALL IS IN ORDER, OR CAN BE MADE SO WITHIN 24 HOURS, THE SITE WILL BE ACCEPTED VERBALLY AT THIS TIME, OR EXTENDED UNTIL SUCH TIME AS THE SITE CAN BE ACCEPTED. THE LANDSCAPE ARCHITECT WILL ISSUE WRITTEN ACCEPTANCE AFTER VERBAL ACCEPTANCE, AND SEND ONE COPY TO THE GENERAL CONTRACTOR, OWNER AND LANDSCAPE CONTRACTOR. FINAL WRITTEN ACCEPTANCE WILL RELEASE THE CONTRACTOR FROM FUTURE RESPONSIBILITIES ON THIS SITE. SHOULD THE PROJECT REQUIRE ADDITIONAL MAINTENANCE, THE LANDSCAPE ARCHITECT SHALL NOTIFY THE INVOLVED PARTIES AT THIS TIME.

END OF SECTION 01700

SECTION 01701

RECORD DRAWINGS

WORK SPECIFIED HEREIN

MATERIAL, LABOR, EQUIPMENT AND SERVICES NECESSARY TO ASSEMBLE AND MAINTAIN RECORD DRAWINGS.

RECORD DRAWINGS

MAINTAIN AT THE PROJECT SITE A SET OF CONTRACT DRAWINGS AND SPECIFICATIONS SHOWING CHANGES OR MODIFICATIONS MADE TO THE PROJECT DURING CONSTRUCTION. PROVIDE RECORD DRAWINGS FOR OWNER OR ARCHITECT REVIEW DURING THE COURSE OF THE WORK.

CLEARLY INDICATE THE DEPTH AND DIMENSIONED LOCATION OF UNDERGROUND UTILITIES PRIOR TO COVERING THE WORK. INDICATE DEPTH FROM FINISH FLOOR ELEVATION OR FINISH GRADE AND LOCATIONS FROM BUILDING LINES OR KNOWN POINTS ON THE SITE THAT CAN READILY BE IDENTIFIED IN THE FUTURE.

CLEARLY INDICATE THE ROUTING OF PIPING AND ELECTRICAL CONDUIT.

INCORPORATE CONTRACT CHANGE DRAWINGS ONTO THE ORIGINAL PRINTS OR INCLUDE AS A SEPARATE SHEET AND CLEARLY REFERENCE AND INDICATE ON THE ORIGINAL PRINT THE LOCATION OF THE CHANGE INFORMATION.

AT THE END OF THE PROJECT, TRANSFER RECORD DRAWING INFORMATION ONTO A REPRODUCIBLE SET OF PLANS. THE RECORD DRAWINGS SHALL BE REPRODUCED AT THE CONTRACTOR'S EXPENSE.

DRAFT NEATLY ALL MODIFICATIONS. FINAL SET OF RECORD DRAWINGS SHALL BE CAPABLE OF REPRODUCING HIGH QUALITY LEGIBLE REPRODUCTIONS WHEN RUN THROUGH A COMMERCIAL QUALITY PRINTING MACHINE. THE ARCHITECT WILL BE THE SOLE JUDGE AS TO THE QUALITY OF THE FINAL REPRODUCIBLE DRAWINGS.

END OF SECTION 01701

SECTION 01702

OPERATION & MAINTENANCE MANUALS

WORK SPECIFIED HEREIN

LABOR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY TO ASSEMBLE AND FURNISH MAINTENANCE MANUALS.

PROJECT MANUALS

ASSEMBLE MANUALS IN THREE RING BINDERS WITH AN INDEX AND CARD STOCK DIVIDERS WITH TABS DESIGNED FOR EASY REFERENCE. THE MANUAL SHALL INCLUDE AT A MINIMUM THE FOLLOWING INFORMATION AND DOCUMENTATION:

EACH INDEX ITEM SHALL REFERENCE THE APPROPRIATE SECTION OF THE SPECIFICATIONS AND THE ITEM BE PLACED IN THE BINDER IN NUMERIC ORDER. PROVIDE 4 SETS OF MANUALS.

SUBCONTRACTOR LIST BY TRADE OR SPECIALTY WITH NAME, ADDRESS, AND PHONE NUMBER AND CONTACT PERSON.

GUARANTEES AND WARRANTIES FOR EQUIPMENT.

RECEIPTS FOR EXTRA MATERIALS TURNED OVER TO THE OWNER.

MAINTENANCE AND OPERATING INSTRUCTION FOR ENTIRE SYSTEMS AND EACH PIECE OF EQUIPMENT.

PREPARE OR COPY THE COLOR SCHEDULE LISTING THE PAINT MANUFACTURER AND COLORS USED ALONG WITH THE NAME AND TELEPHONE NUMBER OF THE SUPPLIER WHERE MATCHING COLORS ARE AVAILABLE.

SECTION 01703

CONTRACTORS LIABILITY INSURANCE

MAINTAIN INSURANCE AS REQUIRED BY LAW FOR CLAIMS UNDER WORKMEN'S COMPENSATION ACTS AND OTHER EMPLOYEE BENEFIT ACTS; FOR CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY, INCLUDING DEATH, TO EMPLOYEES AND ALL OTHERS; AND FROM CLAIMS FOR DAMAGES TO PROPERTY AND/OR ALL OF WHICH MAY ARISE OUT OF OR RESULT FROM THE CONTRACTOR'S OPERATION UNDER THE CONTRACT, WHETHER SUCH OPERATIONS BE BY HIMSELF OR BY ANY SUBCONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY EITHER OF THEM

FOR THE DURATION OF THE CONTRACT, MAINTAIN STATUTORY WORKMEN'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE WITH MINIMUM LIMITS OF \$100,000. REQUIRE SUBCONTRACTORS TO PROVIDE WORKMEN'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE WITH THE SAME MINIMUM LIMITS.

FOR THE DURATION OF THE CONTRACT, MAINTAIN COMPREHENSIVE GENERAL LIABILITY INSURANCE WITH MINIMUM OF \$1,000,000 COMBINED SINGLE LIMIT COVERAGE. THE POLICY SHALL INCLUDE CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE AND BLANKET CONTRACTUAL LIABILITY INSURANCE WITH THE SAME MINIMUM LIMITS. REQUIRE THE SAME MINIMUM LIMITS AND COVERAGE OF SUBCONTRACTORS.

FOR THE DURATION OF THE CONTRACT, MAINTAIN COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE FOR ALL OWNED, NON-OWNED AND HIRED VEHICLES, WITH MINIMUM LIMITS OF \$1,000,000 COMBINED SINGLE LIMIT COVERAGE. REQUIRE SUBCONTRACTORS TO PROVIDE COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE WITH SAME MINIMUM LIMITS AND COVERAGE.

PROVIDE THE OWNER A "CERTIFICATE OF INSURANCE" LISTING THE ABOVE—STATED GENERAL LIABILITY LIMITS AND NAMING THE OWNER AS AN "ADDITIONAL INSURED" ON THE POLICY.

END OF SECTION 01703

SECTION 02810

LANDSCAPE IRRIGATION SYSTEM

PART 1 - GENERAL

DESCRIPTION

PERFORMANCE REQUIREMENTS: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, LAY OUT AND INSTALL A FUNCTIONAL AND COMPLETE AUTOMATIC IRRIGATION SYSTEM AS INDICATED ON PLAN.

LOCATION OF PIPE AND EMITTERS IS APPROXIMATE. MAKE MINOR ADJUSTMENTS NECESSARY TO AVOID PLANTINGS AND OBSTRUCTION SUCH AS SIGNS AND LIGHT STANDARDS. MAINTAIN 100 PERCENT IRRIGATION COVERAGE OF AREAS INDICATED.

SUBMITTALS

PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS AND FURNISHED ACCESSORIES.

SHOP DRAWINGS: PROVIDE ONE REPRODUCIBLE PLAN OF THE IRRIGATION LAYOUT TO THE INSTALLER BEFORE CONSTRUCTION. PRIOR TO INSPECTION OF SUBSTANTIAL COMPLETION, PLAN SHALL BE REVISED TO RECORD THE ENTIRE SYSTEM AS CONSTRUCTED IN THE FIELD.

CONTROLLER CHARTS: RECORD DRAWINGS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT BEFORE CONTROLLER CHARTS ARE PREPARED. PROVIDE ONE CONTROLLER CHART FOR EACH CONTROLLER SUPPLIED. THE CHART SHALL SHOW THE AREA CONTROLLED BY THE AUTOMATIC CONTROLLER AND SHALL BE THE MAXIMUM SIZE WHICH THE CONTROLLER DOOR WILL ALLOW. THE CHART IS TO BE A REDUCED DRAWING OF THE ACTUAL INSTALLED SYSTEM. HOWEVER, IN THE EVENT THE CONTROLLER SEQUENCE IS NOT LEGIBLE WHEN THE DRAWING IS REDUCED, IT SHALL BE ENLARGED TO A SIZE THAT WILL BE READABLE WHEN REDUCED. THE CHART SHALL BE A BLACKLINE OR BLUELINE OZALID PRINT AND A DIFFERENT COLOR SHALL BE USED TO INDICATE THE AREA OF COVERAGE FOR EACH STATION. WHEN COMPLETED AND APPROVED, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS. THESE CHARTS SHALL BE COMPLETED AND APPROVED PRIOR TO FINAL OBSERVATION OF THE IRRIGATION SYSTEM.

EQUIPMENT TO BE FURNISHED:

SUPPLY THE FOLLOWING TOOLS:

FIVE (5) DRIP EMITTERS OF EACH TYPE SPECIFIED.

TWO (2) KEYS FOR EACH AUTOMATIC CONTROLLER.

TWO (2) ELECTRIC VALVES OF EACH TYPE SPECIFIED.
ONE (1) VALVE BOX KEY FOR EVERY SIX (6) VALVE BOXES INSTALLED.

THE ABOVE MENTIONED EQUIPMENT SHALL BE TURNED OVER TO THE OWNER AT THE CONCLUSION OF THE PROJECT. BEFORE FINAL OBSERVATION CAN OCCUR, EVIDENCE THAT THE OWNER HAS RECEIVED THESE MATERIALS MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT.

QUALITY ASSURANCE

USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK OF THIS SECTION.

DELIVERY, STORAGE AND HANDLING

EXERCISE CARE IN HANDLING, LOADING, UNLOADING, AND STORING PLASTIC PIPE AND FITTINGS. STORE UNDER COVER UNTIL READY TO INSTALL AND TRANSPORT ONLY ON A VEHICLE WITH A BED LONG ENOUGH TO ALLOW THE PIPE TO LAY FLAT TO AVOID UNDUE BENDING AND CONCENTRATED EXTERNAL LOAD.

WARRANTY

THE CONTRACTOR SHALL AGREE TO REPAIR OR REPLACE ANY DEFECTS IN MATERIAL OR WORKMANSHIP WHICH MAY DEVELOP DURING THE PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AND ALSO TO REPAIR OR REPLACE ANY DAMAGE RESULTING FROM THE REPAIR OR REPLACEMENT OF SUCH DEFECTS AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL MAKE SUCH REPAIRS OR REPLACEMENTS WITHIN A REASONABLE TIME, AS DETERMINED BY THE OWNER, AFTER RECEIPT OF WRITTEN NOTICE.

IN THE EVENT OF THE CONTRACTOR'S FAILURE TO MAKE SUCH REPAIRS OR REPLACEMENTS WITHIN A REASONABLE TIME AFTER RECEIPT OF WRITTEN NOTICE FROM THE OWNER, THE OWNER SHALL PROCEED TO HAVE SAID REPAIRS OR REPLACEMENTS MADE AT THE CONTRACTOR'S EXPENSE AND HE SHALL PAY THE COSTS AND CHARGES UPON DEMAND.

CONTRACTOR TO WARRANT THAT ALL TRENCHES AND OTHER DISTURBED AREAS TO BE FREE FROM HEAVING OR SETTLING MORE THAN 1/2". SHOULD IT BECOME NECESSARY TO ADJUST THE GRADE, REGRADE THE TRENCH AND RESEED. THIS NO-SETTLEMENT CLAUSE SHALL EXTEND OVER THE ENTIRE PERIOD OF THE WARRANTY OF THE JOB. MINOR MAINTENANCE AND ADJUSTMENT WILL BE BY THE OWNER.

PROJECT CONDITIONS

EXISTING WATER SERVICE: DO NOT INTERRUPT WATER SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER SERVICE ACCORDING TO REQUIREMENTS INDICATED. NOTIFY CONSTRUCTION MANAGER NO LATER THAN 2 DAYS IN ADVANCE OF PROPOSED INTERRUPTION TO WATER SERVICE. DO NOT PROCEED WITH INTERRUPTION OF WATER SERVICE WITHOUT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.

PART 2 - PRODUCTS

PIPE JOINING MATERIAL

PIPES, TUBES AND FITTINGS

COMPLY WITH REQUIREMENTS IN THE PIPING SCHEDULE FOR APPLICATIONS OF PIPE, TUBE, AND FITTING MATERIALS AND FOR JOINING METHODS FOR SPECIFIC SERVICES, SERVICE LOCATIONS, AND PIPE SIZES. PIPE TO BE MARKED AT MAXIMUM 60" INTERVALS WITH FOLLOWING: MANUFACTURER'S NAME, NOMINAL PIPE SIZE, PVC TYPE AND GRADE (I.E. PVC 1120), SDR RATING CLASS, NSF APPROVAL AND COMMERCIAL STANDARD DESIGNATION CS 256-63.

MAINLINE PIPE 2-1/2" AND GREATER: PRESSURE RATED TYPE 1220 CLASS 200 GASKETED PVC SDR 21 CONFORMING TO ASTM D2241, D1784, F477 AND D3139.

MAINLINE PIPE 2-1/4" AND SMALLER: PRESSURE RATED TYPE 1120 SCHEDULE 40 PVC CONFORMING TO ASTM D1785. PVC SCH 40 SHALL NOT BE THREADED.

LATERAL PIPE: PRESSURE RATED TYPE 1120 CLASS 200 SDR 21 PVC CONFORMING TO ASTM D2241.

DISTRIBUTION TUBING: 4" POLYETHYLENE MICRO TUBE CONFORMING TO ASTM D3035.

ASTM B88.

STANDARD FITTINGS: SCHEDULE 40 PVC CONFORMING TO ASTM D1784, D2466 AND F1970. SCH 40 SHALL NOT BE THREADED.

COPPER TUBE: TYPE "K" SEAMLESS ANNEALED COPPER TUBE CONFORMING TO

THREADED FITTINGS: SCHEDULE 80 PVC CONFORMING TO ASTM D1784, D2464, D2467 AND F1970.

COPPER FITTINGS: STANDARD WROUGHT COPPER FITTINGS MANUFACTURED BY PHELPS DODGE COPPER PRODUCTS OR NIBCO, INC.

TRANSITION FITTINGS: PLASTIC TO METAL TRANSITIONS SHALL BE MALE ADAPTORS, HAND TIGHTENED, PLUS ONE TURN WITH STRAP WRENCH.

NIPPLES: SCHEDULE 80 PVC CONFORMING TO ASTM D1785.

UNIONS: SCHEDULE 80 PVC CONFORMING TO ASTM D2467.

PVC SOLVENT CEMENT: WELD-ON 711 MANUFACTURED BY INDUSTRIAL POLYCHEMICAL SERVICE, OR EQUAL TO MEET ASTM D2564.

PRIMER: WELD-ON P70 OR EQUAL MEETING ASTM F656.

SEALING TAPE: 3.5 MIL TEFLON TAPE FOR THREADED JOINTS

PLASTIC TO METAL CONNECTION: JOINT COMPOUND PERMATEX TYPE II. SLEEVES

PIPE USED FOR WATER CONVEYANCE: SCHEDULE 40 PVC. SIZE PER PIPE SIZING SCHEDULE.

PIPE USED FOR WIRES: DIRECT BURIAL RATED PVC CONDUIT. SIZE PER PIPE SIZING SCHEDULE.

UNDERGROUND VALVES THREE INCHES (3") AND SMALLER: FURNISHED WITH OPERATING NUTS OR HANDWHEELS.

GATE VALVES: BRONZE, SIZE SAME AS MAINLINE.

DRAIN VALVES: TYPE AND SIZE PER PLAN.

QUICK COUPLING VALVES: AS INDICATED ON PLAN. EACH VALVE SHALL HAVE MOLDED VINYL LOCKING COVER, YELLOW IN COLOR. ALL QUICK COUPLING VALVE KEYS AND HOSE SWIVELS SAME MANUFACTURER.

PRESSURE REDUCING VALVES: TYPE AND SIZE PER PLAN.

REMOTE CONTROL VALVES: NORMALLY CLOSED AND OPERATED BY 24 VOLT AC FACTORY INSTALLED SOLENOID. TYPE AND SIZE PER PLAN.

VALVE BOXES: CARSON OR AMETEK. INSTALL REMOTE CONTROL VALVES, GATE VALVES AND PRESSURE RELIEF VALVES IN SUITABLE VALVE BOXES AS SHOWN IN DETAILS, COMPLETE WITH LOCKING COVER. BOXES TO BE LABELED "PRV", "GV" OR "RCV". BRAND EACH VALVE BOX WITH 1" LETTERING SHOWING THE CONTROLLER AND ZONE NUMBER ASSOCIATED WITH THE VALVE'S OPERATION (EXAMPLE "A3" = CONTROLLER A ZONE 3). VALVE BOXES GREEN IN TURF, TAN IN MULCH OR PURPLE FOR RECLAIMED SYSTEMS.

SPRAYS, ROTORS, BUBBLERS AND DRIP EMITTERS

SPRAY BODIES: BOTTOM INLET WITH SWING JOINT, CHECK VALVE AND PRESSURE REGULATOR.

ROTORS: 6" POP-UP WITH DRAIN CHECK VALVE AND PRESSURE REGULATOR.

HEADS/NOZZLES: ALL HEADS/NOZZLES IN SYSTEM TO BE OF SAME MANUFACTURER AND MARKED WITH MANUFACTURER'S NAME AND IDENTIFICATION IN SUCH POSITION THAT THEY CAN BE IDENTIFIED WITHOUT BEING REMOVED FROM SYSTEM. SELECT NOZZLES WITH ARCS THAT PROVIDE COMPLETE AND UNIFORM COVERAGE WITH MINIMUM OVERSPRAY. USE ONLY PRESSURE COMPENSATING NOZZLES IF UNIFORM LATERAL PRESSURE CANNOT BE ATTAINED AT THE VALVE. ADJUST RADIUS OF THROW AND ARC TO PROVIDE THE BEST PERFORMANCE.

DRIP EMITTERS: BOWSMITH ML220 MULTI-OUTLET EMITTER. NO SUBSTITUTIONS. EQUIPMENT

BACKFLOW PREVENTION UNITS: TYPE AND SIZE PER PLAN.

BACKFLOW ENCLOSURE: AS REQUIRED PER MUNICIPAL CODE.

AUTOMATIC CONTROLLERS: TYPE AND MANUFACTURER PER PLAN.

ELECTRICAL

CONTROL WIRE: TYPE UF LOW ENERGY CIRCUIT CABLE, SOLID COPPER WIRE (ASTM B3), RED PVC INSULATION DESIGNED FOR DIRECT BURIAL, SIZED PER SYSTEM (MIN 18 AWG). EXTRA WIRE SHALL BE YELLOW.

GROUND WIRE: TYPE UF LOW ENERGY CIRCUIT CABLE, SOLID COPPER WIRE (ASTM B3), WHITE POLYETHYLENE INSULATION DESIGNED FOR DIRECT BURIAL, SIZED PER SYSTEM (MIN 18 AWG).

TRACER/LOCATOR WIRE: COPPER CLAD STEEL, 12 AWG, PURPLE POLYETHYLENE JACKET DESIGNED FOR DIRECT BURIAL.

DECODER WIRE: 600 VOLT, SOLID COPPER WIRE (ASTM B3), 14-2 AWG.

DECODERS: LOW VOLTAGE, SINGLE-STATION, PROGRAMMABLE.

CONNECTORS: DIRECT BURY, WATERPROOF

GROUNDING: RODS OR PLATES WITH LESS THAN 10 OHMS RESISTANCE. § X 8' COPPER CLAD GROUND ROD INSIDE ROUND VALVE BOX OR 4" X 36" X 0.0625' COPPER GROUND PLATE PER MANUFACTURER SPECIFICATIONS.

PART 3 - EXECUTION

FIELD INSPECTION

SURFACE CONDITIONS: EXAMINE THE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION WILL BE PERFORMED. VISIT SITE AND VERIFY EXISTING GRADES, UTILITY LOCATIONS, CONSTRUCTION AND CONDITIONS. NOTIFY LANDSCAPE ARCHITECT OF DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.

FIELD MEASUREMENTS: CONFIRM ALL NON-IRRIGATED AREAS PER PLAN. MAKE NECESSARY MEASUREMENTS IN THE FIELD TO ENSURE PRECISE FIT OF ITEMS IN ACCORDANCE WITH THE APPROVED DESIGN. DIMENSION FROM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, SIDEWALK, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF THE FOLLOWING ITEMS:

-CONNECTION TO EXISTING ELECTRICAL POWER

-ROUTING OF IRRIGATION PRESSURE LINES (DIMENSION MAXIMUM 100' ALONG ROUTING)
-IRRIGATION CONTROL VALVES

-ROUTING OF CONTROL WIRING
-OTHER RELATED EQUIPMENT AS DIRECTED BY ARCHITECT

PREPARATION

COORDINATION: COORDINATE SCHEDULES WITH OTHER TRADES TO ASSURE ORDERLY PROGRESS OF THE TOTAL CONSTRUCTION SEQUENCE. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE GENERAL CONTRACTOR FOR THE INSTALLATION OF IRRIGATION SLEEVES. IRRIGATION CONTRACTOR SHALL COORDINATE WORK W/PLANTING PLANS TO AVOID CONFLICTING LOCATIONS BETWEEN PIPING AND PLANT PITS.

UTILITY CONNECTIONS: THE AUTOMATIC IRRIGATION SYSTEM SHALL BE CONNECTED TO WATER SUPPLY AND ELECTRICAL POWER POINTS OF CONNECTION AS INDICATED ON THE DRAWINGS. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MINOR CHANGES CAUSED BY ACTUAL SITE CONDITIONS.

STAKING: SET STAKES TO IDENTIFY LOCATIONS OF PROPOSED IRRIGATION SYSTEM COMPONENTS.

INSPECTION OF MATERIAL: CAREFULLY INSPECT PIPE AND FITTINGS BEFORE INSTALLATION, REMOVING ALL DIRT, SCALE, AND BURRS; AND REAMING AS REQUIRED.

INSTALLATION

GENERAL: PROVIDE A 100% COVERAGE, COMPLETE AUTOMATIC IRRIGATION SYSTEM AS SCHEMATICALLY DIAGRAMMED. IN—FIELD LAYOUT SHALL PROVIDE HEADS AT A CONSISTENT SPACING NOT TO EXCEED THAT SHOWN FOR EACH TYPE OF HEAD OR AN APPROVED SPACING, IF THERE IS AN EQUIPMENT SUBSTITUTION. ANY SUBSTANTIAL VARIATION OF IN—FIELD REQUIREMENTS TO THOSE SPECIFIED SHALL BE REPORTED PRIOR TO CONSTRUCTION.

TRENCHING: TRENCH SHALL BE EXCAVATED STRAIGHT AND SUPPORT PIPE CONTINUOUSLY ON BOTTOM OF TRENCH. LAYOUT PIPE TO AN EVEN GRADE. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATION IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. ALL ROOTS TWO (2) INCHES AND LARGER IN DIAMETER, EXCEPT DIRECTLY IN THE PATH OF PIPE OR CONDUIT, SHALL BE TUNNELED UNDER AND SHALL BE HEAVILY WRAPPED WITH BURLAP, TO PREVENT SCARRING OR EXCESSIVE DRYING. WHERE A DITCHING MACHINE IS RUN CLOSE TO TREES HAVING ROOTS SMALLER THAN TWO (2) INCHES IN DIAMETER, THE WALL OF THE TRENCH ADJACENT TO THE TREE SHALL BE HAND TRIMMED, MAKING CLEAN CUTS THROUGH. ROOTS ONE (1) INCH AND LARGER IN DIAMETER SHALL BE PAINTED WITH TWO COATS OF TREE SEAL, OR EQUAL. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN TWENTY FOUR (24) HOURS; AND WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.

SLEEVE INSTALLATION: ALL PIPE AND WIRE WILL BE INSTALLED IN SEPARATE SLEEVES AT ALL PAVED SURFACES, SIDEWALKS, DRIVEWAYS, WALL FOOTINGS AND HARDSCAPE AREAS. ALL SLEEVES MAY NOT BE SHOWN AND/OR SIZED ON THE PLANS. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED, REQUIRES HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

MAINLINE INSTALLATION: ON PVC TO METAL CONNECTIONS, THE CONTRACTOR SHALL WORK THE METAL CONNECTIONS FIRST. TEFLON TAPE SHALL BE USED ON ALL THREADED PVC TO PVC AND PVC TO METAL JOINTS. WHERE PVC CONNECTIONS ARE REQUIRED, USE THREADED PVC ADAPTERS INTO WHICH THE PIPE MAY BE WELDED. INSTALL THRUST BLOCKS AT JOINTS ON MAINLINE PIPE 2-1/2" AND GREATER.

WIRING INSTALLATION: PROVIDE TRACING WIRE ALONG ENTIRE MAINLINE ROUTING WITH 24—INCH COIL OF TRACING WIRE IN EACH VALVE BOX. TAPE AND BUNDLE WIRE AT 10' ON CENTER. PROVIDE 18" SLACK AT EACH ELBOW IN MAIN LINE AND AT EACH REMOTE CONTROL VALVE. PULL ONE ADDITIONAL SPARE WIRE TO THE MOST DISTANT VALVE LOCATION FOR POTENTIAL FUTURE USE. SPLICE IN VALVE BOXES ONLY.

WIRING SHALL OCCUPY THE SAME TRENCH AND SHALL BE INSTALLED ALONG THE SAME ROUTE AS PRESSURE SUPPLY OR LATERAL LINES WHEREVER POSSIBLE. WHERE MORE THAN ONE (1) WIRE IS PALED IN A TRENCH, THE WIRING SHALL BE TAPED TOGETHER AT INTERVALS OF TEN (10) FEET.

AN EXPANSION CURL SHALL BE PROVIDED WITHIN THREE (3) FEET OF EACH WIRE CONNECTION. EXPANSION CURL SHALL BE MIN FIVE (5) FEET AT EACH SPLICE CONNECTION SO THAT IN CASE OF REPAIR, THE VALVE BONNET MAY BE BROUGHT TO THE SURFACE WITHOUT DISCONNECTING THE CONTROL WIRES. CONTROL WIRES SHALL BE LAID LOOSELY IN TRENCH WITHOUT STRESS OR STRETCHING OF CONTROL WIRE CONDUCTORS.

ZONING: C-2

PAPP #: 2201538

ZONING: <u>C-2</u>

REZONING: <u>Z-101-76</u>

ZA CASES: <u>34419/4982</u>0/10017

LSPL:

LSIS:

PAPP #: 2201538 KIVA #: 17-287A 7 SDEV #: 1700061 CCPR #: Q01-24 **SSON** 

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 AZ 85041
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 REVISIONS

drawn by: ALS
designed by: ALS
checked by: ALS
project no.: 021-08522
date: 06.07.2022

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AUTOMATIC CONTROLLER: INSTALL AS PER MANUFACTURER'S INSTRUCTIONS REMOTE CONTROL VALVES SHALL BE CONNECTED TO CONTROLLER IN NUMERICAL SEQUENCE AS SHOWN ON THE DRAWINGS. FINAL LOCATION OF AUTOMATIC CONTROLLERS SHALL BE APPROVED BY THEOWNER'S REPRESENTATIVE. UNLESS OTHERWISE NOTED, THE 120 VOLT ELECTRICAL POWER TO THE AUTOMATIC CONTROLLER LOCATION SHALL BE FURNISHED BY THE ELECTRICAL SUBCONTRACTOR OR OWNER. THE FINAL ELECTRICAL HOOK-UP SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.

LATERAL PIPE INSTALLATION: PIPE ROUTING SHOWN ON DRAWINGS IS DIAGRAMMATIC. INSTALL LINES (AND VARIOUS ASSEMBLIES) IN SUCH A MANNER AS TO CONFORM WITH THE DETAILS SHOWN. WHERE PIPING IS SHOWN ON THE DRAWINGS TO BE UNDER PAVED AREAS BUT RUNNING PARALLEL AND ADJACENT TO PLANTED AREAS, THE INTENTION IS TO INSTALL THE PIPING IN THE PLANTED AREAS.

PARALLEL LINES SHALL NOT BE INSTALLED DIRECTLY OVER ONE ANOTHER. ALL LINES SHALL HAVE A MINIMUM 6" CLEARANCE FROM EACH OTHER AND FROM LINES OF OTHER TRADES AND/OR AS PER CITY GOVERNMENTAL AND UTILITY STANDARDS. INSTALL IRRIGATION PIPE AND COMPONENTS A MINIMUM OF 8-FEET FROM TREE ROOT BALLS.

PIPE SIZES SHOWN ON PLAN ARE MINIMUMS. IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO ADJACENT SECTIONS. INSTALL PIPE WITH MARKINGS UP FOR VISUAL INSPECTION.

REPAIR DENTED AND DAMAGED PIPE BY CUTTING OUT AND DISCARDING THE DENTED OR DAMAGED SECTION, AND REJOINING WITH A COUPLING. IN JOINING, USE ONLY THE SPECIFIED SOLVENT AND MAKE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. GIVE SOLVENT WELDS AT LEAST 15 MINUTES SET-UP TIME BEFORE MOVING OR HANDLING, AND 24 HOURS CURING TIME BEFORE FILLING WITH WATER. CENTERLOAD PLASTIC PIPE WITH A SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND WHIPPING UNDER PRESSURE

VALVE INSTALLATION: INSTALL ALL ASSEMBLIES SPECIFIED HEREIN IN ACCORDANCE WITH RESPECTIVE DETAIL. IN ABSENCE OF DETAIL DESIGN OR SPECIFICATIONS PERTAINING TO SPECIFIC ITEMS REQUIRED TO COMPLETE WORK. PERFORM SUCH WORK IN ACCORDANCE WITH BEST STANDARD PRACTICE WITH PRIOR APPROVAL OF ARCHITECT.

REMOTE CONTROL VALVES: INSTALL WHERE SHOWN ON DRAWINGS AND DETAILS. WHEN GROUPED TOGETHER, ALLOW AT LEAST TWELVE (12) INCHES BETWEEN VALVES. INSTALL EACH REMOTE CONTROL VALVE IN A SEPARATE VALVE BOX.

VALVE BOXES: ALL ELECTRICAL AND MANUAL VALVES SHALL BE ENCLOSED IN AN APPROPRIATE WIDTH VALVE BOX. THIS BOX SHALL BE INSTALLED FLUSH WITH FINISH GRADE. INSTALL VALVE BOXES ON A SUITABLE BASE OF GRAVEL TO PROVIDE A LEVEL FOUNDATION AT PROPER GRADE AND TO PROVIDE DRAINAGE OF THE ACCESS BOX. SUPPORT BOX WITH BLOCK OR NOTCH BOX TO PROTECT PIPE UNDER BOX.

FLUSHING OF SYSTEM: PRIOR TO BACKFILLING, COMPLETELY FLUSH AND TEST THE MAIN LINE PER TESTING AND ADJUSTMENT SECTION BELOW. AFTER ALL NEW IRRIGATION LINES AND EMITTER RISERS ARE IN PLACE AND CONNECTED, ALL NECESSARY DIVERSION WORK HAS BEEN COMPLETED, AND PRIOR TO INSTALLATION OF EMITTER HEADS, THE CONTROL VALVES SHALL BE OPENED AND FULL HEAD OF WATER USED TO FLUSH OUT THE SYSTEM

EMITTER HEADS SHALL BE INSTALLED ONLY AFTER FLUSHING OF THE SYSTEM HAS BEEN ACCOMPLISHED TO THE COMPLETE SATISFACTION OF THE LANDSCAPE ARCHITECT.

BACKFILL: INSTALL PRESSURE SUPPLY LINES AND CONTROL WIRING WITH A MINIMUM COVER OF 18" BASED ON FINISH GRADE. PROVIDE A MINIMUM 24" OF COVER WHEN PRESSURE LINES ARE LOCATED BELOW AGGREGATE BASE COURSE AT TRAFFIC BEARING PAVING. INSTALL NON-PRESSURE IRRIGATION MATERIALS WITH A MINIMUM COVER OF 12" BASED ON FINISHED GRADE.

TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE PERFORMED. CAREFULLY BACKFILL TRENCHES WITH APPROVED MATERIAL CONSISTING OF TOPSOIL, GRANULAR EARTH FILL, SAND OR OTHER APPROVED MATERIALS FREE FROM EARTHEN CLODS OR ROCKS LARGER THAN 2" IN ANY DIMENSION, TO WITHIN 6" OF FINAL GRADE. THE TOP 6" OF BACKFILL SHALL BE CLEAN, FERTILE, FRIABLE TOPSOIL FREE OF EARTHEN CLODS, SUBSOIL, NOXIOUS WEEDS OR OTHER FOREIGN MATTER SUCH AS STONES, ROOTS, STICKS AND OTHER EXTRANEOUS MATERIALS. ANY SPECIAL SOIL MIXTURE SHALL BE REPLACED TO THE ORIGINAL CONDITION IT WAS PRIOR TO IRRIGATION INSTALLATION.

COMPACTION: MECHANICALLY OR MANUALLY COMPACT BACKFILL MATERIAL IN LANDSCAPED AREAS TO A DRY DENSITY OF 90%. BACKFILL UNDER TRAFFIC | PAVING AND HARDSCAPED AREAS WITH A MINIMUM SAND LAYER OF 2" BELOW INTHE PIPE AND 6" LAYER ABOVE THE PIPE; COMPACT THE EARTHEN BACKFILL MATERIAL TO A DRY DENSITY OF 95% IN DEPTHS OF 8" LOOSE MATERIAL LIFTS.

EMITTER INSTALLATION: THE EMITTER ASSEMBLIES AS DETAILED ON THE PLANS SHALL CONSIST OF THE EMITTER UNIT, 1/2 INCH CLASS 315 OR FLEX HOSE RISER WITH SCHEDULE 40 MALE ADAPTORS AND FITTINGS REQUIRED AS SHOWN IN DETAILS.

MULTI-OUTLET EMITTER ASSEMBLIES SHALL BE INSTALLED ON ALL TREES AND SHRUBS AND SHALL BE DISTRIBUTED AS PER PLANS; SEE DETAILS.

TESTING AND ADJUSTMENT

TESTING OF PRESSURE MAINLINES SHALL OCCUR PRIOR TO INSTALLATION OF ELECTRIC CONTROL VALVES. MAKE NECESSARY PROVISIONS FOR THOROUGHLY BLEEDING THE LINE OF AIR AND DEBRIS. BEFORE TESTING, FILL THE LINE WITH WATER FOR A PERIOD OF AT LEAST 24 HOURS. TEST LIVE WATER LINES FOR LEAKS AT A HYDROSTATIC PRESSURE OF 150 PSI FOR A PERIOD OF TWO HOURS, WITH COUPLINGS EXPOSED AND WITH PIPE SECTIONS CENTERLOADED. PROVIDE REQUIRED TESTING EQUIPMENT AND PERSONNEL. REPAIR LEAKS AND RETEST UNTIL ACCEPTED BY THE ARCHITECT

ALL PIPING UNDER PAVED AREAS SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 150 PSI, AND PROVED WATERTIGHT, PRIOR TO PAVING. ALL HYDROSTATIC TESTS SHALL BE MADE ONLY IN THE PRESENCE OF THE ARCHITECT. NO PIPE SHALL BE BACKFILLED UNTIL IT HAS BEEN INSPECTED, TESTED AND APPROVED IN WRITING.

WHEN THE IRRIGATION SYSTEM IS COMPLETED, PERFORM A COVERAGE TEST TO DETERMINE IF THE WATER COVERAGE FOR PLANTING AREAS IS COMPLETE AND ADEQUATE. FURNISH ALL MATERIALS AND PERFORM ALL WORK REQUIRED TO CORRECT ANY INADEQUACIES OF COVERAGE DUE TO DEVIATIONS FROM DRAWINGS. THIS TEST SHALL BE ACCOMPLISHED BEFORE ANY GROUNDCOVER IS 있 PLANTED.

UPON COMPLETION OF EACH PHASE OF WORK, ENTIRE SYSTEM SHALL BE TESTED AND ADJUSTED TO MEET SITE REQUIRÉMENTS

가들 VALVE OPERATION: AUTOMATIC VALVE OPERATION SHALL BE TESTED BY ACTIVATING THE CONTROLLER. WIRING AND VALVES SHALL BE REPAIRED FOR PROPER OPERATION AS REQUIRED.

QUALITY CONTROL

THE ENTIRE IRRIGATION SYSTEM SHALL BE UNDER FULL AUTOMATIC OPERATION FOR A PERIOD OF SEVEN (7) DAYS PRIOR TO ANY PLANTING. THE ARCHITECT HAS THE RIGHT TO WAIVE OR SHORTEN THE OPERATION PERIOD.

CLEAN-UP: CLEAN-UP SHALL BE MADE AS EACH PORTION OF WORK PROGRESSES. REFUSE AND EXCESS DIRT SHALL BE REMOVED FROM THE SITE ALL WORK AND PAVING SHALL BE SWEPT OR WASHED DOWN AND ANY DAMAGE SUSTAINED TO EXISTING WORK SHALL BE REPAIRED TO ORIGINAL CONDITIONS WITHOUT COST TO THE OWNER.

TEMPORARY REPAIRS: THE OWNER RESERVES THE RIGHT TO MAKE TEMPORARY REPAIRS AS NECESSARY TO KEEP THE IRRIGATION SYSTEM EQUIPMENT IN OPERATING CONDITION. THE EXERCISE OF THIS RIGHT BY THE OWNER SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES UNDER THE TERMS OF THE GUARANTEE AS HEREIN SPECIFIED.

ADJUSTMENT OF THE SYSTEM: IF IT IS DETERMINED THAT ADJUSTMENTS IN THE IRRIGATION EQUIPMENT WILL PROVIDE PROPER AND MORE ADEQUATE COVERAGE, MAKE SUCH ADJUSTMENTS PRIOR TO PLANTING. ADJUSTMENTS MAY ALSO INCLUDE THE ADDITION OF EMITTERS OR ELECTRIC VALVE FLOW CONTROL CHANGES AS REQUIRED. FLUSH AND ADJUST ALL EMITTER HEADS FOR OPTIMUM PERFORMANCE AND TO PROVIDE PROPER DISTRIBUTION TO PLANT MATERIAL.

FINAL INSPECTION AND CLOSEOUT

SYSTEM OPERATION AND MAINTENANCE TRAINING: AFTER THE SYSTEM HAS BEEN COMPLETED AND PRIOR TO FINAL ACCEPTANCE, INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN THE OPERATION AND MAINTENANCE OF THE

SUBMIT CLOSE-OUT MATERIALS: SUBMIT PROJECT RECORD DRAWINGS, MANUFACTURERS' WARRANTIES, CONTROLLER CHARTS AND REQUIRED EQUIPMENT PER SECTIONS 01701, 01702 AND PART 1 - GENERAL

FINAL INSPECTION: THE CONTRACTOR SHALL OPERATE EACH SYSTEM IN ITS ENTIRETY FOR THE ARCHITECT AT THE TIME OF FINAL OBSERVATION. ANY ITEMS DEEMED NOT ACCEPTABLE BY THE ARCHITECT SHALL BE REWORKED TO THE COMPLETE SATISFACTION OF THE ARCHITECT. THE CONTRACTOR SHALL SHOW EVIDENCE TO THE ARCHITECT THAT THE OWNER HAS RECEIVED ALL ACCESSORIES, CHARTS, RECORD DRAWINGS AND EQUIPMENT AS REQUIRED BEFORE FINAL INSPECTION CAN OCCUR.

END OF SECTION 02810

<u>SECTION 02920</u>

LANDSCAPE SITE PREPARATION PART 1 — GENERAL

PROVIDE LABOR, MATERIALS, AND SERVICES NECESSARY TO PREPARE SITE FOR A COMPLETE AND PROPER INSTALLATION AS INDICATED.

QUALITY ASSURANCE

COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING MATERIALS, METHODS OF WORK, AND DISPOSAL OF EXCESS WASTE MATERIALS.

OBTAIN AND PAY FOR REQUIRED INSPECTIONS, PERMITS, AND FEES. PROVIDE NOTICES REQUIRED BY GOVERNMENTAL AUTHORITIES.

PROJECT CONDITIONS

OCATE AND IDENTIFY EXISTING UNDERGROUND AND OVERHEAD SERVICES AND UTILITIES WITHIN CONTRACT LIMITS. CALL BLUE STAKE FOR UTILITY LOCATION STAKING. PROVIDE ADEQUATE MEANS OF PROTECTION OF UTILITIES AND SERVICES DESIGNATED TO REMAIN. REPAIR UTILITIES DAMAGED DURING SITE WORK OPERATIONS AT CONTRACTOR'S EXPENSE.

WHEN UNCHARTED OR INCORRECTLY CHARTED UNDERGROUND PIPING OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.

LOCATE, PROTECT, AND MAINTAIN BENCH MARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS AT CONTRACTOR'S EXPENSE.

PERFORM SITE WORK OPERATIONS AND THE REMOVAL OF DEBRIS AND MATERIALS TO ASSURE MINIMUM INTERFERENCE WITH STREETS, WALKS, AND OTHER ADJACENT FACILITIES.

OBTAIN GOVERNING AUTHORITIES WRITTEN PERMISSION WHEN REQUIRED TO CLOSE OR OBSTRUCT STREET, WALKS AND ADJACENT FACILITIES. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS WHEN REQUIRED BY GOVERNING AUTHORITIES.

CONTROL DUST CAUSED BY THE WORK. DAMPEN SURFACES AS REQUIRED. COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES.

PROTECT EXISTING BUILDINGS, PAVING, AND OTHER SERVICES OR FACILITIES ON SITE AND ADJACENT TO THE SITE FROM DAMAGE CAUSED BY SITE WORK OPERATIONS. COST OF REPAIR AND RESTORATION OF DAMAGE ITEMS AT CONTRACTOR'S EXPENSE.

PROTECT AND MAINTAIN STREET LIGHTS, UTILITY POLES AND SERVICES, TRAFFIC SIGNAL CONTROL BOXES, CURB BOXES, VALVES AND OTHER SERVICES, EXCEPT ITEMS DESIGNATED FOR REMOVAL.

PERFORM SITE PREPARATION WORK PRIOR TO COMMENCING SITE CONSTRUCTION. LOCATE, PROTECT, AND MAINTAIN ACTIVE UTILITIES AND SITE IMPROVEMENTS TO

PROVIDE NECESSARY BARRICADES, COVERINGS, AND PROTECTION TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS AND AS REQUIRED BY GOVERNING AGENCIES.

PART 2 - PRODUCTS

MATERIALS/EQUIPMENT

MATERIALS AND EQUIPMENT: AS SELECTED BY THE CONTRACTOR, AT CONTRACTOR OPTION, UNLESS INDICATED OTHERWISE.

HERBICIDE FOR LAWN RESTORATION: "ROUND UP" BY MONSANTO.

PART 3 - EXECUTION

EXISTING UTILITIES: CALL BLUE STAKE TO FLAG LOCATION OF UNDERGROUND UTILITIES BEFORE CONSTRUCTION BEGINS.

INFORMATION ON THE DRAWINGS RELATED TO EXISTING UTILITY LINES AND SERVICES IS FROM THE BEST SOURCES PRESENTLY AVAILABLE. SUCH INFORMATION IS FURNISHED FOR INFORMATION ONLY AND IS NOT GUARANTEED. EXCAVATE TEST PITS AS REQUIRED TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.

REMOVE EXISTING STUMPS AND ROOTS TO A CLEAR DEPTH OF 36" BELOW SUBGRADE. REMOVE STUMPS AND ROOTS TO THEIR FULL DEPTH WITHIN  $5'\!-\!0"$ OF UNDERGROUND STRUCTURES, UTILITY LINES, FOOTINGS AND PAVED AREAS.

AVOID SOIL COMPACTION BY USE OF EQUIPMENT, PARKING AND DUMPING OF CHEMICALS BENEATH THE CANOPY OF EXISTING TREES TO REMAIN.

EXAMINE EXISTING CONDITIONS. PROTECT AND MAINTAIN EXISTING PLANT MATERIAL EXCEPT ITEMS DESIGNATED FOR SALVAGE OR REMOVAL

DISPOSAL OF WASTE MATERIALS

STOCKPILE, REMOVE FROM SITE DAILY, AND LEGALLY DISPOSE OF WASTE MATERIALS AND DEBRIS. ACCUMULATION IS NOT PERMITTED.

MAINTAIN DISPOSAL ROUTES, CLEAR, CLEAN AND FREE OF DEBRIS.

ON SITE BURNING OF COMBUSTIBLE CLEARED MATERIALS IS NOT PERMITTED. UPON COMPLETION OF SITE PREPARATION WORK, CLEAN AREAS WITHIN CONTRACT LIMITS, REMOVE TOOLS, AND EQUIPMENT. SITE TO BE CLEAR, CLEAN, AND FREE OF MATERIALS AND DEBRIS AND SUITABLE FOR SITE WORK OPERATIONS.

MATERIALS, ITEMS AND EQUIPMENT NOT SCHEDULED FOR REUSE OR REMOVAL ARE THE PROPERTY OF THE CONTRACTOR. REMOVE CLEARED MATERIALS FROM THE SITE AS THE WORK PROGRESSES. STORAGE AND SALE OF CONTRACTORS SALVAGE ITEMS ON SITE IS NOT PERMITTED.

CLEAN UP

REMOVE DEBRIS, RUBBISH, AND MATERIALS RESULTING FROM EXECUTION OF THE WORK.

END OF SECTION 02920

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WORK INCLUDED: ALL LABOR, MATERIALS AND INSTALLATION NECESSARY TO COMPLETE THE FINE GRADING, INCIDENTAL GRADING, PLANTING AND RELATED ITEMS AS INDICATED OR SPECIFIED.

RELATED WORK DESCRIBED ELSEWHERE: SECTION 02810 - IRRIGATION SYSTEM

#### SUBMITTALS

CERTIFICATES: SUBMIT INSPECTION CERTIFICATES BY STATE, FEDERAL AND OTHERS INDICATING THE ORIGIN AND HEALTH OF THE PLANT MATERIAL IN DUPLICATE. SUBMIT AFFIDAVIT THAT THE INSPECTION CERTIFICATES REFER TO THE PLANT MATERIAL INSTALLED.

SUBMIT SAMPLES OF THE FOLLOWING FOR APPROVAL: SOIL MIX: 1 PINT FOR EACH TYPE CHEMICAL ADDITIVES: 1 PINT FOR EACH TYPE

AGGREGATE: 1 PINT FOR EACH TYPE DECOMPOSED GRANITE: 1 PINT

LANDSCAPE ARCHITECT RESERVES THE RIGHT TO TAKE AND ANALYZE SAMPLES OF MATERIALS FOR CONFORMITY TO SPECIFICATIONS AT ANY TIME. ARCHITEC ALSO RESERVES THE RIGHT TO REFUSE ANY MATERIAL NOT IN ACCORDANCE WITH SPECIFICATIONS. REJECTED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED AT THE CONTRACTOR'S EXPENSE. COST OF TESTING MATERIALS NOT MEETING SPECIFICATION SHALL BE PAID BY CONTRACTOR.

#### QUALITY ASSURANCE

PLANT MATERIAL SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO PLANTING. ARCHITECT RESERVES THE RIGHT TO REFUSE ANY PLANT MATERIAL THAT IS UNACCEPTABLE.

QUALITY & SIZE: THE QUALITY AND SIZE OF ALL PLANT MATERIALS SHALL BE BASED UPON THE AMERICAN NURSERY ASSOCIATION ACCEPTED STANDARDS FOR SIZE. SHAPE AND CALIPER (NO OTHER METHOD SHALL BE USED). CONTAINER GROWN PLANTS SHALL HAVE BEEN GROWN IN POTS, CANS, TUBS, OR BOXED FOR A MINIMUM OF SIX MONTHS, EXCEPT WHEN THE PLANTS SHALL HOLD THE ENTIRE ROOTBALL TOGETHER UPON REMOVAL FROM THE CONTAINERS, WITHOUT BEING ROOTBOUND. ALL NON-LOCAL GROWN PLANTS SHALL BE "CLIMATIZED" FOR AT LEAST TWO WEEKS IN PARTIAL SHADE, DURING THE SUMMER MONTHS, PRIOR TO DELIVERY TO THE SITE. TREES SHALL HAVE STRAIGHT TRUNKS THROUGHOUT THEIR HEIGHT, EXCEPT MULTI-TRUNKED SPECIFIED MATERIAL. ANY TREE WITH WEAK TRUNKS INCAPABLE OF SUPPORTING ITS FULL GROWTH SHALL BE DOUBLE-STAKED.

ALL PLANT MATERIALS SHALL BE PLACED IN THEIR PROPER LOCATION FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.

PROVIDE A WRITTEN GUARANTEE WARRANTING THAT ALL SHRUB AND GROUND COVER MATERIAL WILL BE IN A HEALTHY, THRIVING CONDITION FOR 90 DAYS AND THAT TREES WILL BE IN A HEALTHY, THRIVING CONDITION FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLÉTION. MATERIAL THAT IS NOT SHALL BE REPLACED AT NO COST TO THE OWNER WITHIN THIRTY DAYS OF WRITTEN NOTICE. WARRANTY PLANTING THAT IS REPLACED FOR 90 DAYS FROM THE DATE OF PLANTING.

DELIVERY, STORAGE, AND HANDLING

ALL PLANT MATERIALS DELIVERED TO THE SITE SHALL BE PLANTED AS SOON AS PRACTICAL, AFTER INSPECTION AND APPROVAL. NO SOD SHALL BE KEPT ON-SITE FOR MORE THAN 11 HOURS AFTER DELIVERY WITHOUT INSTALLATION. UNDER NO CIRCUMSTANCES SHALL SOD BE LEFT ON—SITE OVERNIGHT AND THEN PLACED THE FOLLOWING DAY. ALL SOD NOT INSTALLED WITHIN THIS TIME SHALL BE REMOVED. KEEP ALL PLANT MATERIALS OUT OF FULL SUN DURING SUMMER MONTHS. PROTECT FROM DRYING WINDS AND DUST STORMS. ALL B&B STOCK SHALL BE PLANTED IMMEDIATELY UPON ARRIVAL. OR HEELED-IN FOR TEMPORARY STORAGE UNTIL PLANTING. DELIVERY AND INSTALLATION OF ALL PLANT MATERIALS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. AND HE SHALL MAKE ALL ARRANGEMENTS FOR PROPER LABOR TO AVOID DELAYS AND REJECTION OF PLANT MATERIALS WHICH HAVE BEEN ON-SITE TOO LONG WITHOUT PLANTING OR INSTALLATION.

THE LANDSCAPE CONTRACTOR SHALL DO EVERYTHING REASONABLE TO PROTECT ALL FROST SENSITIVE PLANT MATERIAL FROM DAMAGE WHILE UNDER HIS CONTROL. THIS INCLUDES STORAGE ON SITE PRIOR TO INSTALLATION THROUGH THE MAINTENANCE PERIOD. SHOULD PLANT MATERIAL INSTALLATION OCCUR DURING FROST PRONE MONTHS, THE CONTRACTOR MAY REQUEST TO THE LANDSCAPE ARCHITECT, IN WRITING, FOR A SUBSTITUTION OR A "HOLD" ON INSTALLATION UNTIL THE DANGER OF FROST HAS PASSED.

# JOB CONDITIONS

SITE SHALL HAVE GRADES AT +/- ONE TENTH OF A FOOT EXCEPT AS NOTED. THE PLANTING AREAS SHALL BE FREE OF WASTE OR DEBRIS DEVELOPED BY OTHER TRADES. DISCREPANCY FROM THESE CONDITIONS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT BEFORE BEGINNING CONSTRUCTION.

STOCKPILED TOPSOIL LOCATIONS SHALL BE AS DESIGNATED BY THE CONTRACTOR. USE CARE IN PROTECTING STOCKPILED SOIL.

# PLANT QUANTITIES

QUANTITIES ON PLANT LIST, IF SHOWN, ARE NOT GUARANTEED. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL PLANT MATERIALS SHOWN ON THE PLANS, WHETHER SHOWN IN A PLANT "QUANTITY" LIST OR NOT. IF SHOWN, QUANTITIES ARE PROVIDED FOR ESTIMATING OR CITY APPROVAL PURPOSES ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE FOR BIDDING. WHEN A GROUND COVER OR GRANITE IS SPECIFIED IN ONE SECTION OF A PLANTER BED, IT SHALL BE ASSUMED THE GROUND COVER EXTENDS THROUGHOUT SAID BED, BELOW ALL 1,5,15 GALLON AND LARGER PLANTS. ALL SIGNIFICANT DIFFERENCES BETWEEN THE SITE AND THE DRAWINGS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY UPON DETERMINING SAID DISCREPANCIES. FAILURE TO DO SO SHALL REQUIRE THE CONTRACTOR TO MAKE ADDITIONAL PLANTINGS TO FILL SPACES, OR OTHER CHANGES AS DETERMINED BY THE LANDSCAPE ARCHITECT AT THE CONTRACTOR'S EXPENSE.

# PART 2 - PRODUCTS

# MATERIALS

PLANT MATERIAL: FURNISH PLANT SPECIES AND SIZE AS INDICATED ON THE DRAWINGS. SUBSTITUTIONS IN PLANT SPECIES OR SIZE CAN BE MADE ONLY BY WRITTEN APPROVAL.

MANURE: SHALL BE WELL-ROTTED, UNBLEACHED STEER MANURE, NOT LESS THAN 8 MONTHS NOR MORE THAN 2 YEARS OLD. REASONABLY FREE OF WOOD SHAVINGS, SAWDUST OR REFUSE, AND SHALL NOT CONTAIN MORE THAN 10" STRAW OR OTHER FOREIGN MATERIALS BY VOLUME.

MULCH: SHALL BE WELL-ROTTED, DECOMPOSED WOOD FIBER, OR COTTON STUBBLE-DERIVED MATERIALS WITH NO FILLERS OR AGENTS, SAVE FOR THE BALANCE OF NITROGEN—ADDING INGREDIENTS. PH SHALL RANGE FROM 6.8—7.2: MOISTURE CONTENT SHALL BE 30-40% BY WEIGHT, AND NUTRIENTS SHALL COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS BY VOLUME: NITRATE NITROGEN - 1.5%; ORGANIC NITROGEN - 3.65%; PHOSPHOROUS - 1.14%; POTASSIUM - 1.19%; IRON - 0.84%. ALL MULCH IS SUBJECT TO APPROVAL OF THE LANDSCAPE ARCHITECT. DELIVERY TO SITE SHALL BE EITHER BULK OR MARKED BAGS. ACCEPTABLE PRODUCTS ARE "GREENWORLD MULCH", "COM-PEL SOIL CONDITIONER", AND NATURAL "PEAT MOSS"

AGGREGATE: 1" IN SIZE MAXIMUM AND FREE OF SAND, SILT OR CLAY PARTICLES AND ALL OTHER DELENTERIOUS MATERIALS.

WATER: USE CLEAN, FRESH WATER FREE FROM IMPURITIES INJURIOUS TO VEGETATION. WATER FOR PLANTING PURPOSES TO BE SUPPLIED BY OWNER CONTRACTOR TO PROVIDE ALL HOSES, CONNECTIONS, AND OTHER EQUIPMENT NECESSARY TO TRANSPORT WATER FROM SOURCE TO REQUIRED LOCATIONS. DO NOT WASTE WATER, NOT LET IT RUN INTO CITY THOROUGHFARES

SAND: SHALL BE COURSE, GRANULAR CONCRETE SAND OR GROUT SAND, CONFORMING TO ASTM  $C\!-\!33$ , THOROUGHLY AND UNIFORMLY WASHED, ENTIRELY FREE OF OIL OR OTHER DELÉTERIOUS SUBSTANCES.

FERTILIZER TABLETS: SHALL BE "AGRIFORM" OR "ZIM" (IN PILL OR TABLET FORM). PLACE 4-10" DEEP AND 2" OUTSIDE OF THE ROOTBALL AT THE FOLLÓWING RATES: ONE TABLET/1 GAL; TWO PER 5 GAL; ONE TABLET PER EACH 1/2" OF TRUNK DIAMETER, OR ONE PER EACH 24" OF HEIGHT, WHICHEVER IS GREÁTER.

TOPSOIL SHALL BE SCREENED, FERTILE, FRIABLE SOIL FOR WELL-DRAINED ARABLE LAND FREE OF NON-ORGÁNIC REFUSE, NOXIOUS WEEDS, AND ALL MATERIAL TOXIC TO PLANT GROWTH AND MAY NOT NECESSARILY BE THE TOP 6" OF SOIL ON THE SITE. TOPSOIL USED FOR PREPARING SPECIAL BACKFILL AT PLANTS SHALL COMPLY WITH THE MAG SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REQUIRE TESTING BY AN INDEPENDENT LAB COMPLIANT WITH MAG. THE CONTRACTOR SHALL PAY ALL EXPENSES INVOLVED.

PLANTING PIT BACKFILL: FOR ALL TREES AND SHRUBS SHALL BE AS FOLLOWS: 6 PARTS BY VOLUME ON SITE FERTILE SOIL 4 PARTS BY VOLUME NITROLIZED SAWDUST

1 POUND 10-20-0 PER CUBIC YARD OF MIX

TREE STAKING, GUYING & BRACING: WHEN STIPULATING ON CONTRACT DOCUMENTS, ÁLL 15-GAL AND LARGER TREES SHALL BE DOUBLE STAKED (SEE DETAIL ON PLANS). STAKES SHALL BE A 2" DIAMETER ROUND PINE "LODGE" POLE". LENGTH AS REQUIRED BELOW, AND INSTALLED AS FOLLOWS: STAKES SHALL BE PLACED IMMEDIATELY ADJACENT TO, BUT IN NO CASE THROUGH, THE ROOTBALL, PENETRATING AT LEAST 8" INTO UNDISTURBED SOIL, AND ALIGNED VERTICALLY. THE STAKE SHALL BE POINTED AT ONE END, AND ALIGNMENT SHOULD NOT INTERFERE WITH THE EXISTING BRANCH STRUCTURE OF THE TREE. INSTALL ALL STAKES AS FOLLOWS: SINGLE TRUNK TREES - 2 EACH 10' LONG STAKES: MULTI-TRUNK TREES - 3 EACH 8' LONG STAKES. WIRE FOR FASTENING INSTALL DECORATIVE ROCK TO A DEPTH AS INDICATED ON THE PLANS, APPLY A TREES TO STAKES SHALL BE #10 PLASTIC GUYWIRE LOOPED TWICE AROUND STAKES OR OTHERWISE ATTACHED TO PREVENT REMOVAL OF THE WIRE. ALI WIRE ATTACHED TO THE TREES SHALL BE DONE AT THE LOWEST BRANCHES ENCASED WITH RUBBER HOSES, AND CLAMPED WITH AT LEAST TWO CLAMPS HOSE MAY BE EITHER NEW OR OLD RUBBER, BUT NOT PLASTIC. ALLOW 1" CLEARANCE AROUND THE TRUNKS OF 36" BOX TREES OR LARGER (UNLESS SPECIFIED OTHERWISE ON THE PLANS) MATERIAL WHEN FORMING THE HOSE-ENCASED WIRE RING. FORM A COMPLETE RING OF HOSE-ENCASED WIRE FOR EACH OF TREE GUYS. APPROXIMATELY 120 DEGREES APART. SET THE GROUND STAKES AN APPROPRIATE DISTANCE FROM THE TREE TO PROVIDE AN APPROXIMATE ANGEL OF 45 DEGREES BETWEEN THE GROUND AND WIRE.

MULCH: SHALL BE THE COLOR AND SIZE PER PLAN, FREE OF CLUMPS WHICH CANNOT BE BROKEN WITH ONE SHOVEL BLOW, FREE OF FOREIGN SUBSTANCES BE OBTAINED ONE COLOR SHALL BE USED FOR THE ENTIRE WORK, AND SHALL FROM ONLY ONE SOURCE. MULCH SHALL BE INSTALLED TO A DEPTH OF UNLESS OTHERWISE NOTED AND SHALL BE MEASURED AFTER COMPACTION AND ROLLING. REMOVE ALL WEEDS BY MECHANICAL METHODS OR BY REPEATING SPRAYING OF WEED KILLER FOR WEEDS AND ROUND-UP FOR GRASSES. A PRE-EMERGENT SHALL BE USED IN ALL MULCH AREAS. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATIONS. PLASTIC LINERS ARE

PART 3 - EXECUTION

NOT ALLOWED UNDER ANY CONDITION.

# COORDINATION

COORDINATION: COORDINATE AS REQUIRED WITH OTHER TRADES TO ASSURE PROPER AND ADEQUATE PROVISION IN THE WORK OF THOSE FOR INTERFACE WITH THE WORK OF THIS SECTION. COORDINATE SCHEDULES FOR INSTALLATION OF THE WORK OF THIS SECTION WITH SCHEDULES FOR OTHER INSTALLATIONS, TO ASSURE ORDERLY PROGRESS OF THE TOTAL CONSTRUCTION SEQUENCE.

# FIELD QUALITY CONTROL

SOIL COMPATIBILITY TESTS: PERFORM TOPSOIL COMPATIBILITY TESTS FOR PH AND CHEMICAL CONTAMINATION WHEN FINE GRADING IS IN PLACE AND PRIOR TO INSTALLATION OF PLANT MATERIAL.

TOPSOIL INSTALLATION: DO NOT WORK SOIL WHEN MOISTURE CONTENT IS SO GRAT THAT COMPACTION WILL OCCUR, NOR WHEN IT IS SO DRY THAT CLODS WILL NOT BREAK READILY. APPLY WATER IF NECESSARY TO BRING SOIL TO AN OPTIMUM MOISTURE CONTENT FOR FILLING AND PLANTING.

ALL COMPACTED SOIL WILL BE TREATED AS NECESSARY TO PROVIDE ADEQUATE AERATION.

# LAYOUT AND EXCAVATION OF PLANTING AREAS

LAYOUT TREE LOCATIONS WITH STAKES OR GYPSUM AT LOCATIONS WHEN ON DRAWINGS. THE LANDSCAPE ARCHITECT SHALL FIELD CHECK THE LAYOUT LOCATION OF PLANTS AND WILL DIRECT THE CONTRACTOR TO ADJUST TO EXACT POSITION BEFORE EXCAVATION BEGINS. NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 48 HOURS PRIOR TO SCHEDULING WORK

NOTIFY THE LANDSCAPE ARCHITECT TO ROCK AND OTHER OBSTRUCTIONS WHICH ARE ENCOUNTERED IN THE EXCAVATION OF PLANT PITS, ALTERNATIVE LOCATIONS MAY BE SELECTED BY LANDSCAPE ARCHITECT

DIG PLANTING PITS WITH PERPENDICULAR SIDES, 1-1/2 TIMES THE SIZE OF THE ROOTBALL. BACKFILL PIT WITH PLANTING MIXTURE TO 1/3 DEPTH BEFORE SETTING SHRUBS AND TREES.

PUDDLE PLANTING MIXTURE WHEN PIT IS 2/3 FULL OF MIX. CONTINUE BACKFILLING TO WITHIN 1" OF THE SURROUNDING FINISH GRADE.

CUT PLANT CONTAINER (CANS) ON TWO SIDES WITHOUT INJURING ROOTBALL. AND CAREFULLY REMOVE THE PLANT. DO NOT CUT CONTAINER WITH SPADE ANY PLANT INJURED OR ROOTBALL BROKEN DURING PLANTING OPERATIONS WILL BE REJECTED.

ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT AS OUTLINES IN A PREVIOUS SECTION.

GENERALLY. FINISHED GRADE IN GROUND COVER AREAS SHALL BE 1-1/2" BELOW TOP OF HEADER, WALKS, ETC.

SURROUNDING SIDEWALKS, PAVING SHALL BE KEPT BROOM SWEPT DAILY DURING PLANTING OPERATION. PLANT CONTAINERS, EMPTY FERTILIZER BAGS AND SEED BAGS, AND CONTAINERS ARE TO BE PICKED UP AND DISPOSED OF DAILY CONTRACTOR'S TRASH SHALL BE REMOVED FROM THE SITE AT THE COMPLETION OF WORK. IMMEDIATELY AFTER PLANTING, GROUND COVER AREAS SHALL BE TOP DRESSED WITH 2" OF MULCH.

#### INSTALLATION

SOIL PREPARATION: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ADEQUATE DEPTHS (4" MINIMUM) OF ACCEPTABLE TOPSOIL THROUGHOUT ALL AREAS TO BE PLANTED, WHETHER EXISTING, IMPORTED, SUPPLEMENTED, OR OTHERWISE PROVIDED. THEY SHALL VISIT THE SITE, AND WORK WITH THE GENERAL CONTRACTOR TO ASSURE THEMSELVES THIS PROVISION IS COMPLIED WITH. IN AREAS WHERE GRASS WILL NOT BE PLANTED, THEY SHALL TAKE PROPER PRECAUTIONS FOR THE REMOVAL OF ANY EXISTING BERMUDA AND OTHER AGGRESSIVE WEEDS. REMOVE ALL ROCKS OR FOREIGN OBJECTS LARGER THAN 1-1/2" FROM ALL PLANTED AREAS. ALL GROUND COVER BEDS AND SHRUB MASS AREAS SHALL RECEIVE A SPECIAL TREATMENT PRIOR TO ANY SPRINKLER WORK. 6 CUBIC YARDS OF MULCH WITH 15 LBS. (16-20-0) FERTILIZER PER 1,000 SQ. FT. SHALL BE BROADCAST EVENLY AND INCORPORATED TO A DEPTH OF 6" BY MEANS OF ROTOTILLING.

TOPDRESSING: SHALL BE APPLIED TO ALL SHRUB MASSES, GROUND COVER AREAS. AND ALL PLANT LOCATION PITS NOT LOCATED WITHIN MULCH AREAS. AFTER ALL PLANTING AND SPRINKLER OPERATIONS ARE COMPLETE. COMBINE 6 C.Y. MULCH WITH 15 LBS. (116-20-0) FERTILIZER PER 1,000 SQ. FT. AND SPREAD EVENLY TO A CONSISTENT DÉPTH OF 1-1/2" (MINIMUM OF 1-1/4"; MAXIMUM OF 2"). ALL SHRUB MASS AREAS SHALL EITHER RECEIVE THIS TOPDRESSING OR SHALL RECEIVE 2" OF MULCH PER PLANS.

SHRUBS & TREES: SHALL BE INSTALLED IN ACCORDANCE WITH THE FOREGOING SPECIFICATIONS AND THE DETAILS SHOWN ON THE PLANS. PLANT PITS SHALL ALWAYS PROVIDE ADEQUATE GROWTH VOLUMES FOR NEW ROOTS, AND SHALL MEET THE FOLLOWING MINIMUM STANDARDS, WHICH MAY BE INCREASED IN THE DETAILS: 1 GAL. MATERIALS, 4" CLEARANCE SIDES AND BOTTOM; 5 GAL. MATERIALS, 6" CLEARANCE SIDES AND BOTTOM; 15 GAL. AND LARGER, 9" CLEARANCE ON SIDES, AND 12" CLEARANCE ON BOTTOM. BACKFILL THESE AREAS WITH "PREPARED BACKFILL"

STAKES OR BY UNTWINING ALL GROWTH. SHOOTS SHALL BE PLACED IMMEDIATELY ADJACENT TO WALLS, OR PLACED ONTO TRELLISES FOR SUPPORT AND TRAINING. CAT'S CLAW STAKES MAY BE BRACED AGAINST THE WALL AND

VINES: SHALL BE REMOVED FROM THEIR STAKES, WHETHER BY CUTTING THE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TYPE OF LAWN SPECIFIED ON THE PLANS, IN ACCORDANCE WITH THE SPECIFICATIONS LISTED

WORKMANSHIP - VOID ROCK

PRE-EMERGENT AS OUTLINED IN PREVIOUS SECTIONS.

ALL BOULDERS SHALL BE GRANITE SURFACE SELECT BOULDERS PLACED WITH NATURAL WEATHERED SIDE UP. SET AS PER DETAIL USING CABLES OR STRAPS. BOULDERS SET WITH EXCESSIVE SCARRING SHALL BE REPLACED.

#### WORKMANSHIP - BERMS

EARTH BERMS SHALL BE FORMED AS INDICATED ON THE PLANS. THE LANDSCAPE ARCHITECT SHALL APPROVE ALL GRADING BASED ON AESTHETICS. THE CIVIL ENGINEER SHALL APPROVE ALL GRADING BASED UPON DRAINAGE. APPROVALS MUST BE OBTAINED IN WRITING PRIOR TO COMMENCING WORK. THE LANDSCAPE ARCHITECT WILL OBSERVE AND ACCEPT OR REJECT ALL FINISHED GRADES PRIOR TO PLANTING. NOTIFY LANDSCAPE ARCHITECT AT LEAST 48 HOURS PRIOR TO SCHEDULED WORK.

# PRUNING AND REPAIR

UPON COMPLETION OF THE WORK OF THIS SECTION, ALL TREES AND SHRUBS SHALL HAVE BEEN PRUNED IF REQUIRED OR DIRECTED BY THE LANDSCAPE ARCHITECT, AND ALL INJURIES REPAIRED. LIMIT AMOUNT OF PRUNING TO THE MINIMUM NECESSARY TO REMOVE DEAD AND INJURED TWIGS AND BRANCHES.

END OF SECTION 02950

SECTION 02970

LANDSCAPE MAINTENANCE AND WARRANTY STANDARDS

PART 1 - GENERAL

#### DESCRIPTION

WORK INCLUDED: LABOR, MATERIALS, AND INSTALLATION NECESSARY TO PROVIDE A WARRANTY FOR A ONE-YEAR PERIOD FROM DATE OF ACCEPTANCE OF INSTALLATION.

PART 2 - PRODUCTS

NOT USED.

#### PART 3 - EXECUTION

#### ACCEPTANCE OF INSTALLATION

AT THE COMPLETION OF LANDSCAPE INSTALLATION AND UPON ARCHITECTS RECEIPT OF PRELIMINARY RECORD DRAWINGS REQUEST IN WRITING AN INSPECTION FOR ACCEPTANCE IN WHICH THE GENERAL CONTRACTOR, LANDSCAPI CONTRACTOR, LANDSCAPE ARCHITECT, AND OWNER'S REPRESENTATIVE SHALL BE PRESENT. COORDINATE A MUTUALLY AGREEABLE DATE AND TIME FOR THE PARTIES TO MEET. AT THIS INSPECTION, PREPARE A "PUNCH LIST" FOR SUBMISSION TO THE LANDSCAPE ARCHITECT. UPON COMPLETION OF PUNCH LIST ITEMS, THE LANDSCAPE ARCHITECT AND OR OWNER'S REPRESENTATIVE WILL RE-INSPECT THE PROJECT AND ISSUE A WRITTEN STATEMENT OF ACCEPTANCE AND ESTABLISH THE BEGINNING OF THE PROJECT WARRANTY PERIOD OR ITEMIZE WORK ON THE PUNCH LIST THAT REMAINS INCOMPLETE.

LANDSCAPE WORK MAY BE INSPECTED FOR ACCEPTANCE IN PARTS ONLY IF AGREFABLE TO OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT AND PROVIDED WORK OFFERED FOR INSPECTION IS COMPLETE, INCLUDING MAINTENANCE AS REQUIRED.

FOR PARTIAL ACCEPTANCE PROVIDE A DRAWING OUTLINING AN AREA OF CONTIGUOUS WORK COMPLETED AND SUPPLY A WRITTEN STATEMENT REQUESTING ACCEPTANCE OF THE PARTIAL WORK COMPLETED TO DATE.

#### PROJECT WARRANTY

THE PROJECT WARRANTY PERIOD BEGINS UPON WRITTEN ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

WARRANTY TREES FOR ONE YEAR AND SHRUBS, GROUNDCOVER BEDS AND HYDROSEEDED OR SODDED AREAS THROUGH CONSTRUCTION AND FOR A PERIOD OF 90 DAYS AFTER DATE OF ACCEPTANCE AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND LANDSCAPE CONTRACTOR'S CONTROL

MAINTENANCE PERIOD

BEGIN MAINTENANCE IMMEDIATELY UPON PLANTING OF EACH PLANT AND CONTINUE THROUGH THE WARRANTY PERIOD.

TO ENSURE WARRANTY STANDARDS, THE FOLLOWING MAINTENANCE PROCEDURES SHALL BE EXECUTED DURING CONSTRUCTION AND FOR THE FULL PROJECT WARRANTY PERIOD.

MAINTENANCE OF TREES, SHRUBS, AND GROUND COVERS.

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ONLY ONE REPLACEMEN<sup>\*</sup> OF ANY PLANT MATERIAL THAT IS DEAD OR IN THE OPINION OF THE LANDSCAPE ARCHITECT IS IN AN UNHEALTHY OR UNSIGHTLY CONDITION, OR HAVING LOST NATURAL SHAPE OR AESTHETIC DESIGN QUALITIES, RESULTING FROM DIEBACK EXCESSIVE PRUNING, OR INADEQUATE OR IMPROPER MAINTENANCE AS PART OF

REPLACEMENTS MUST MEET CONTRACT DOCUMENT SPECIFICATIONS AS TO SIZE, QUALITY, AND SPECIES OF PLANT MATERIAL AND PLANTING PROCEDURES, TO RECEIVE APPROVAL OF REPLACEMENT MATERIAL BY LANDSCAPE ARCHITECT.

COSTS FOR REPLACEMENTS ARE TO BE INCLUDED AS A PART OF BID QUOTATIONS AND THEREFORE WILL NOT BE CONSIDERED AS AN ADDITIONAL COST TO OWNER.

PROVIDE AND BE RESPONSIBLE FOR WATERING OF PLANTINGS THROUGH THE WARRANTY PERIOD. KEEP GUY WIRES TAUT, RAISE TREE BALLS THAT SETTLE FURNISH AND APPLY SPRAYS AS NECESSARY TO KEEP THE PLANTINGS FREE OF DISEASE AND INSECTS UNTIL THE END OF THE WARRANTY PERIOD. WATER EVERGREENS THOROUGHLY IN THE FALL TO INSURE THEY DO NOT GO INTO THE WINTER DRY. ARRANGE WITH OWNER'S REPRESENTATIVE TO WALK THE SITE MONTHLY DURING WARRANTY PERIOD TO REVIEW MAINTENANCE. REMOVE AND REPLACE TREES, SHRUBS, OR OTHER PLANTS FOUND TO BE DEAD OR IN AN UNHEALTHY CONDITION. REMOVE REJECTED PLANTS AND MATERIAL PROMPTLY. MAKE REPLACEMENTS DURING NORMAL PLANTING SCHEDULE. REPLACE TREES AND SHRUBS WHICH ARE IN DOUBT, UNLESS IN OPINION OF OWNER'S REPRESENTATIVE AND LANDSCAPE ÁRCHITECT IT IS ADVISABLE TO EXTEND WARRANTY PERIOD FOR A FULL-GROWING SEASON. REMOVE STAKES, GUY WIRES, TREE WRAP PAPER, DEAD TWIGS AND BRANCHES FROM TREE AND PLANT MATERIAL AT THE END OF WARRANTY PERIOD. KEEP PLANTING BEDS FREE OF WEEDS DURING WARRANTY PERIOD. SEE SECTION 02950 - TREES, PLANTS, AND GROUND COVERS; FOR HERBICIDES.

# FINAL ACCEPTANCE UPON CONCLUSION OF THE WARRANTY PERIOD

AT THE CONCLUSION OF THE PROJECT WARRANTY PERIOD REQUEST A PROJECT INSPECTION FOR FINAL ACCEPTANCE IN WHICH THE GENERAL CONTRACTOR, LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT, AND OWNER'S REPRESENTATIVE SHALL BE PRESENT. AFTER THIS INSPECTION, A "PUNCH LIST" WILL BE PREPARED BY THE CONTRACTOR FOR SUBMISSION TO THE LANDSCAPE ARCHITECT. UPON COMPLETION OF PUNCH LIST ITEMS, THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE WILL REINSPECT THE PROJECT AND ISSUE A WRITTEN STATEMENT OF FINAL ACCEPTANCE. UPON ACCEPTANCE, THE OWNER WILL ASSUME MAINTENANCE RESPONSIBILITIES FOR THE LANDSCAPE OF THE PROJECT.

ZONING: C-2

LSPL:

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REZONING:  $\overline{Z-101-76}$ 

# END OF SECTION 02970

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