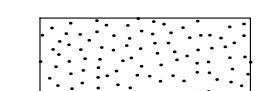

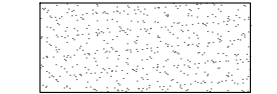
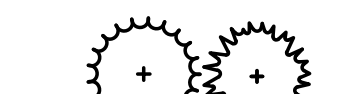
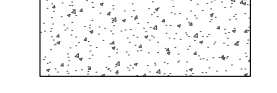




**PLANTING NOTES:**

1. STAKE ALL BED LINES AND TREE LOCATIONS FOR THE INSPECTOR'S REVIEW PRIOR TO INSTALLATION. ALL PLANTING PROCEDURES ARE SUBJECT TO THE REVIEW OF THE INSPECTOR AND THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES FOUND AT NO ADDITIONAL COST TO THE OWNER.
2. SECURE PLANT MATERIAL AS SPECIFIED ON PLANS. IN THE EVENT THAT PLANT MATERIALS SPECIFIED ARE NOT AVAILABLE, CONTACT OWNER FOR APPROVED SUBSTITUTIONS. NO SUBSTITUTIONS FOR PLANT MATERIALS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE OWNER.
3. VERIFY THAT ALL PLANTING PRODUCTS, PLANT MATERIAL, AND PLANT QUANTITIES DELIVERED TO THE SITE MATCH WHAT IS INDICATED ON THE PLANS AND SPECIFICATIONS.
4. PROTECT ALL PLANT MATERIAL DURING DELIVERY TO PREVENT DAMAGE TO ROOT BALLS, TRUNKS, BRANCHES AND THE DESICCATION OF LEAVES. PROTECT ALL PLANT MATERIAL DURING SHIPPING WITH SHADE CLOTH OR SHIP WITH ENCLOSED TRANSPORT. MAINTAIN PROTECTIONS AND HEALTH OF PLANT MATERIAL STORED ON SITE. HANDLE ALL TREES WITH NYLON STRAPS. NO CHAINS OR CABLES WILL BE ALLOWED. REMOVE UNACCEPTABLE PLANT MATERIAL IMMEDIATELY FROM THE SITE.
5. ALL PLANT MATERIAL SHALL BE NURSERY GROWN, WELL FORMED, TRUE TO SPECIES, HARDENED OFF WITH VIGOROUS ROOT SYSTEMS, FULL CROWN AND CANOPIES, AND FREE FROM DISEASE, PESTS AND INSECTS, AND DEFECTS SUCH AS KNOTS, SUN SCALD, WINDBURN, LEAF DIS-COLORATION, IRREGULAR BRANCHING OR INJURIES.
6. ALL ROOT BALLS SHALL CONFORM TO THE SIZE STANDARDS SET FORTH IN 'AMERICAN STANDARDS FOR NURSERY STOCK'.
7. ALL PLANT MATERIAL DELIVERED TO THE SITE IS SUBJECT TO THE REVIEW OF THE OWNER BEFORE, DURING AND AFTER INSTALLATION.
8. PROVIDE PLANT SAMPLES OR PHOTOGRAPHS OF EACH PLANT SPECIFIED TO THE OWNER FOR COMPLIANCE REVIEW PRIOR TO INSTALLATION.
9. TEST FILL ALL TREE AND PLANTING PITS WITH WATER, PRIOR TO PLANTING, TO ASSURE PROPER SOIL PERCOLATION. PITS WHICH DO NOT ADEQUATELY DRAIN SHALL BE FURTHER EXCAVATED TO A DEPTH SUFFICIENT FOR DRAINAGE TO OCCUR AND/OR BACKFILLED WITH SUITABLE DRAINAGE GRAVEL. NO ALLOWANCES SHALL BE MADE FOR PLANT MATERIAL LOSS DUE TO IMPROPER DRAINAGE. CONTRACTOR SHALL REPLACE LOST PLANT MATERIAL WITH SAME SIZE AND SPECIES AT NO ADDITIONAL COST TO OWNER.
10. ALL PLANT MATERIALS, INCLUDING RELOCATED PLANT MATERIAL, SHALL BE PLANTED IN A PROFESSIONAL MANNER TYPICAL TO THE INDUSTRY STANDARDS OF THE AREA TO ASSURE COMPLETE SURVIVABILITY OF ALL INSTALLED PLANT MATERIALS AS WELL AS TO PROVIDE AN AESTHETICALLY APPROVED PROJECT. CONTRACTOR SHALL REFER TO THE PLANTING DETAILS FOR MINIMUM SIZE AND WIDTH OF PLANTING PITS AND BEDS, GUYING AND STAKING, MULCHING, AND OTHER PLANTING REQUIREMENTS.
11. NO PLANTS SHALL BE PLANTED WITH IN A 2'-0" RADIUS (CLEARANCE ZONE) AROUND ALL ATRIUM DRAINS LOCATED IN LANDSCAPE BEDS. CONTRACTOR SHALL MULCH AREA AROUND ALL ATRIUM DRAINS LOCATED IN LANDSCAPE BEDS. REFER TO THIS DRAWING AND ENGINEERING DRAWINGS FOR ALL DRAIN LOCATIONS.
12. REMOVE ALL PLANTING AND LANDSCAPE DEBRIS FROM THE PROJECT SITE AND SWEEP AND WASH CLEAN ALL PAVED AND FINISHED SURFACES AFFECTED BY THE LANDSCAPE INSTALLATION.
13. PLANTING BEDS SHALL HAVE A MINIMUM OF 12" DEPTH. SEE THIS SHEET FOR SOIL DEPTHS.
14. PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF SHREDDED HARDWOOD MULCH. SEE THIS SHEET FOR ADDITIONAL INFORMATION.
15. ALL PLANTING AREAS SHALL BE WEED FREE PRIOR TO PLANTING INSTALLATION.
16. EXISTING TREES AROUND DETENTION BASIN TO BE SALVAGED. CANTON TOWNSHIP TO PROPOSE FINAL LOCATION OUTSIDE OF PROJECT SITE AT THE TOWNSHIP'S DIRECTIVE. CANTON TOWNSHIP TO PROVIDE ALL MATERIALS AND LABOR TO TRANSPLANTS TO FINAL LOCATION.

**LEGEND:**

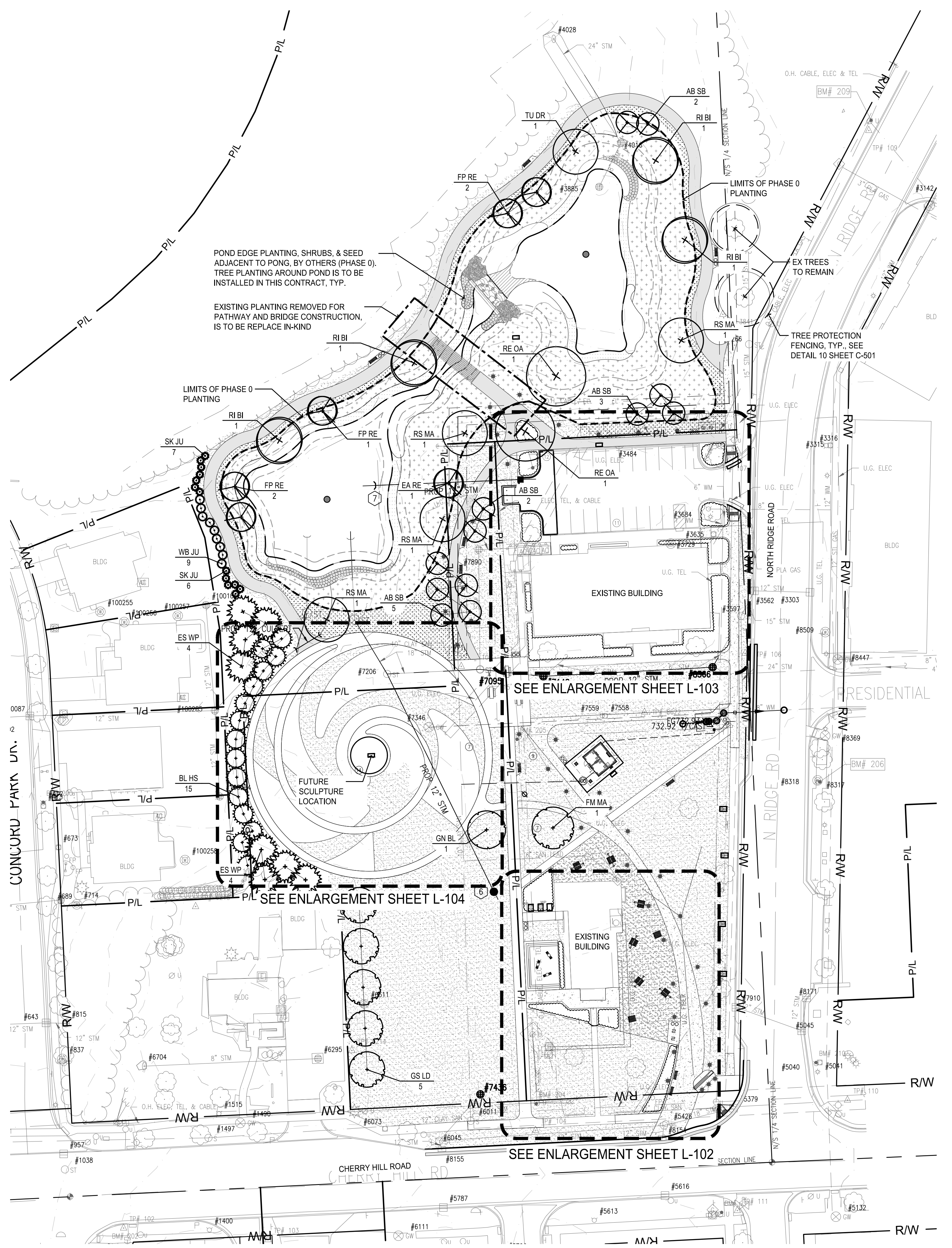
	SEEDED LAWN		DECIDUOUS TREE
	DECORATIVE GRAVEL		EVERGREEN TREE
	PROPOSED CONCRETE PAVEMENT, SEE CIVIL DRAWINGS		ORNAMENTAL TREE
	PROPOSED ASPHALT PAVEMENT, SEE CIVIL DRAWINGS		

\*CONTRACTOR TO REPAIR AND REPLACE ANY PLANTS OR LAWN AREAS FROM THE PHASE 0 - POND PROJECT THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS AND TREE PLACEMENT IN PHASE 1.

CONTRACTOR IS TO STAKE OUT TREE LOCATIONS THAT ARE TO BE REVIEWED AND APPROVED BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.

PLANT LIST: DECIDUOUS TREES						
QTY	CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING
4	RS MA	RED SUNSET MAPLE	<i>Acer rubrum 'Red Sunset'</i>	3" CAL.	B & B	PER PLAN
1	FM MA	FREEMAN MAPLE	<i>Acer x freemanii 'Armstrong'</i>	3" CAL.	B & B	PER PLAN
4	RI BI	RIVER BIRCH	<i>Betula nigra</i>	8" HT.	B & B	PER PLAN
1	GN BL	GINGKO, MALE	<i>Ginkgo Biloba</i>	3" CAL.	B & B	PER PLAN
1	TU TR	TULIPTREE	<i>Liriodendron tulipifera</i>	3" CAL.	B & B	PER PLAN
2	RE OA	NORTHERN RED OAK	<i>Quercus Rubra</i>	3" CAL.	B & B	PER PLAN
5	GS LD	GREENSPIRE LINDEN	<i>Tilia cordata 'Greenspire'</i>	3" CAL.	B & B	PER PLAN
PLANT LIST: EVERGREEN TREES						
13	SK JU	GREEN COLUMNAR JUNIPER	<i>Juniperus chinensis 'Hetzii Columnaris'</i>	8' HT.	B & B	PER PLAN
9	WB JU	WITCHITA BLUE JUNIPER	<i>Juniperus scopulorum 'Witchita Blue'</i>	8' HT.	B & B	PER PLAN
15	BL HS	BLACK HILLS SPRUCE	<i>Picea glauca 'Densata'</i>	8' HT.	B & B	PER PLAN
8	ES WP	EASTERN WHITE PINE	<i>Pinus strobus</i>	8' HT.	B & B	PER PLAN
PLANT LIST: ORNAMENTAL TREES						
	CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING
12	AB SB	AUTUMN BRILLIANCE SERVICEBERRY	<i>Amelanchier x grandifolia 'Autumn Brilliance'</i>	2" CAL.	B & B	PER PLAN
1	EA RE	EASTERN REDBUD	<i>Cercis canadensis</i>	2" CAL.	B & B	PER PLAN
5	FP RE	FOREST PANSY REDBUD	<i>Cercis canadensis 'Forest Pansy'</i>	2" CAL.	B & B	PER PLAN


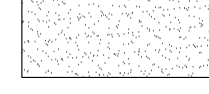
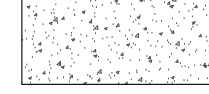




TREE QUANTITIES LISTED HEREIN REPRESENT PROJECT TOTALS, NOT SHEET TOTALS



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REVISION	
DESCRIPTION	



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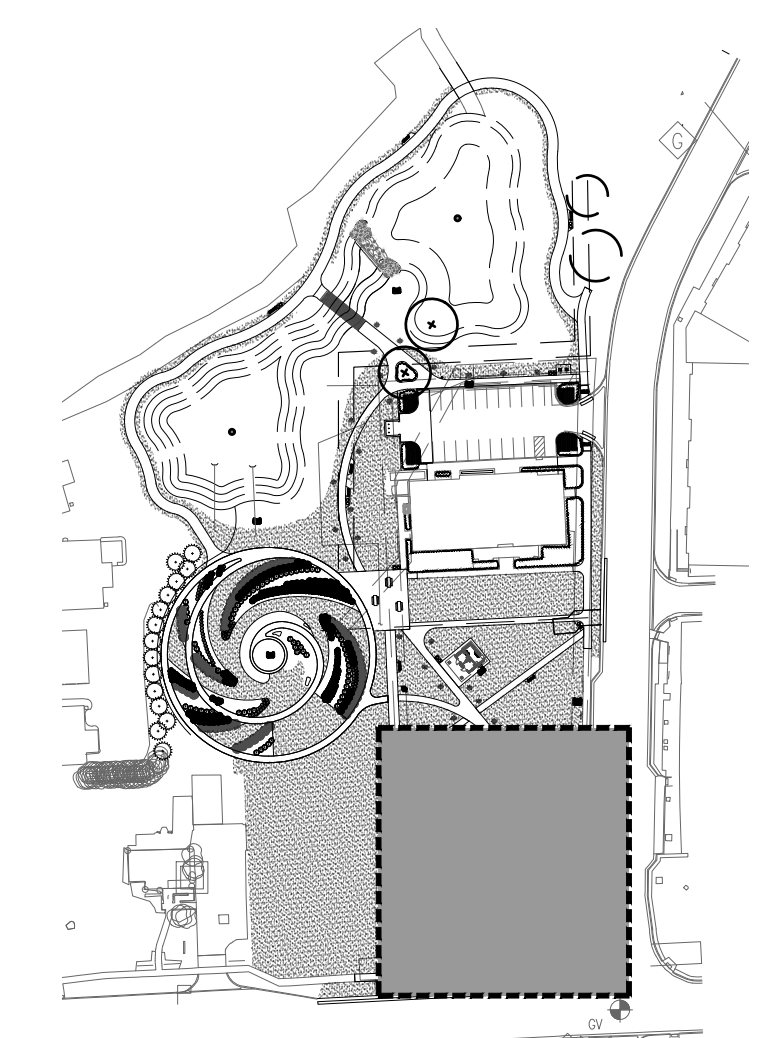
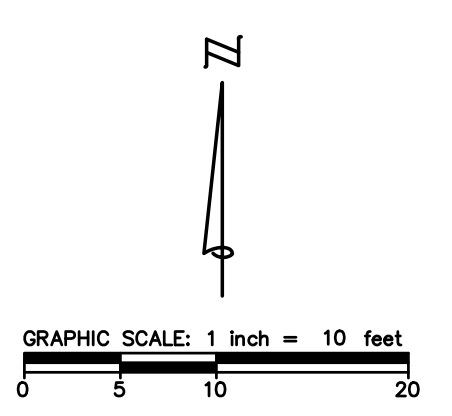
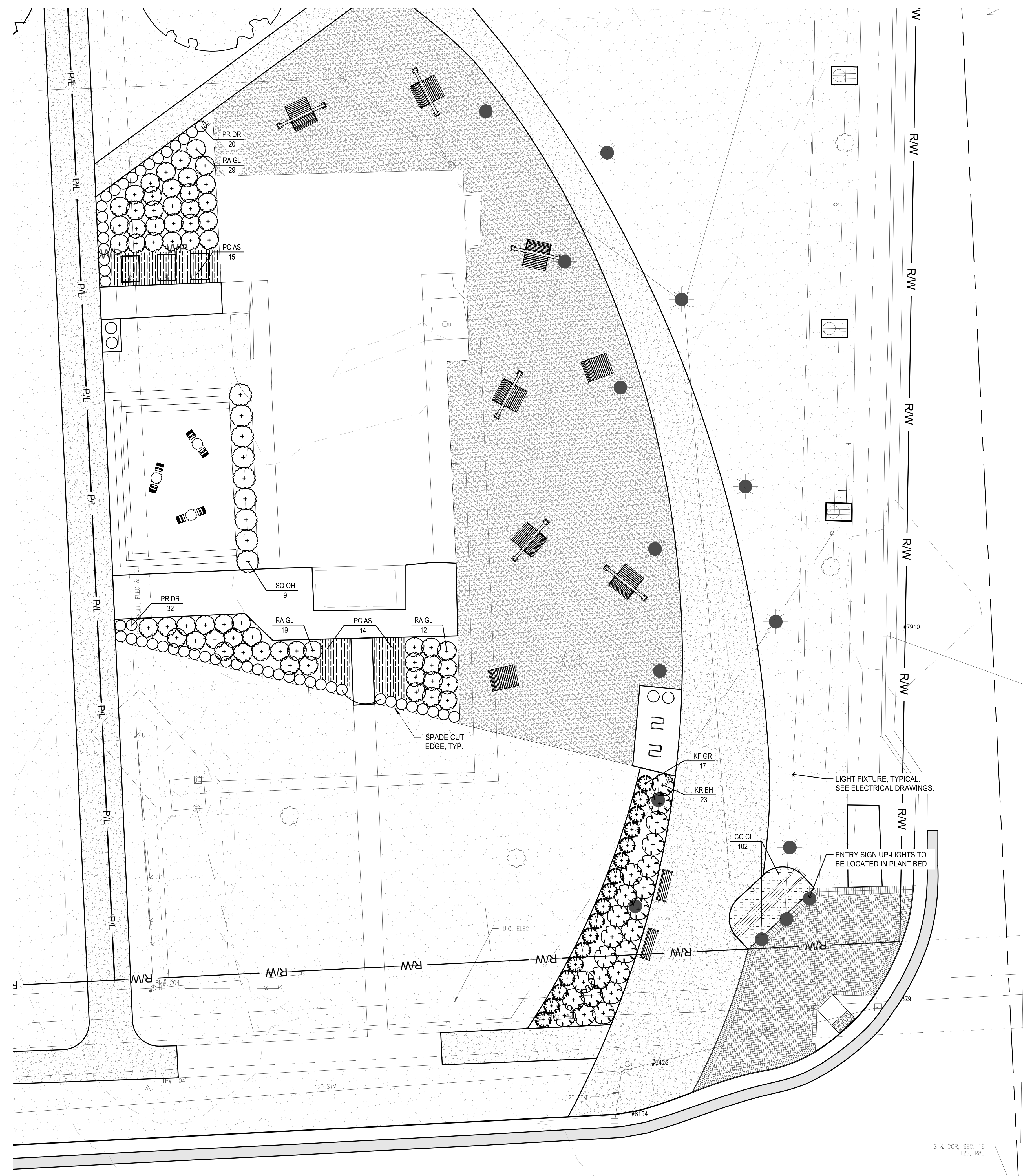
-  SEEDED LAWN
-  DECORATIVE GRAVEL
-  PROPOSED CONCRETE PAVEMENT, SEE CIVIL DRAWINGS
-  PROPOSED ASPHALT PAVEMENT, SEE CIVIL DRAWINGS
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  ORNAMENTAL TREE

PLANT LIST: SHRUBS						
CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING	
76	KR BH KODIAK RED BUSH HONEYSUCKLE	<i>Diervilla splendens</i> 'Kodiak Red'	24" HT.	CONT.	48" O.C.	
44	SQ OH SNOW QUEEN OAKLEAF HYDRANGEA	<i>Hydrangea quercifolia</i> 'Snow Queen'	30" HT.	CONT.	48" O.C.	
62	GG JU GREY GUARDIAN JUNIPER	<i>Juniperus virginiana</i> 'Greguard'	24" HT.	CONT.	60" O.C.	
287	RA GL GRO-LOW FRAGRANT SUMAC	<i>Rhus aromatica</i> 'Gro-low'	24" HT.	CONT.	36" O.C.	

PLANT LIST: ORNAMENTAL GRASSES						
CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING	
226	KF GR KARL FOERSTER GRASS	<i>Calamagrostis x acutiflora</i> 'Karl Foerster'	36" HT.	CONT.	30" O.C.	
73	HM SG HEAVY METAL SWITCHGRASS	<i>Panicum virgatum</i> 'Heavy Metal'	36" HT.	CONT.	48" O.C.	
184	PR DR PRAIRIE DROPSEED	<i>Sporobolus heterolepis</i>	12" HT.	CONT.	24" O.C.	

PLANT LIST: PERENNIALS						
CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING	
159	BL ST BLUE ICE BLUE STAR	<i>Amsonia</i> 'Blue Ice'	#1 GAL.	CONT.	18" O.C.	
62	PC AS PINK CRUSH ASTER	<i>Aster novae-angliae</i> 'Pink Crush'	#1 GAL.	CONT.	36" O.C.	
62	WB IN WILD BLUE INDIGO	<i>Baptisia australis</i>	#1 GAL.	CONT.	48" O.C.	
124	CC CO CORAL CRAZE CONEFLOWER	<i>Echinacea</i> 'Coral Craze'	#1 GAL.	CONT.	30" O.C.	
45	LS RS LITTLE SPIRE RUSSIAN SAGE	<i>Perovskia atrip.</i> 'Little Spire'	#1 GAL.	CONT.	30" O.C.	
898	CO CI COMMON CINQUEFOIL	<i>Potentilla simplex</i>	#1 GAL.	CONT.	12" O.C.	
75	BE SU BLACK EYED SUSAN	<i>Rudbeckia hirta</i>	#1 GAL.	CONT.	30" O.C.	

PLANT QUANTITIES LISTED HEREIN REPRESENT PROJECT TOTALS, NOT SHEET TOTALS  
FOR TREE SPECIES AND QUANTITY INFORMATION, REFER TO SHEET L-101 - PLANTING PLAN.



REFERENCE PLAN  
NTS

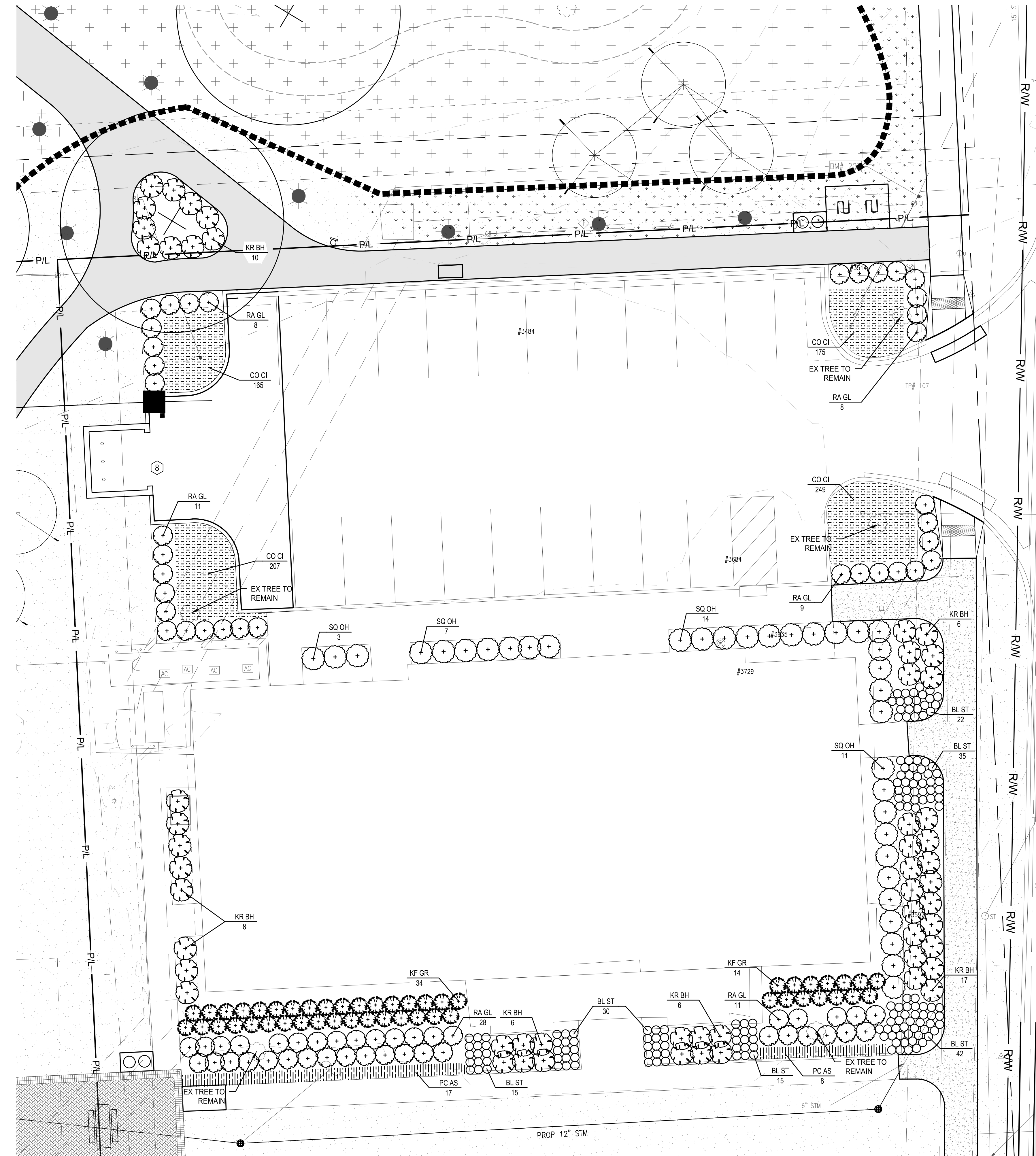


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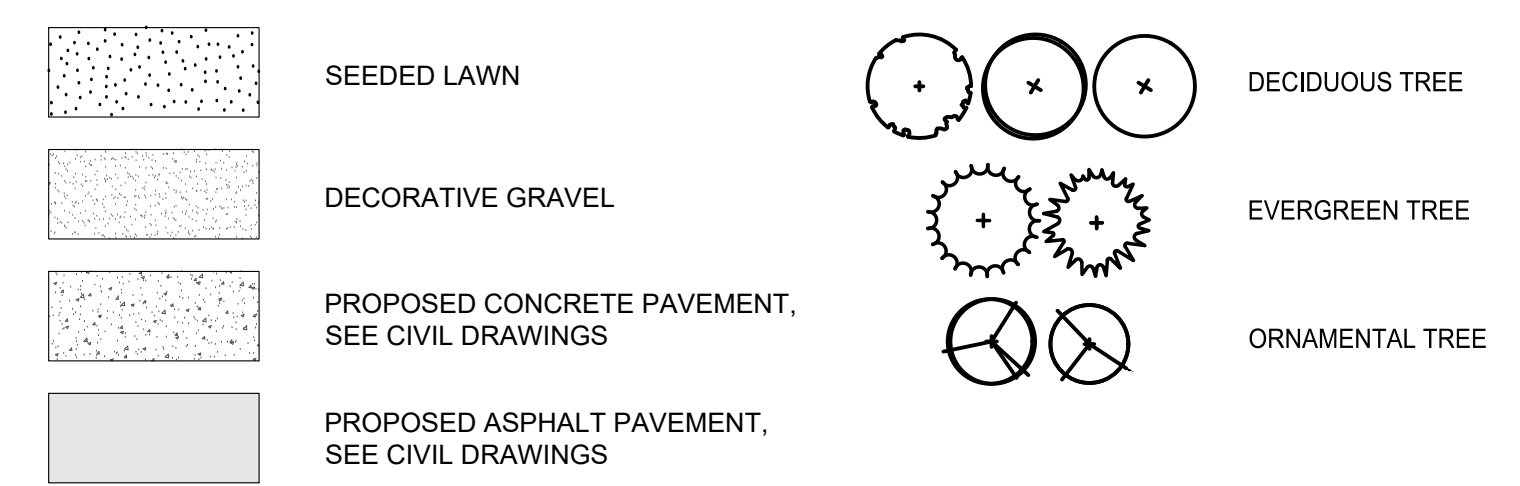
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REVISION	DESCRIPTION	

PROJECT NUMBER: 0133-24-020  
CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN  
PLANTING PLAN





**LEGEND:**



**PLANT LIST: SHRUBS**

CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING
76	KR BH	KODIAK RED BUSH HONEYSUCKLE	<i>Diervilla splendens 'Kodiak Red'</i>	24" HT.	CONT. 48" O.C.
44	SQ OH	SNOW QUEEN OAKLEAF HYDRANGEA	<i>Hydrangea quercifolia 'Snow Queen'</i>	30" HT.	CONT. 48" O.C.
62	GG JU	GREY GUARDIAN JUNIPER	<i>Juniperus virginiana 'Greguard'</i>	24" HT.	CONT. 60" O.C.
287	RA GL	GRO-LOW FRAGRANT SUMAC	<i>Rhus aromatica 'Gro-low'</i>	24" HT.	CONT. 36" O.C.

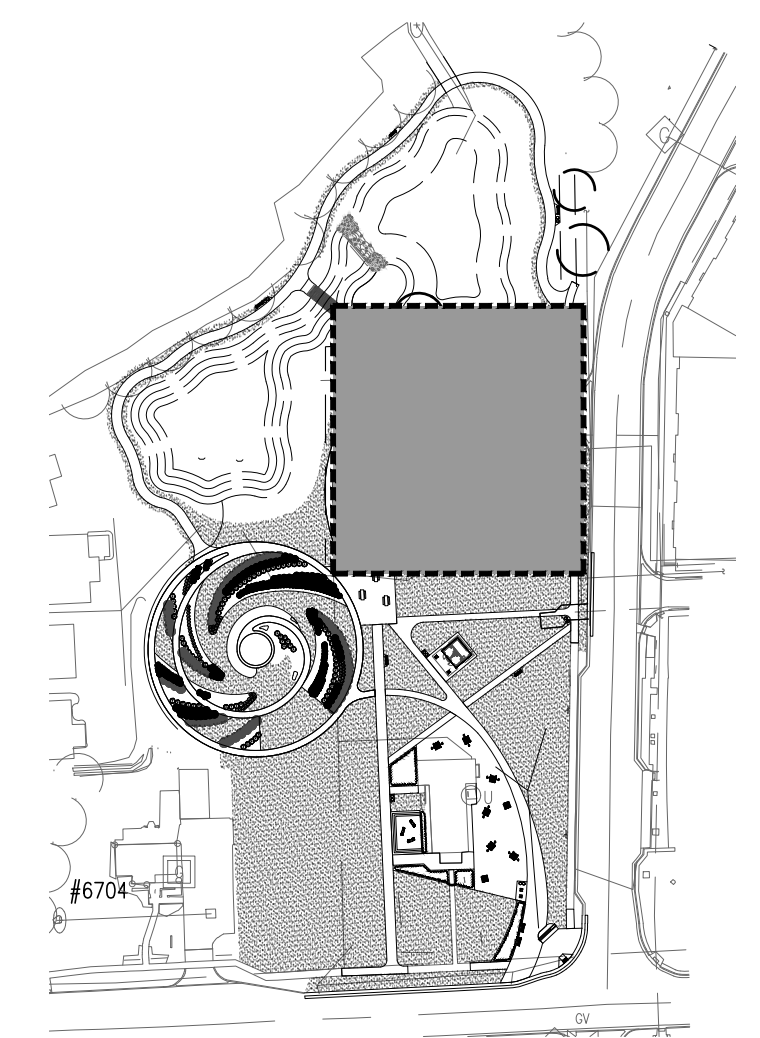
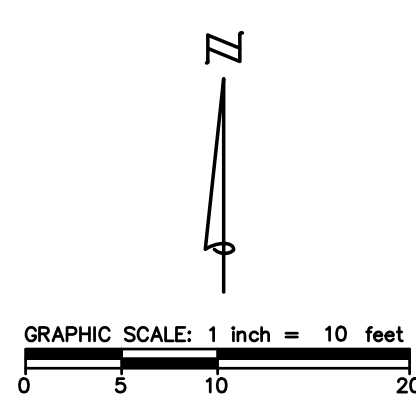
**PLANT LIST: ORNAMENTAL GRASSES**

CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING
226	KF GR	KARL FOERSTER GRASS	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	36" HT.	CONT. 30" O.C.
73	HM SG	HEAVY METAL SWITCHGRASS	<i>Panicum virgatum 'Heavy Metal'</i>	36" HT.	CONT. 48" O.C.
184	PR DR	PRAIRIE DROPSEED	<i>Sporobolus heterolepis</i>	12" HT.	CONT. 24" O.C.

**PLANT LIST: PERENNIALS**

CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING
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75	BE SU	BLACK EYED SUSAN	<i>Rudbeckia hirta</i>	#1 GAL.	CONT. 30" O.C.

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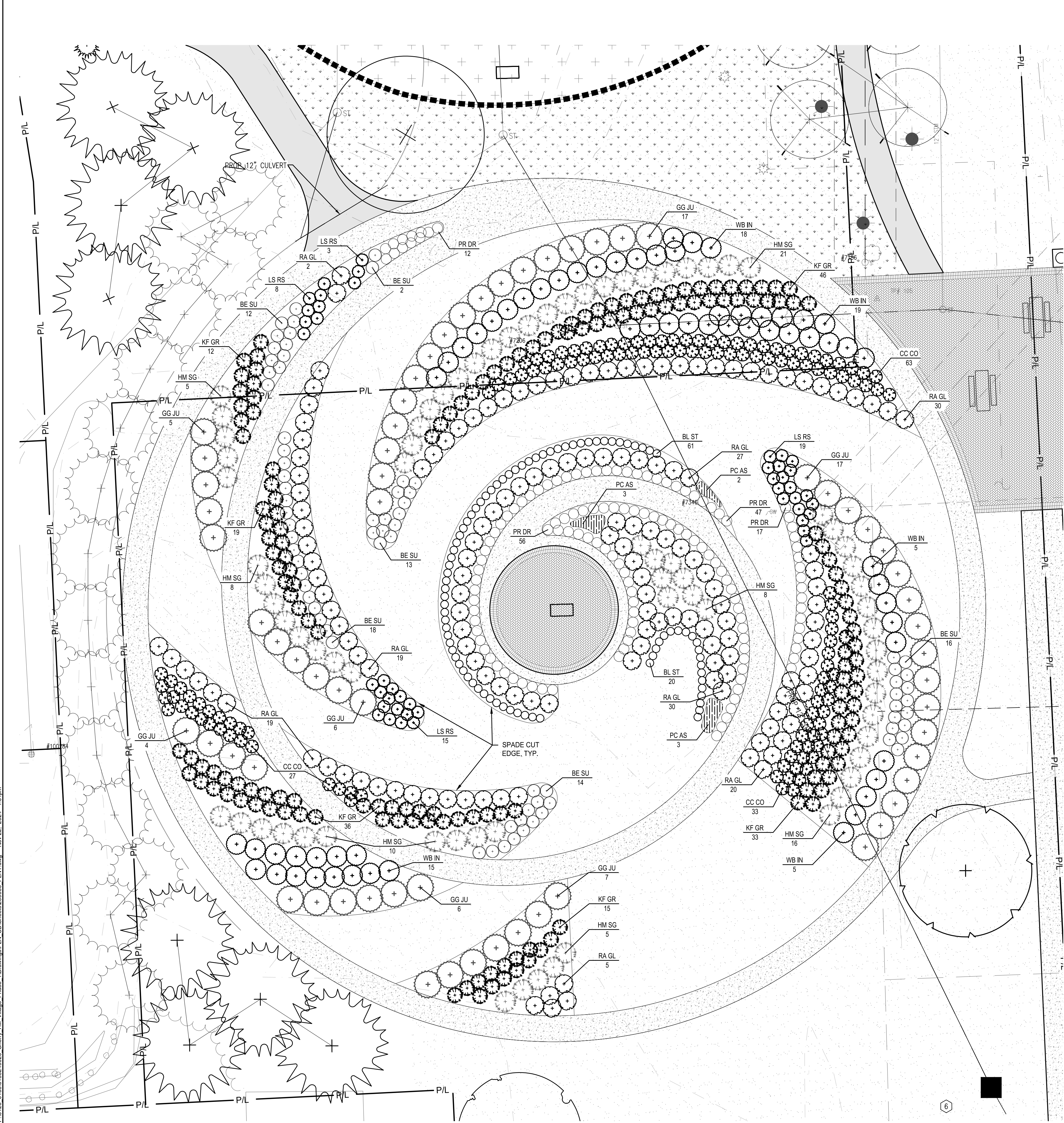
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REVISION:	DESCRIPTION		

PROJECT NUMBER: 0133-24-020  
 CANTON CHARTER TOWNSHIP  
 CHERRY HILL VILLAGE PHASE 1  
 CANTON TOWNSHIP, MICHIGAN  
 PLANTING PLAN

DRAWING PATH: P:\0126\_0166\0133\24\020\_Cherry Hill Village Phase 1\Drawings\PLN\_ID\Sheets\202060\_PLANT.dwg Nov 22, 2024 - 1:00pm

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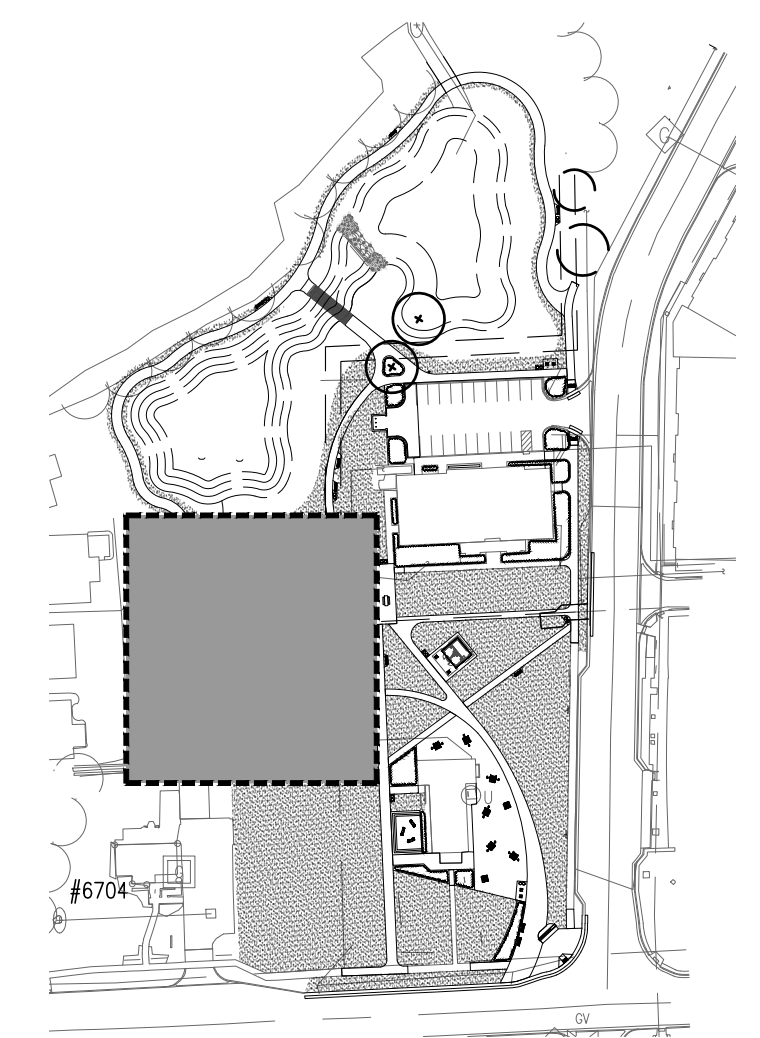
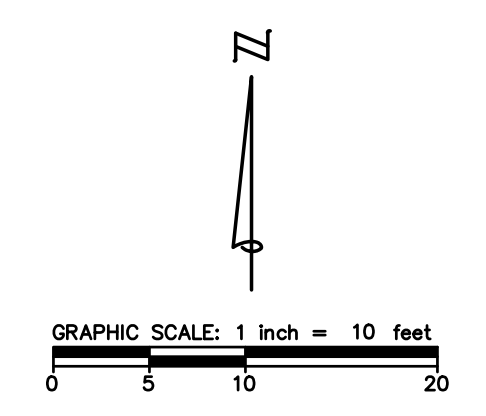
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 FOR TREE SPECIES AND QUANTITY INFORMATION, REFER TO SHEET L-101 - PLANTING PLAN.



REFERENCE PLAN  
NTS



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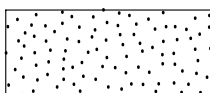

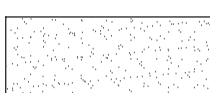

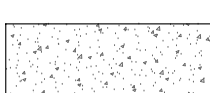


PROJECT NUMBER: 0133-24-020  
 PM: CM  
 CANTON CHARTER TOWNSHIP  
 CHERRY HILL VILLAGE PHASE 1  
 CANTON TOWNSHIP, MICHIGAN  
 PLANTING PLAN

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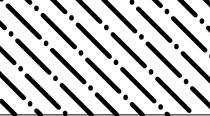

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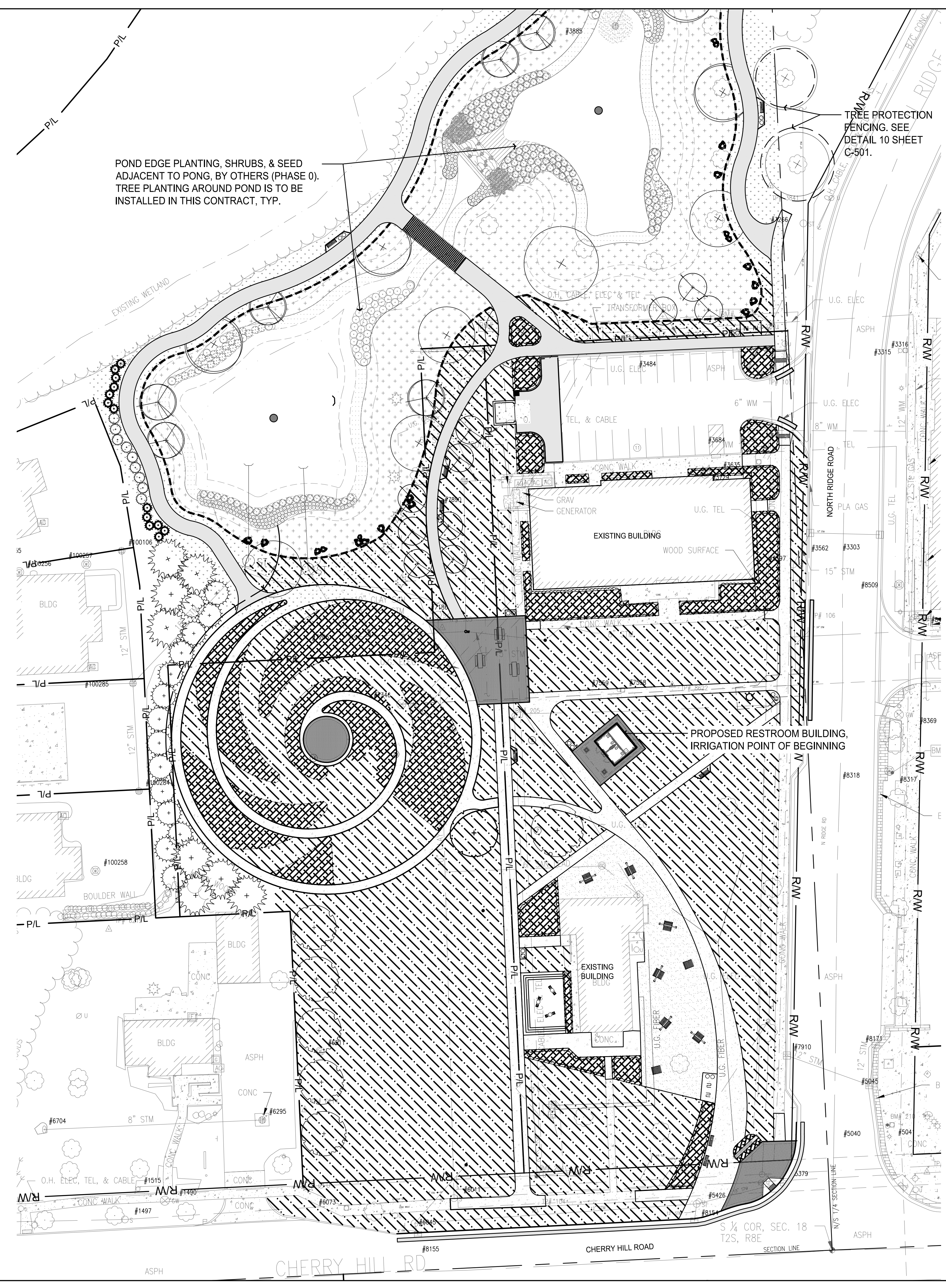
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|---|---|---|-----------------|
|  | SEEDED LAWN                                       |  | DECIDUOUS TREE  |
|  | DECORATIVE GRAVEL                                 |  | EVERGREEN TREE  |
|  | PROPOSED CONCRETE PAVEMENT,<br>SEE CIVIL DRAWINGS |  | ORNAMENTAL TREE |
|  | PROPOSED ASPHALT PAVEMENT,<br>SEE CIVIL DRAWINGS  |   |                 |

**IRRIGATION LEGEND:**

- |   |   |
|---|---|
|  | LAWN AREA.<br>HEAD TO HEAD COVERAGE.      |
|  | PLANT BED AREA.<br>HEAD TO HEAD COVERAGE. |

SHEET IS FOR REFERENCE ONLY.  
SEE SHEETS L-202 - L-204 FOR FULL IRRIGATION DESIGN.

IRRIGATION CONTROLS TO BE RELOCATED FROM HUMAN  
RESOURCE BUILDING TO PROPOSED RESTROOM  
BUILDING.



ISSUED FOR:	BID SET	DATE
REVISION <td>DESCRIPTION <td></td> </td>	DESCRIPTION <td></td>	

PROJECT NUMBER: 0133-24-020  
 PM: CM  
**CANTON CHARTER TOWNSHIP**  
**CHERRY HILL VILLAGE PHASE 1**  
 CANTON TOWNSHIP, MICHIGAN  
**IRRIGATION PLAN**

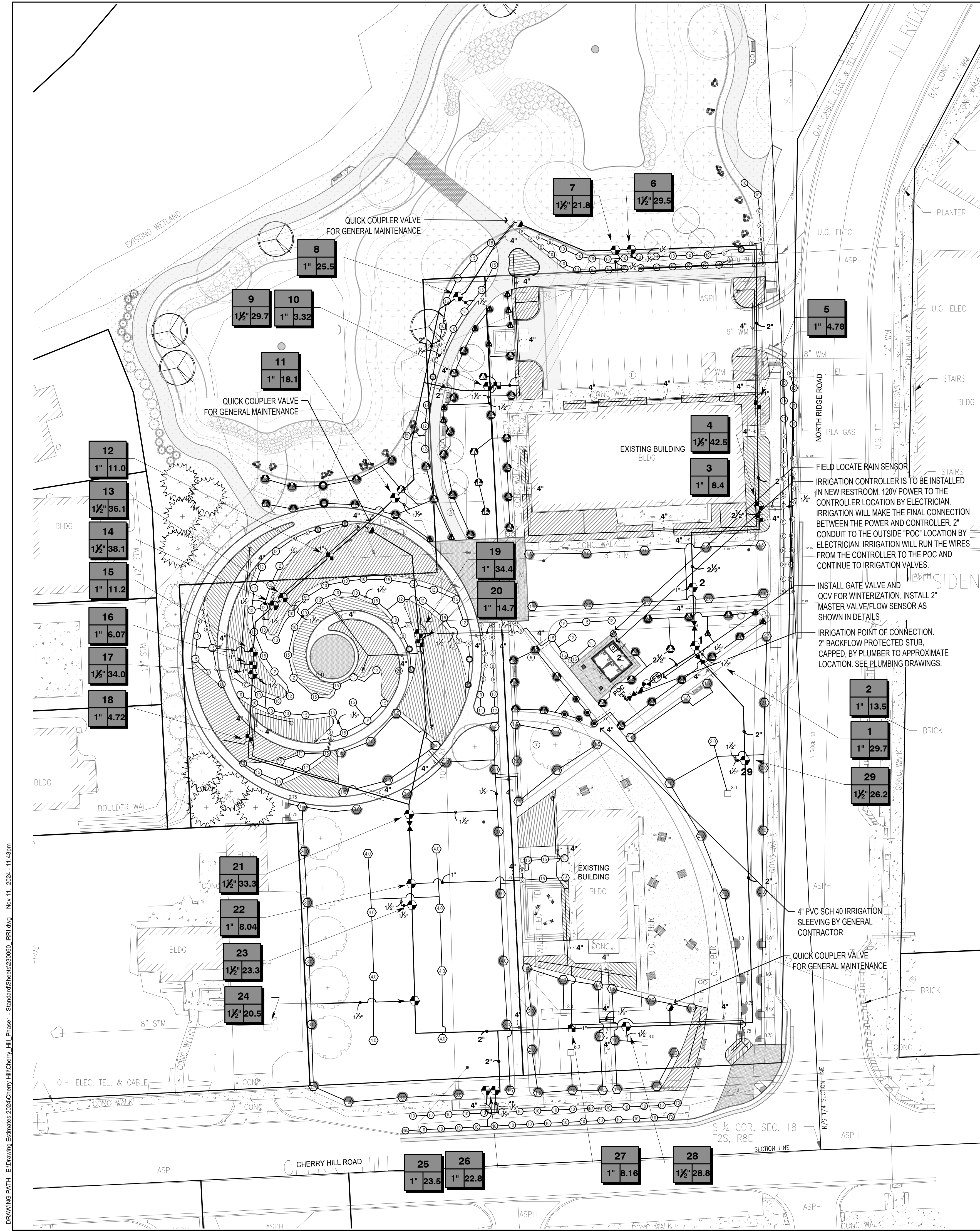


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**IRRIGATION NOTES:**

- CONTRACTOR SHALL THESE NOTES AS A 'SUMMARY' OF THE WRITTEN SPECIFICATIONS ISSUED FOR THE PROJECT. THESE NOTES WILL ASSIST THE CREW IN THE FIELD INSTALL THE SYSTEM CORRECTLY. THESE NOTES DO NOT RELIEVE THE CONTRACTOR FROM REQUIREMENTS OF THE SPECIFICATIONS
- THE IRRIGATION SYSTEM DESIGN IS BASED ON 70 STATIC PRESSURE (PSI) AND MAXIMUM FLOW OF 40 GALLONS PER MINUTE (GPM). THE IRRIGATION CONTRACTOR SHALL VERIFY THE PRESSURE AND FLOW PRIOR TO COMMENCEMENT OF CONSTRUCTION. REPORT TO THE OWNER OR OWNER'S REPRESENTATIVE ANY DIFFERENCES BETWEEN THE PRESSURE INDICATED AND THE ACTUAL PRESSURE READING AT THE POINT OF CONNECTION.
  - THE PIPE ROUTING SHOWN IS DIAGRAMMATIC ONLY. ALL PIPING, VALVES, HEADS, ETC SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. IRRIGATION CONTRACTOR WILL PROVIDE A COMPLETE IRRIGATION SYSTEM FOR THE AREAS SHOWN. FIELD LOCATIONS MAY VARY SLIGHTLY.
  - DO NOT WILLINGLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE DIMENSIONS OF THE CONSTRUCTED AREAS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE IRRIGATION DESIGN OR CHANGES HAVE OCCURRED IN THE SITE PLAN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE IRRIGATION DESIGNER AND THE GENERAL CONTRACTOR IMMEDIATELY. SHOULD THE IRRIGATION CONTRACTOR PROCEED WITH THE INSTALLATION WITHOUT NOTIFYING THE IRRIGATION DESIGNER AND THE GENERAL CONTRACTOR, THE IRRIGATION CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY AND ALL REVISIONS / RECONSTRUCTION NECESSARY.
  - IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF/HERSELF WITH THE SITE, ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, AND INSTALLED UTILITIES. COORDINATE WORK WITH THE OWNER FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES UNDERNEATH PAVEMENT AND THROUGH WALLS.
  - DUE TO THE SCALE OF THE DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, JOINTS, ETC. WHICH MAY BE REQUIRED. THE IRRIGATION CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS/HER WORK AND PLAN HIS/HER WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC. AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. ALL WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM COMPONENTS, LANDSCAPE PLANTING, AND ARCHITECTURAL FEATURES.
  - FLUSH ALL LINES AND HEADS PRIOR TO INSTALLING NOZZLES. ADJUST NOZZLE SPRAY ARC AND RADIUS FOR OPTIMUM PERFORMANCE TO PREVENT OVERSPRAY ONTO PAVED SURFACES OR FACE OF BUILDING AS MUCH AS POSSIBLE TO FIT THE SITE CONDITIONS. THROTTLE FLOW CONTROL AT EACH VALVE FOR OPTIMUM OPERATING PRESSURE FOR EACH ZONE.
  - ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISHED GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED.
  - WHEN VERTICAL OBSTRUCTIONS (POLES, SIGNS, TREES, HYDRANTS, ETC) INTERFERE WITH THE SPRAY PATTERN OF THE HEADS SO AS TO PREVENT PROPER COVERAGE, THE CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER, THIRD, OR HALF CIRCLE HEAD AT THE SIDES OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST.
  - USE TEFLON TAPE ON ALL MALE PIPE THREADS ON PVC PIPE, SWING JOINTS, AND VALVE ASSEMBLIES.
  - INSTALL VALVE BOXES 18-INCHES FROM AND PERPENDICULAR TO WALKS, CURBS, BUILDING, OR LANDSCAPE FEATURES. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE INSTALLED A MINIMUM OF 12-INCHES APART.
  - ALL VALVES SHALL BE PLACED IN VALVE BOXES AS SHOWN IN THE DETAILS. USE ONLY 2 WIRE CASED CONTROL WIRE AS DIRECTED BY RAINBIRD OR EQUAL AND ALL ELECTRICAL CONNECTIONS SHALL BE SEALED WITH WATERPROOF CONNECTORS. ANY SPLICES MADE IN THE FIELD WILL BE INSTALLED IN 6" VALVE BOXES.
  - 120-VOLT ELECTRICAL POWER SOURCE FOR THE CONTROLLER SHALL BE IDENTIFIED. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL CONNECTION FROM THE POWER PROVIDED TO THE CONTROLLER.
  - PROVIDE AS-BUILT DRAWINGS PROMPTLY UPON COMPLETION OF THE IRRIGATION INSTALLATION.
  - IRRIGATION CONTRACTOR SHALL PROVIDE THE FIRST WINTERIZATION, SPRING TURN ON HEAD ADJUSTMENTS AND CONTROLLER MAINTENANCE FOR THE FIRST YEAR. IT SHALL BE INCLUDED IN THE BID.
  - CONTRACTOR WILL ARRANGE INSPECTIONS FOR IRRIGATION AS NEEDED DURING THE COURSE OF CONSTRUCTION. ALL WIRING AND BACKFLOW PREVENTION TO BE PER LOCAL CODE.

**IRRIGATION NOTES:**

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P.O.C. NUMBER: 01  
Water Source Information:

FLOW AVAILABLE  
Point of Connection Size: 2"  
Flow Available: 77.18 GPM

PRESSURE AVAILABLE  
Static Pressure at POC: 70 PSI  
Pressure Available: 70 PSI

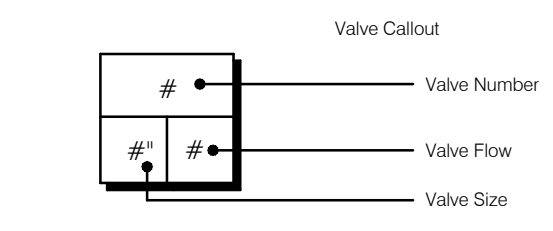
DESIGN ANALYSIS  
Maximum Station Flow: 42.46 GPM  
Flow Available at POC: 77.18 GPM  
Residual Flow Available: 34.72 GPM

Design Pressure: 45 PSI  
Friction Loss: 1.78 PSI  
Fittings Loss: 0.18 PSI  
Elevation Loss: 0 PSI  
Loss through Valve: 5.5 PSI  
Pressure Req. at Critical Station: 52.5 PSI  
Loss for Fittings: 0.01 PSI  
Loss for Main Line: 0.13 PSI  
Loss for POC to Valve Elevation: 0 PSI  
Loss for Backflow: 0 PSI  
Critical Station Pressure at POC: 52.6 PSI  
Pressure Available: 70 PSI  
Residual Pressure Available: 17.4 PSI

IRRIGATION IS DESIGNED FOR 45 GPM AT 55 PSI AT THE POINT OF CONNECTION.

**IRRIGATION LEGEND:**

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD 1804 15 STRIP SERIES
	RAIN BIRD 1804 ADJ NOZZLE
	RAIN BIRD R-VAN14 1804-SAM-P45
	RAIN BIRD R-VAN18 1804-SAM-P45
	RAIN BIRD R-VAN24 1804-SAM-P45
	RAIN BIRD 3504-SAM, PC, FC 0.75
	RAIN BIRD 3504-SAM, PC, FC 1.0
	RAIN BIRD 3504-SAM, PC, FC 3.0
	RAIN BIRD 5004-SAM-PC, FC ROTOR 1.5
	RAIN BIRD 5004-SAM-PC, FC ROTOR 2.0
	RAIN BIRD 5004-SAM-PC, FC ROTOR 3.0
	RAIN BIRD 5004-SAM-PC, FC ROTOR 4.0
	RAIN BIRD XZPGA-100-PRF DRIP VALVE 3-15GPM 1"
	RAIN BIRD MDCFCAP FLUSH CAP
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFCV-06-18
	RAIN BIRD PEB GLOBE VALVE 2" MASTER VALVE
	RAIN BIRD PGA-IVM ANGLE 1"
	RAIN BIRD PGA-IVM ANGLE 1-1/2"
	RAIN BIRD 5-RC 1" QUICK COUPLER 1"
	SHUT OFF VALVE
	RAIN BIRD ESP-ZWIRE CONTROLLER
	RAIN BIRD RAIN SENSOR
	RAIN BIRD FS-150-P FLOW
	POINT OF CONNECTION 2"
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1"
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1 1/2"
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 2"
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 2"
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 2 1/2"
	PIPE SLEEVE: PVC SCHEDULE 40 2"
	PIPE SLEEVE: PVC SCHEDULE 40 4"



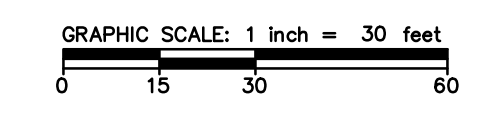
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CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN  
IRRIGATION PLAN



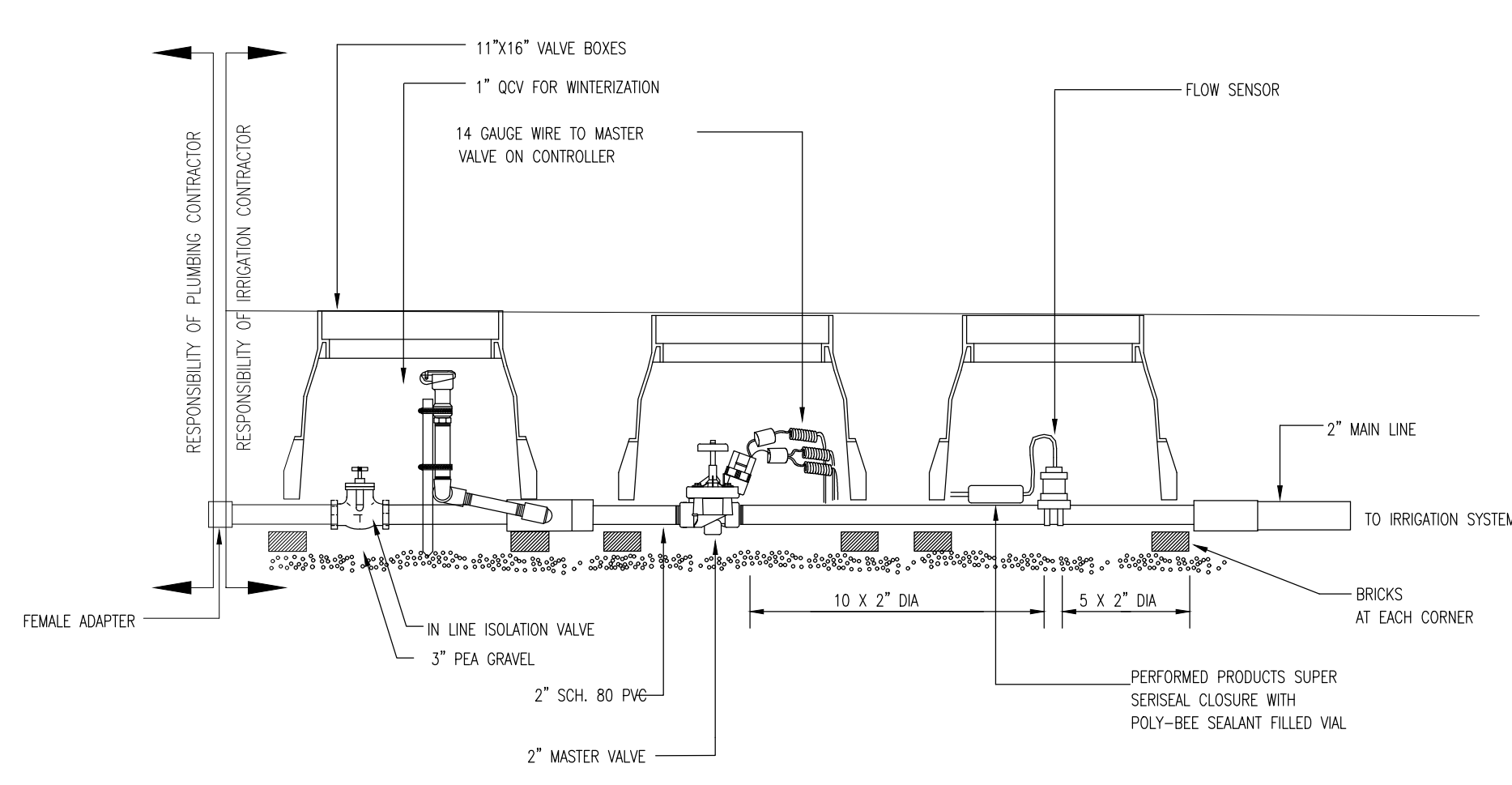
Know what's below.  
Call before you dig.



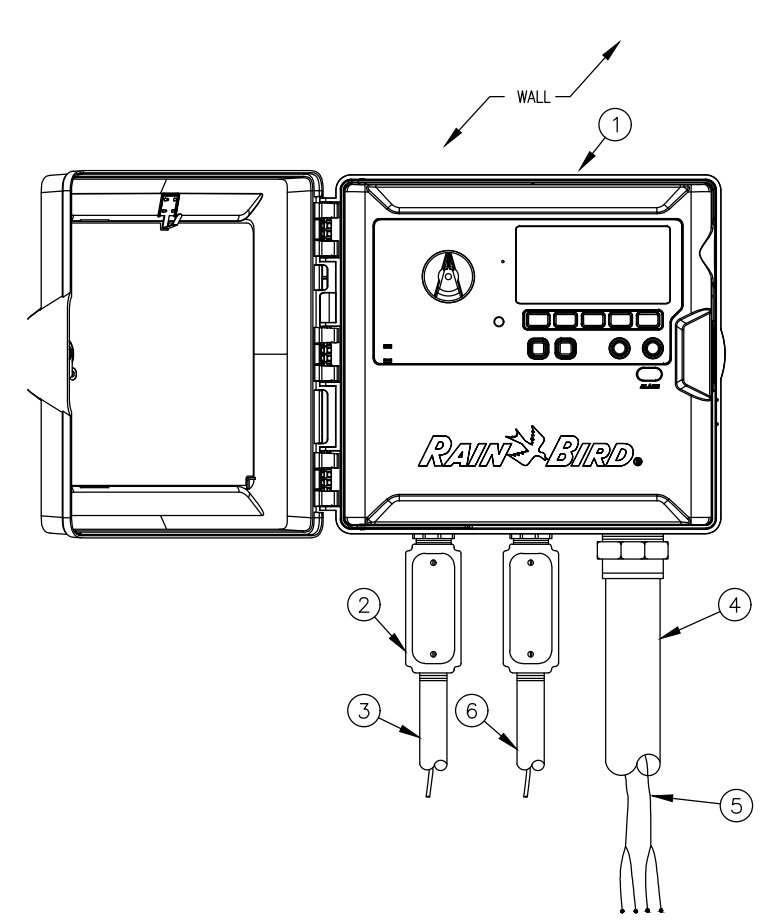
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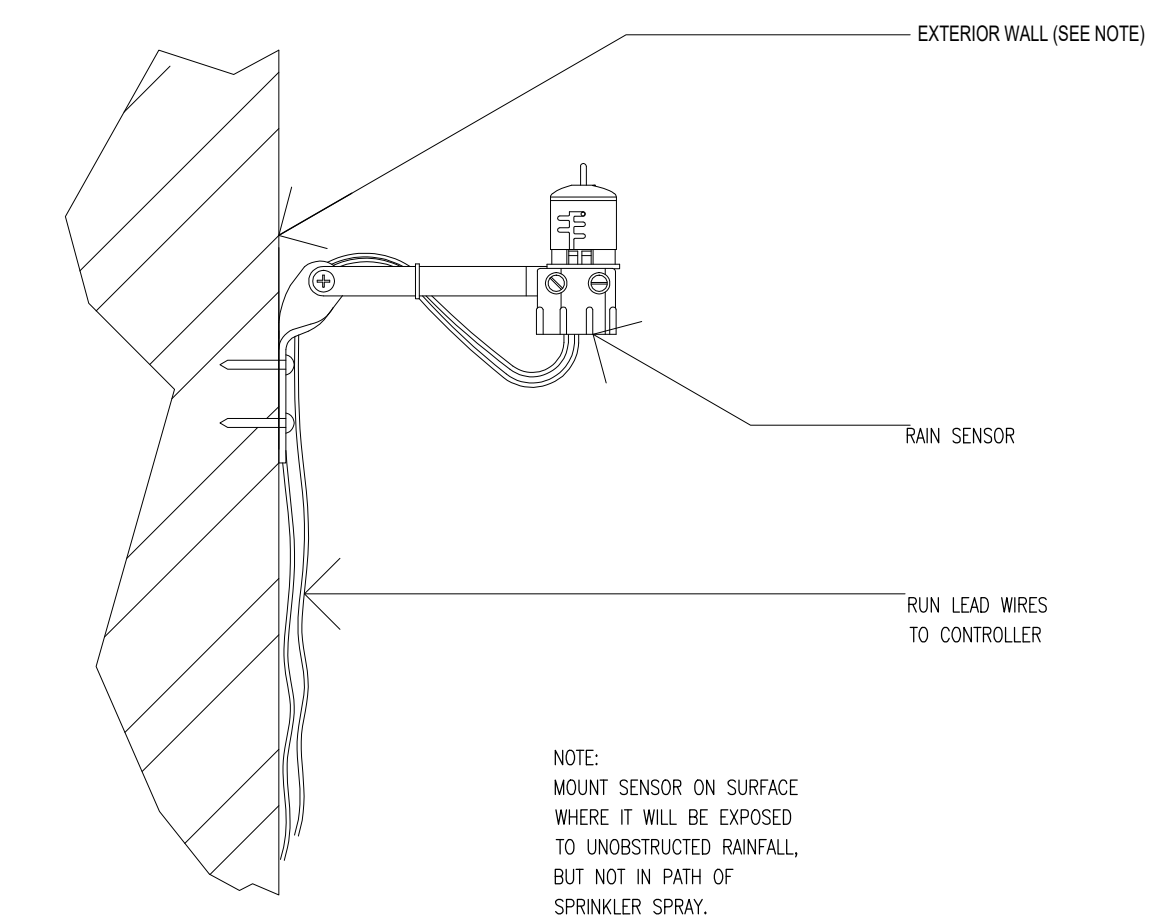
1 2" POINT OF CONNECTION DETAIL  
NTS



2 CONTROLLER INSTALLATION  
NTS

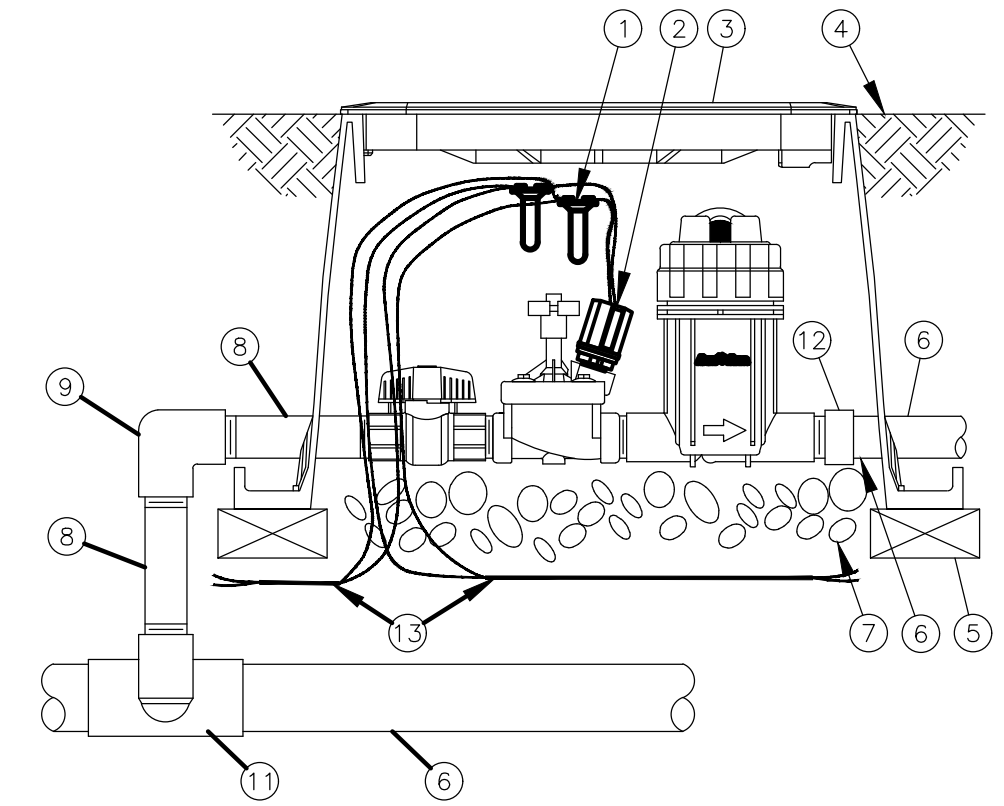
- 1 TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXVM/PRO IN PLASTIC CABINET WITH WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
- 2 JUNCTION BOX
- 3 1-INCH CONDUIT AND FITTINGS FOR POWER SUPPLY WIRE
- 4 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
- 5 MAXIMIZABLE TWO-WIRE PATH TO FIELD DEVICES. USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
- 6 1-INCH CONDUIT AND FITTINGS FOR GROUND WIRE. ONLY FOR OUTDOOR INSTALLATIONS.

NOTES:  
1. ESP-LXVM CONTROLLER IS AVAILABLE IN TWO MODELS. THE LXVM WITH 60 STATIONS AND THE LMVM-PRO WITH 240 STATIONS. REFER TO THE CHART BELOW FOR DIFFERENCES BETWEEN THE TWO MODELS.  
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.  
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS. IF CONTROLLER IS MOUNTED INDOORS, USE POWER SUPPLY GROUND.



3 RAIN SENSOR INSTALLATION  
NTS

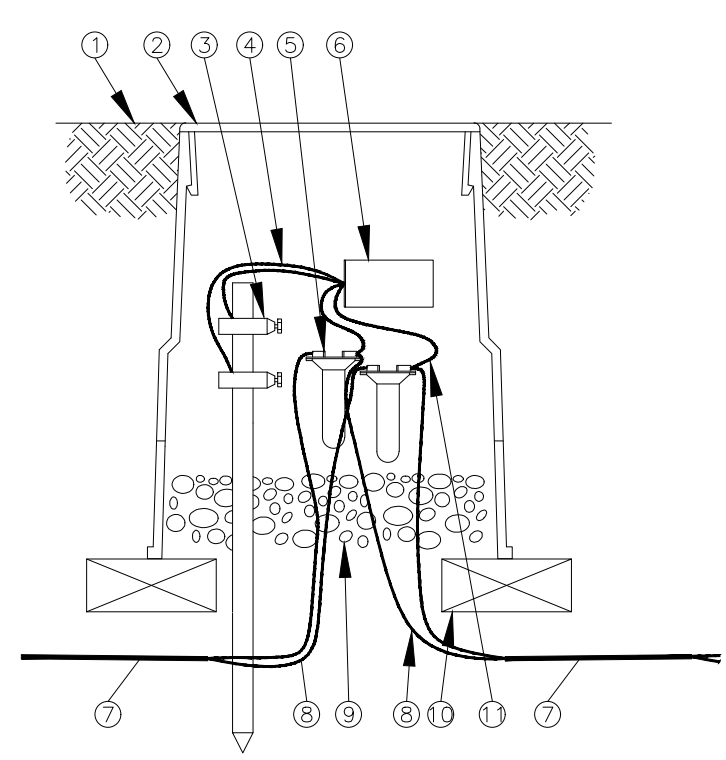
NOTE:  
MOUNT SENSOR ON SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY.



- 1 WATERPROOF SPLICE CONNECTION: RAIN BIRD WC20 (TWO REQUIRED)
- 2 RAIN BIRD DRIP KIT: XZZ-100-PRB-COM WITH IM-SOL
- 3 VALVE BOX WITH COVER: RAIN BIRD VB-STD
- 4 FINISH GRADE OR TOP OF MULCH
- 5 BRICK (1 OF 4)
- 6 PVC PIPE
- 7 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 8 PVC SCH 80 NIPPLE 1"
- 9 PVC SCH 80 ELBOW
- 10 PVC SCH 80 NIPPLE (2" LENGTH, HIDDEN) AND PVC SCH 80 ELBOW
- 11 PVC SCH 80 TEE OR ELBOW
- 12 PVC SCH 40 MALE ADAPTER
- 13 TWO-WIRE CABLE BETWEEN DEVICES (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)

NOTE:  
1. COIL AN ADDITIONAL 3- FEET OF TWO-WIRE CABLE IN VALVE BOX FOR EASY SERVICING.

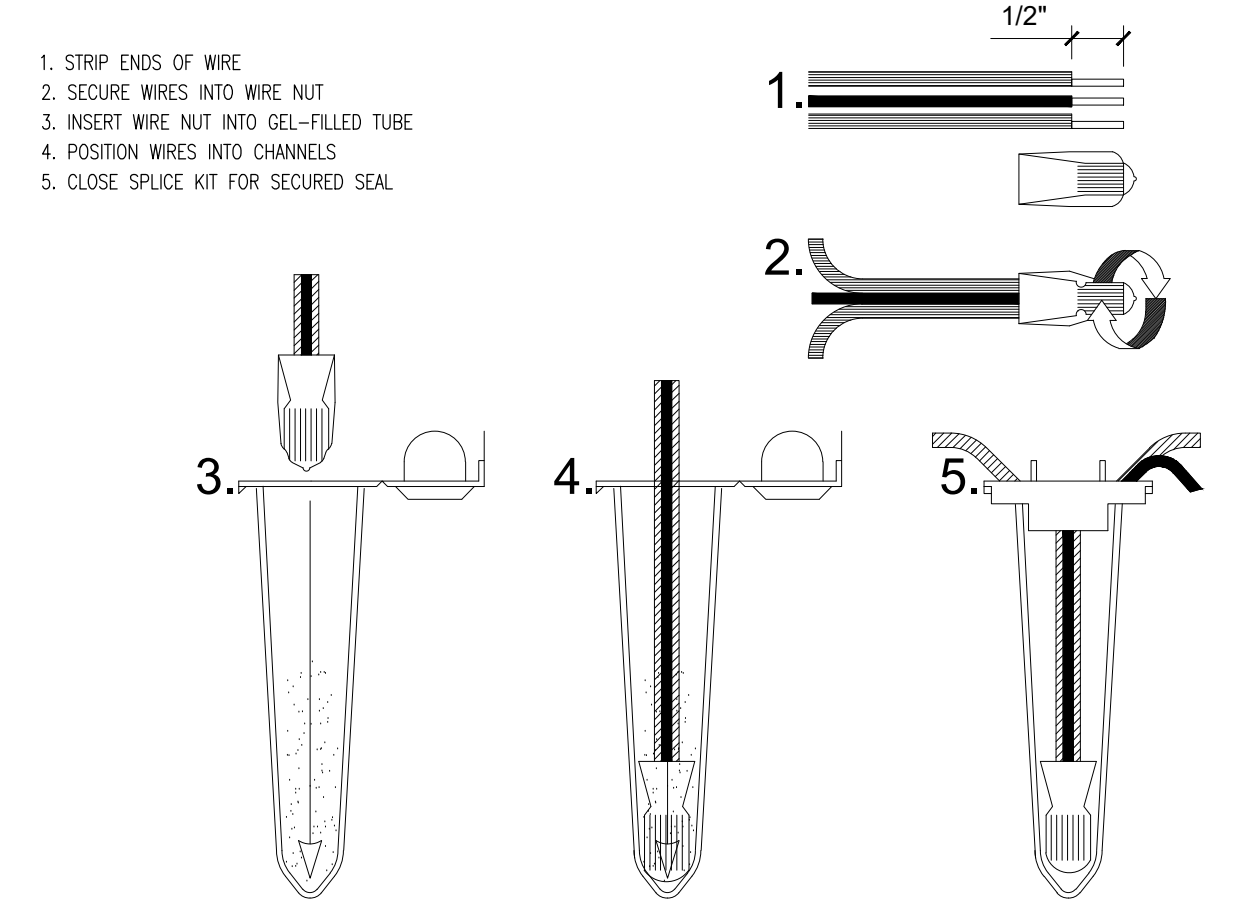
4 DRIP ZONE KIT WITH PRESSURE REGULATING FILTER  
NTS



- 1 FINISH GRADE OR TOP OF MULCH
- 2 10-INCH VALVE BOX WITH COVER: RAIN BIRD VB-10RND
- 3 GROUNDING ROD: 10 OHMS OR LESS
- 4 GREEN/YELLOW WIRE FROM LSP-1TURF TO GROUNDING ROD BRASS CLAMPS (1 OF 2)
- 5 DB SERIES WIRE CONNECTOR: RAIN BIRD DBWC25 (1 OF 2)
- 6 LINE SURGE PROTECTOR: RAIN BIRD LSP-1TURF M10008
- 7 TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
- 8 COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
- 9 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 10 BRICK (1 OF 2)
- 11 BLUE WIRE FROM LSP-1TURF TO DB SERIES WIRE CONNECTOR

NOTES:  
1. LSP-1TURF SHOULD BE INSTALLED EVERY 500- FEET OR FOR EVERY FIFTEEN DECODERS ON TWO-WIRE PATH.  
2. LSP-1TURF TO BE INSTALLED AT END OF WIRE RUN THAT TERMINATES IN THE FIELD (STAR CONFIGURATION).  
3. RAIN BIRD FD-401TURF AND FD-601TURF FIELD DECODERS COME WITH LSP-1TURF'S BUILT-IN. FD-101TURF, FD-102TURF AND FD-202TURF REQUIRE SEPARATE LSP-1TURF PROTECTION.

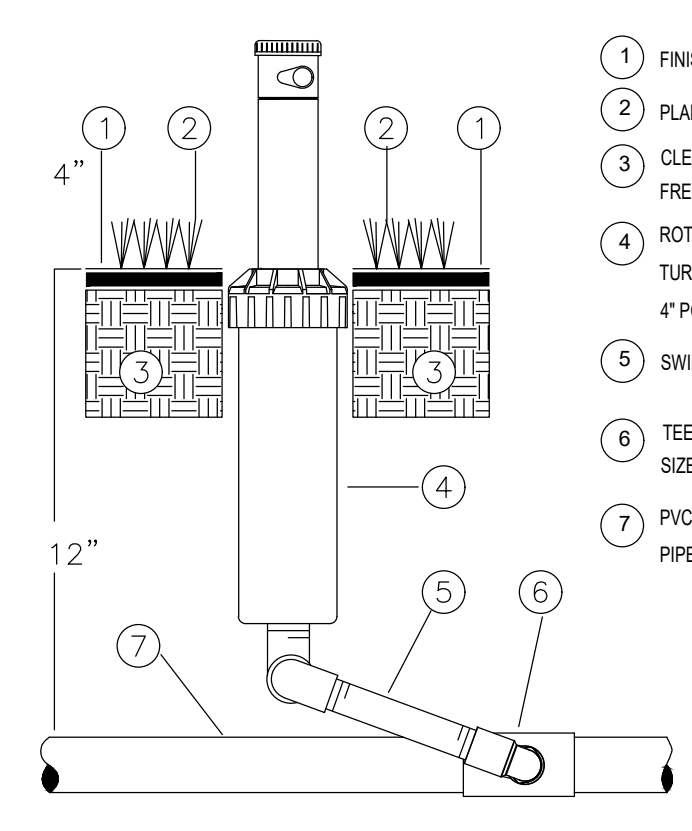
5 SURGE PROTECTION  
NTS



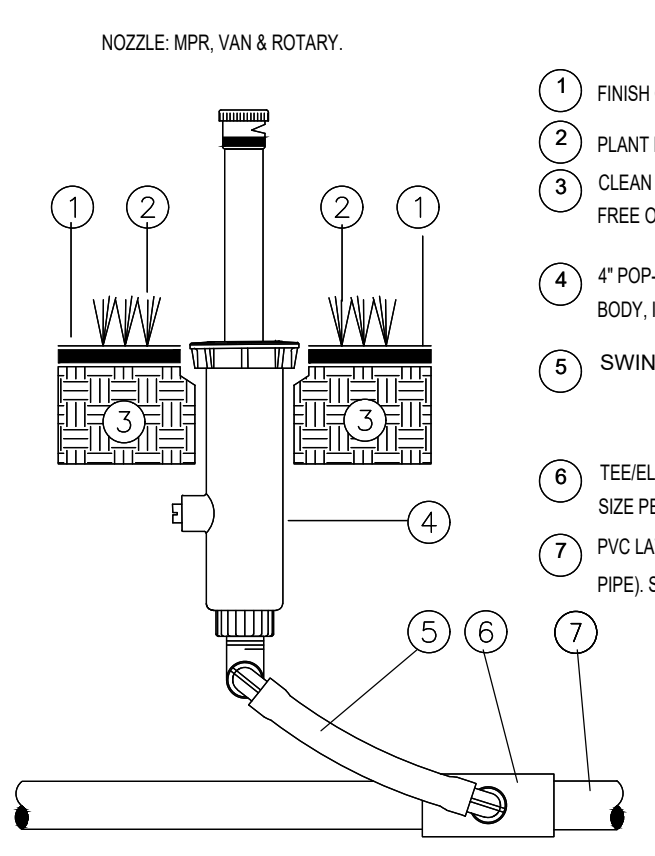
1. STRIP ENDS OF WIRE
2. SECURE WIRES INTO WIRE NUT
3. INSERT WIRE NUT INTO GEL-FILLED TUBE
4. POSITION WIRES INTO CHANNELS
5. CLOSE SPLICE KIT FOR SECURED SEAL

NOTE:  
1. VISUALLY CHECK THAT CONNECTOR IS BELOW LOCKING "FINGERS".

6 WIRE SPLICES NO EXCEPTION  
NTS

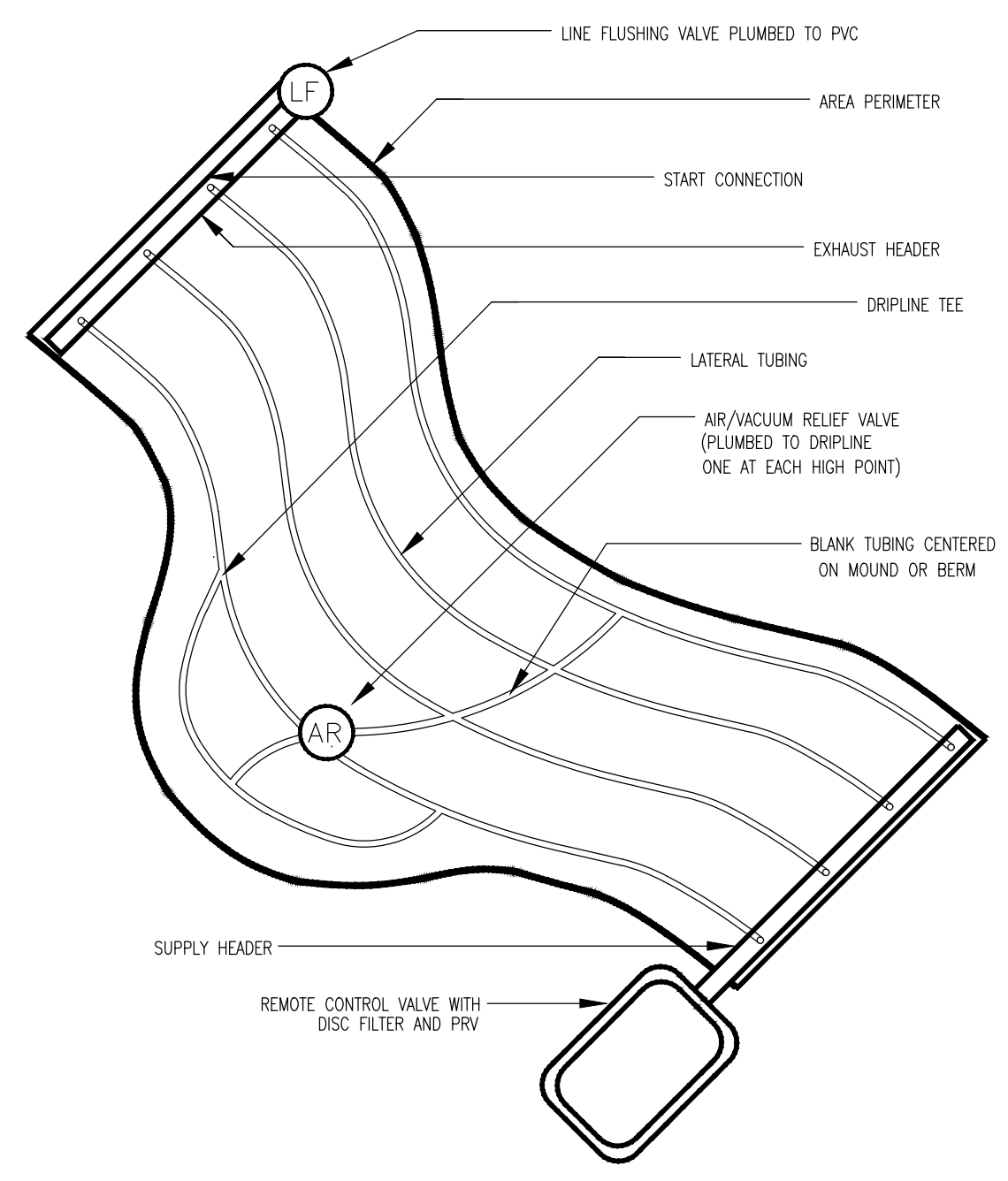


- 1 FINISH GRADE
- 2 PLANT MATERIAL (TURF), FREE OF ROCK AND DEBRIS
- 3 CLEAN SOIL, AMENDED/NATIVE, FREE OF ROCK AND DEBRIS
- 4 ROTOR POP-UP SPRINKLER: TURF ROTOR, 4" POP-UP HEIGHT, 3/4" INLET.
- 5 SWING PIPE
- 6 TEE/EL, PVC SCH40 LINE SIZE, SIZE PER SPRINKLER INLET
- 7 PVC LATERAL (NON-PRESSURE PIPE), SIZE PER PLAN.

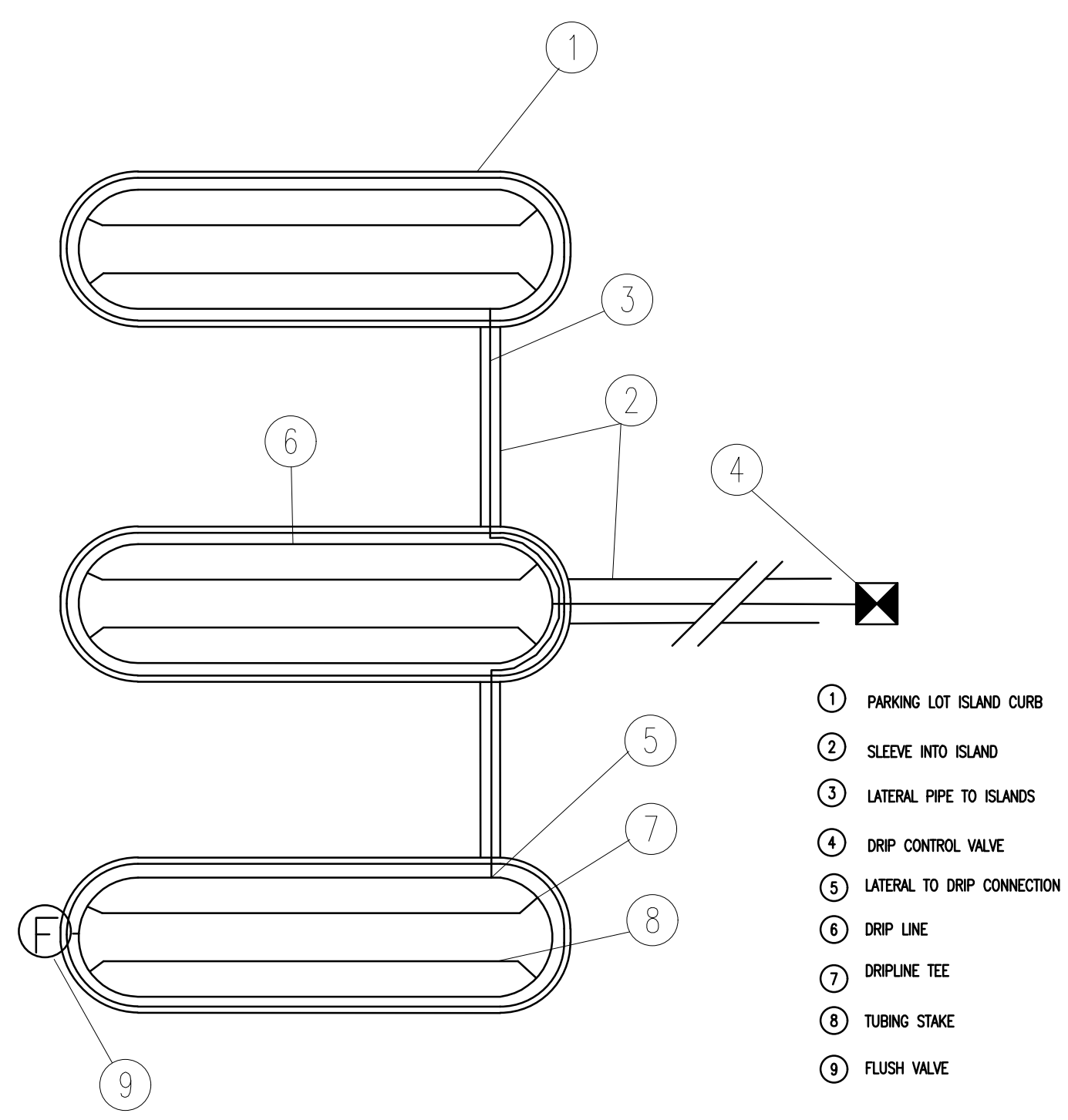


- 1 FINISH GRADE
- 2 PLANT MATERIAL (TURF), FREE OF ROCK AND DEBRIS
- 3 CLEAN SOIL, AMENDED/NATIVE, FREE OF ROCK AND DEBRIS
- 4 4" POP-UP SPRAY SPRINKLER BODY, INSTALL IN TURF AREAS.
- 5 SWING PIPE
- 6 TEE/EL, PVC SCH40 LINE SIZE, SIZE PER SPRINKLER INLET
- 7 PVC LATERAL (NON-PRESSURE PIPE), SIZE PER PLAN.

7 SPRINKLER INSTALLATION  
NTS



8 DRILINE IN LANDSCAPE BEDS  
NTS



9 IRRIGATION TO PARKING LOT ISLANDS  
NTS

- 1 PARKING LOT ISLAND CURB
- 2 SLEEVE INTO ISLAND
- 3 LATERAL PIPE TO ISLANDS
- 4 DRIP CONTROL VALVE
- 5 LATERAL TO DRIP CONNECTION
- 6 DRIP LINE
- 7 DRILINE TEE
- 8 TUBING STAKE
- 9 FLUSH VALVE

ISSUED FOR:	BID SET	DATE
REVISION	DESCRIPTION	

PROJECT NUMBER: 0133-24-020  
PM: CM  
CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN  
IRRIGATION DETAILS

DRAWING PATH: E:\Drawing Estimates\2024\Cherry Hill\Cherry Hill Phase 1 - Standard\Sheet\230060\_IRRI.dwg Nov 11, 2024 - 11:27 am

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**WATERING\_SCHEDULE**

NUMBER	MODEL	TYPE	PRECIP	SUN	MON	TUE	WED	THU	FRI	SAT	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
1	RAIN BIRD PGA ANGLE	SHRUB ROTARY	0.61 in/h	33 min		33 min		33 min			1	99	2,943	981
2	RAIN BIRD PGA ANGLE	TURF ROTOR	0.29 in/h	35 min	35 min	35 min	35 min	35 min	35 min		1	208	2,804	467
3	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	1,184	169
4	RAIN BIRD PGA ANGLE	TURF SPRAY	3.59 in/h	3 min	3 min	3 min	3 min	3 min	3 min	3 min	1	17	722	103
5	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	674	96.3
6	RAIN BIRD PGA ANGLE	TURF SPRAY	1.71 in/h	6 min	6 min	6 min	6 min	6 min	6 min	6 min	1	36	1,064	152
7	RAIN BIRD PGA ANGLE	TURF SPRAY	1.94 in/h	5 min	5 min	5 min	5 min	5 min	5 min	5 min	1	31	677	96.8
8	RAIN BIRD PGA ANGLE	TURF SPRAY	1.34 in/h	7 min	7 min	7 min	7 min	7 min	7 min	7 min	1	45	1,148	164
9	RAIN BIRD PGA ANGLE	SHRUB ROTARY	0.66 in/h	31 min		31 min		31 min			1	92	2,734	911
10	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	20 min	20 min	20 min	20 min	20 min	20 min	20 min	1	140	465	66.4
11	RAIN BIRD PGA ANGLE	SHRUB ROTARY	0.51 in/h	40 min		40 min		40 min			1	118	2,130	710
12	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	1,544	221
13	RAIN BIRD PGA ANGLE	TURF SPRAY	1.07 in/h	9 min	9 min	9 min	9 min	9 min	9 min	9 min	1	57	2,059	294
14	RAIN BIRD PGA ANGLE	TURF SPRAY	1.17 in/h	8 min	8 min	8 min	8 min	8 min	8 min	8 min	1	52	1,981	283
15	RAIN BIRD PGA ANGLE	TURF SPRAY	2.19 in/h	4 min	4 min	4 min	4 min	4 min	4 min	4 min	1	28	315	45.0
16	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	856	122
17	RAIN BIRD PGA ANGLE	TURF SPRAY	1.47 in/h	6 min	6 min	6 min	6 min	6 min	6 min	6 min	1	41	1,393	199
18	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	666	95.1
19	RAIN BIRD PGA ANGLE	TURF SPRAY	1.94 in/h	5 min	5 min	5 min	5 min	5 min	5 min	5 min	1	31	1,066	152
20	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	2,076	297
21	RAIN BIRD PGA ANGLE	TURF ROTOR	0.46 in/h	22 min	22 min	22 min	22 min	22 min	22 min		1	132	4,394	732
22	RAIN BIRD PGA ANGLE	TURF SPRAY	1.92 in/h	5 min	5 min	5 min	5 min	5 min	5 min	5 min	1	32	257	36.7
23	RAIN BIRD PGA ANGLE	TURF ROTOR	0.21 in/h	49 min	49 min	49 min	49 min	49 min	49 min		1	289	6,728	1,121
24	RAIN BIRD PGA ANGLE	TURF ROTOR	0.62 in/h	17 min	17 min	17 min	17 min	17 min	17 min		1	97	1,990	332
25	RAIN BIRD PGA ANGLE	TURF SPRAY	1.45 in/h	6 min	6 min	6 min	6 min	6 min	6 min	6 min	1	42	987	141
26	RAIN BIRD PGA ANGLE	TURF SPRAY	1.46 in/h	6 min	6 min	6 min	6 min	6 min	6 min	6 min	1	42	957	137
27	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	AREA FOR DRIPLINE	0.43 in/h	21 min	21 min	21 min	21 min	21 min	21 min	21 min	1	141	1,151	164
28	RAIN BIRD PGA ANGLE	TURF ROTOR	0.48 in/h	21 min	21 min	21 min	21 min	21 min	21 min		1	124	3,566	594
29	RAIN BIRD PGA ANGLE	TURF ROTOR	0.47 in/h	22 min	22 min	22 min	22 min	22 min	22 min		1	129	3,380	563
		TOTALS:		507	403	507	403	507	403	237		2,869	51,910	9,447

**CRITICAL ANALYSIS**

Generated: 2024-11-11 22:17

P.O.C. NUMBER: 01  
Water Source Information:

FLOW AVAILABLE  
Point of Connection Size: 2"  
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Loss for POC to Valve Elevation: 0 PSI  
Loss for Backflow: 0 PSI  
Critical Station Pressure at POC: 52.6 PSI  
Pressure Available: 70 PSI  
Residual Pressure Available: 17.4 PSI

**VALVE\_SCHEDULE**

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE 1"	PIPE 1 1/2"	PIPE 2"	WIRE	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PGA ANGLE	1"	SHRUB ROTARY	29.73	26	427.3	14.7		83.0	52.5	52.6	0.61 in/h
2	RAIN BIRD PGA ANGLE	1"	TURF ROTOR	13.48	10	299.9			115.9	30.9	31.0	0.29 in/h
3	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	8.4	1,584 L.F.	241.4			191.6	37.7	37.8	0.43 in/h
4	RAIN BIRD PGA ANGLE	1-1/2"	TURF SPRAY	42.46	31	256.6	6.8	12.2	198.4	33.1	33.8	3.59 in/h
5	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	4.78	801.5 L.F.	204.1			255.1	34.0	34.1	0.43 in/h
6	RAIN BIRD PGA ANGLE	1-1/2"	TURF SPRAY	29.55	23	182.8	18.7		415.2	33.1	34.1	1.71 in/h
7	RAIN BIRD PGA ANGLE	1-1/2"	TURF SPRAY	21.85	16	128.9	10.6		424.1	31.9	32.5	1.94 in/h
8	RAIN BIRD PGA ANGLE	1"	TURF SPRAY	25.5	17	170.0	46.1		537.2	36.3	37.2	1.34 in/h
9	RAIN BIRD PGA ANGLE	1-1/2"	SHRUB ROTARY	29.72	26	407.7	11.0		630.6	47.2	48.6	0.66 in/h
10	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	3.32	497.1 L.F.	102.8			635.8	33.2	33.2	0.43 in/h
11	RAIN BIRD PGA ANGLE	1"	SHRUB ROTARY	18.05	15	272.8	10.4		662.2	51.2	51.6	0.51 in/h
12	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	10.95	1,642 L.F.	61.9			711.4	40.1	40.3	0.43 in/h
13	RAIN BIRD PGA ANGLE	1-1/2"	TURF SPRAY	36.12	24	234.4	44.9	15.2	746.4	33.1	35.0	1.07 in/h
14	RAIN BIRD PGA ANGLE	1-1/2"	TURF SPRAY	38.09	28	330.0	14.8	5.2	753.1	34.1	36.2	1.17 in/h
15	RAIN BIRD PGA ANGLE	1"	TURF SPRAY	11.24	11	120.4			768.5	36.0		2.19 in/h
16	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	6.07	909.2 L.F.	75.9			761.2	35.2	35.3	0.43 in/h
17	RAIN BIRD PGA ANGLE	1-1/2"	TURF SPRAY	33.98	25	220.2	75.7		756.0	32.9	34.6	1.47 in/h
18	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	4.72	707.5 L.F.				720.4	33.9	34.0	0.43 in/h
19	RAIN BIRD PGA ANGLE	1"	TURF SPRAY	34.39	26	240.0	41.2		712.1	38.6	40.3	1.94 in/h
20	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	14.72	2,208 L.F.	144.6			706.9	45.5	45.9	0.43 in/h
21	RAIN BIRD PGA ANGLE	1-1/2"	TURF ROTOR	33.29	21	545.1	68.1		609.5	29.1	30.8	0.46 in/h
22	RAIN BIRD PGA ANGLE	1"	TURF SPRAY	8.04	7	131.2			570.5	36.0	36.1	1.92 in/h
23	RAIN BIRD PGA ANGLE	1-1/2"	TURF ROTOR	23.28	8	250.1	10.2		558.4	27.2	28.1	0.21 in/h
24	RAIN BIRD PGA ANGLE	1-1/2"	TURF ROTOR	20.52	12	301.0	58.5		504.5	28.1	28.9	0.62 in/h
25	RAIN BIRD PGA ANGLE	1"	TURF SPRAY	23.5	16	151.0	20.1		482.8	37.2	38.2	1.45 in/h
26	RAIN BIRD PGA ANGLE	1"	TURF SPRAY	22.78	16	151.5	12.5		477.6	36.9	37.9	1.46 in/h
27	RAIN BIRD XCZPGA-100-PRF DRIP VALVE 3-15GPM	1"	AREA FOR DRIPLINE	8.16	1,223 L.F.	337.8			398.7	37.4	37.5	0.43 in/h
28	RAIN BIRD PGA ANGLE	1-1/2"	TURF ROTOR	28.76	19	401.9	38.2		368.1	37.4	38.6	0.48 in/h
29	RAIN BIRD PGA ANGLE	1-1/2"	TURF ROTOR	26.2	21	579.4	8.3		149.6	27.8	28.3	0.47 in/h
	Common Wire								1,715			

2024/11/22  
DATE

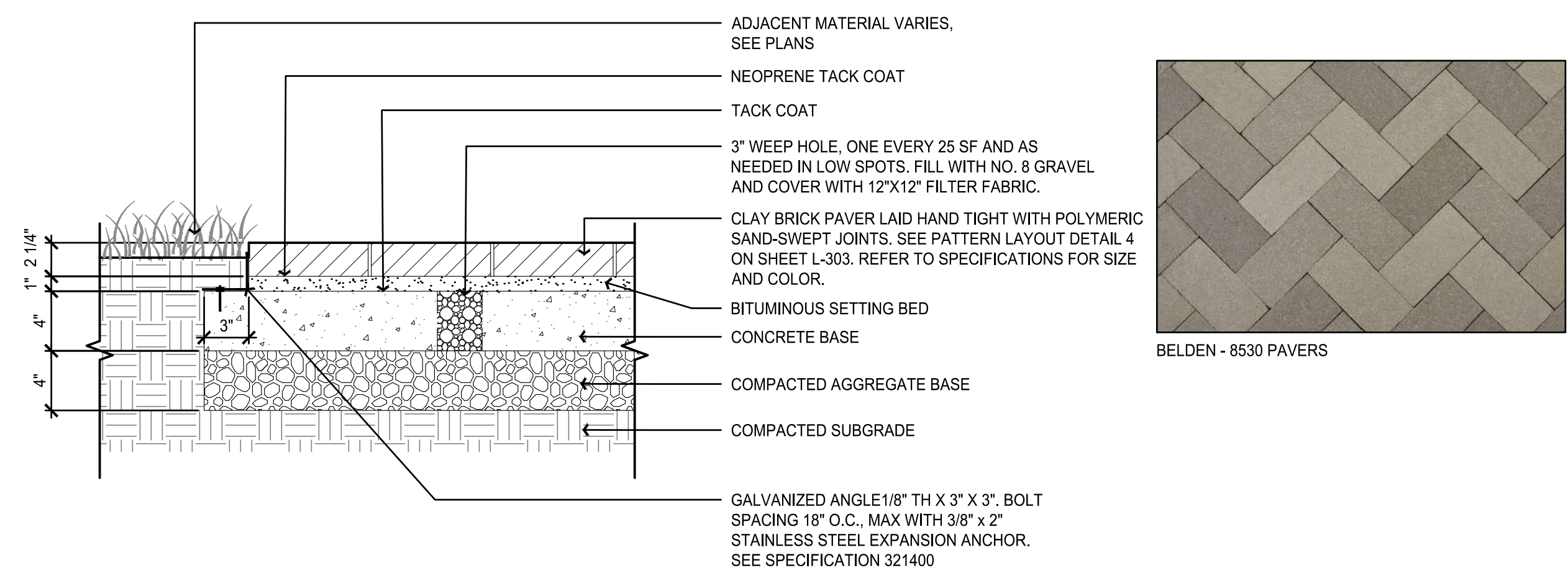
ISSUED FOR: BID SET  
REVISION DESCRIPTION

PROJECT NUMBER: 0133-24-020  
PM: CM

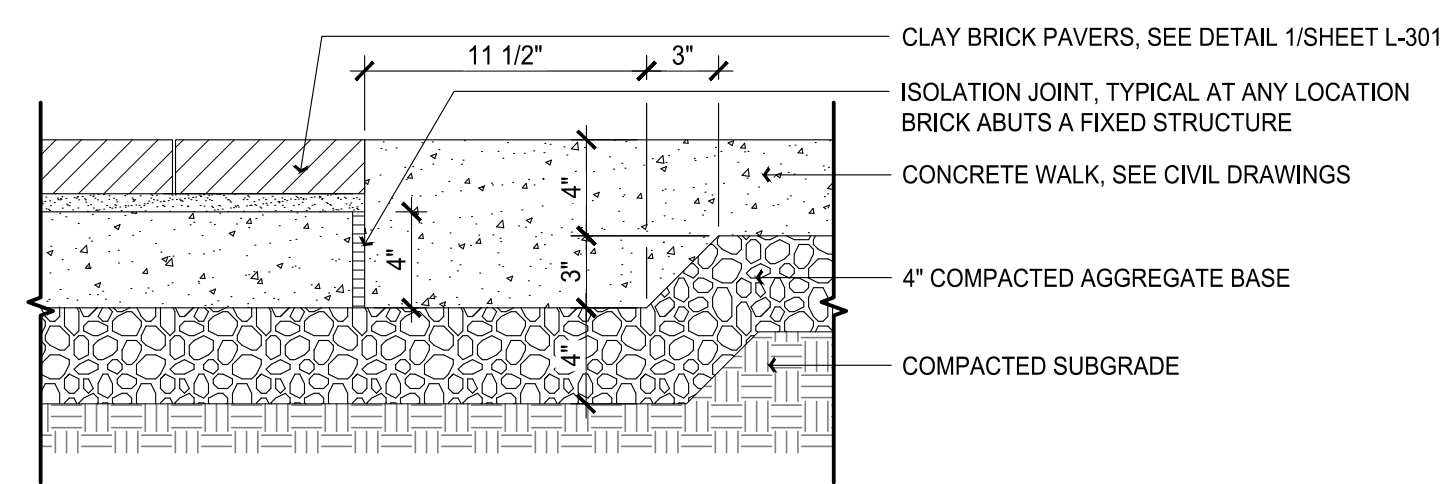
CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN

IRRIGATION SCHEDULES

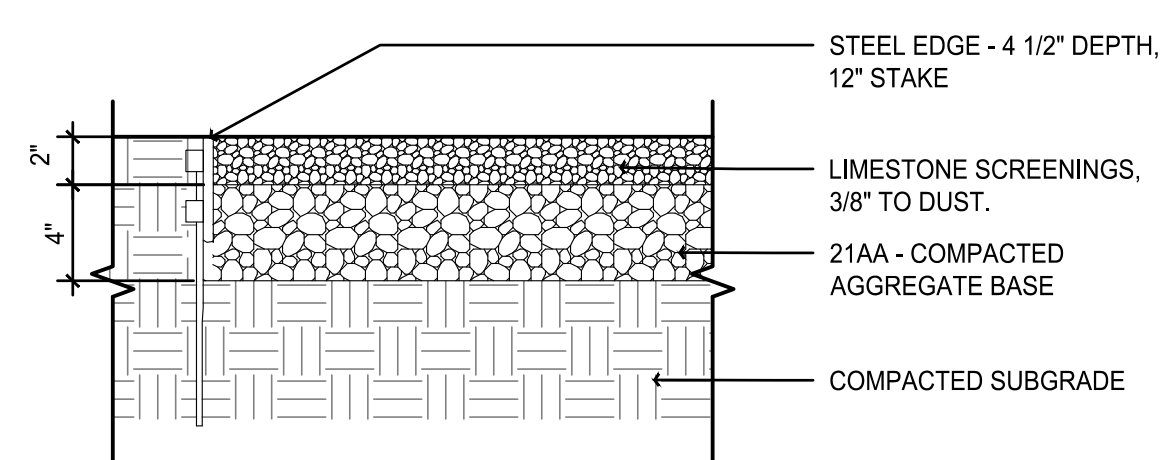




**1 CLAY BRICK PAVER**  
 SCALE: 1-1/2" = 1'-0"

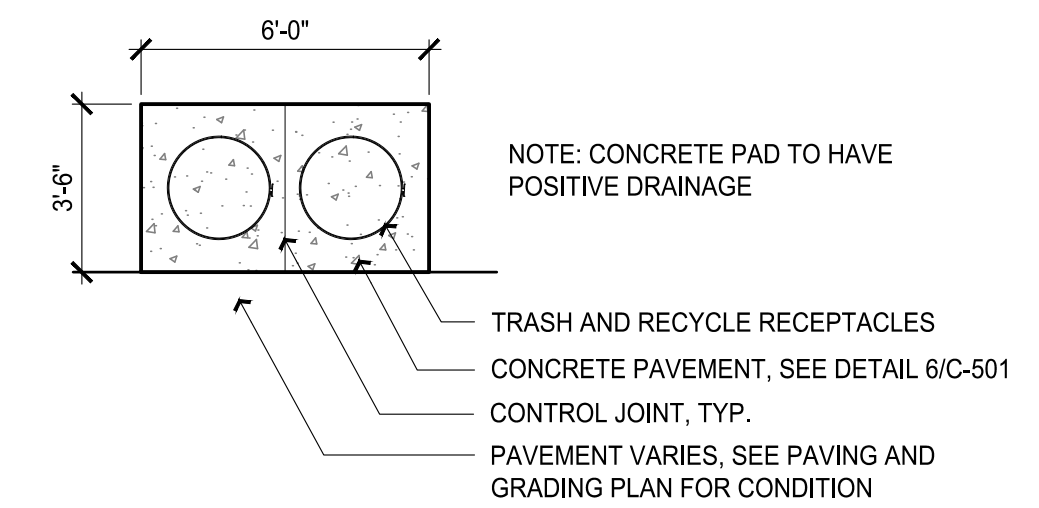
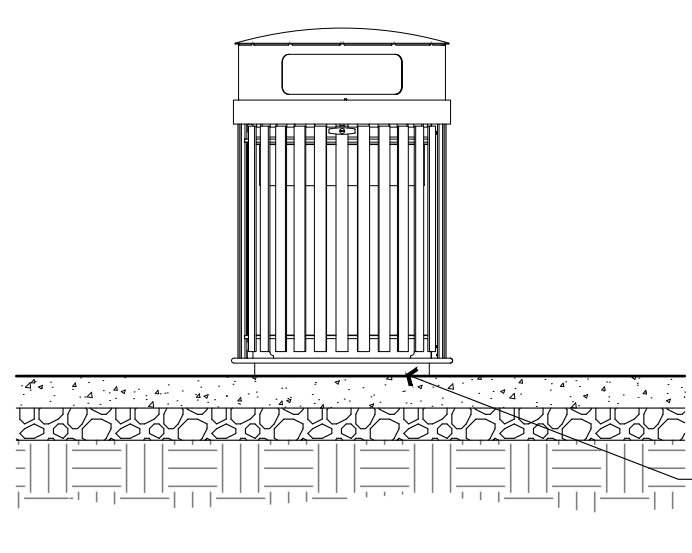


**2 BRICK TO CONCRETE SECTION**  
 SCALE: 1-1/2" = 1'-0"

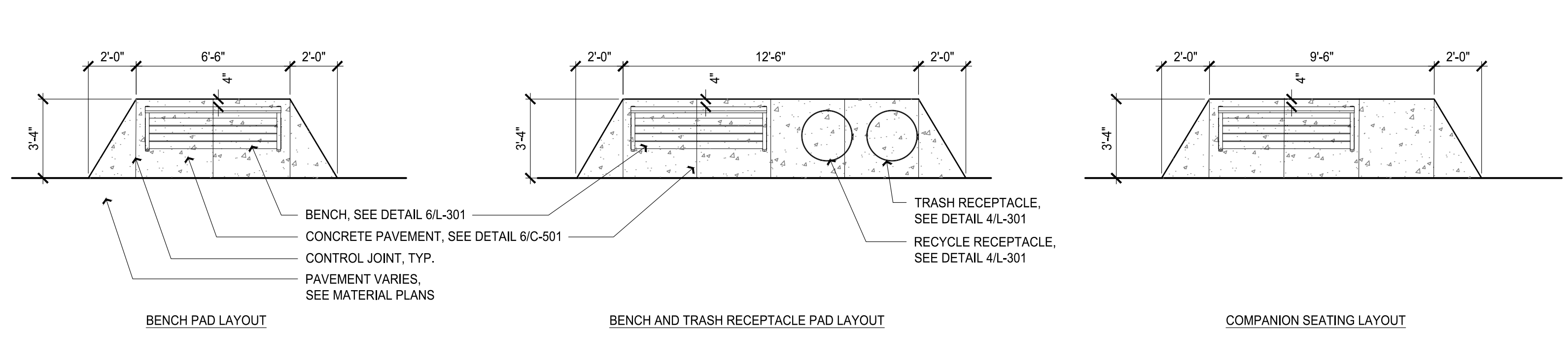


**3 DECORATIVE GRAVEL**  
 SCALE: 1 1/2" = 1'-0"

**DUMOR, INC.:**  
 RECEPTACLE 287  
 COLOR: TRASH - TEXTURED GREY  
 RECYCLE CONTAINER TO BE BLUE WITH WHITE LETTERS

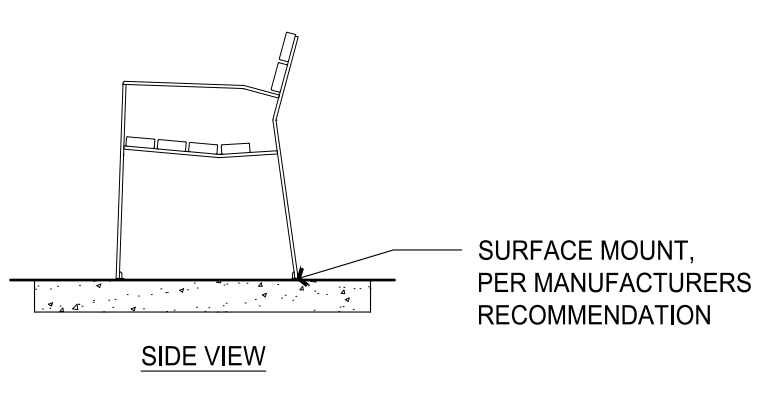


**4 TRASH RECEPTACLE**  
 SCALE: NTS

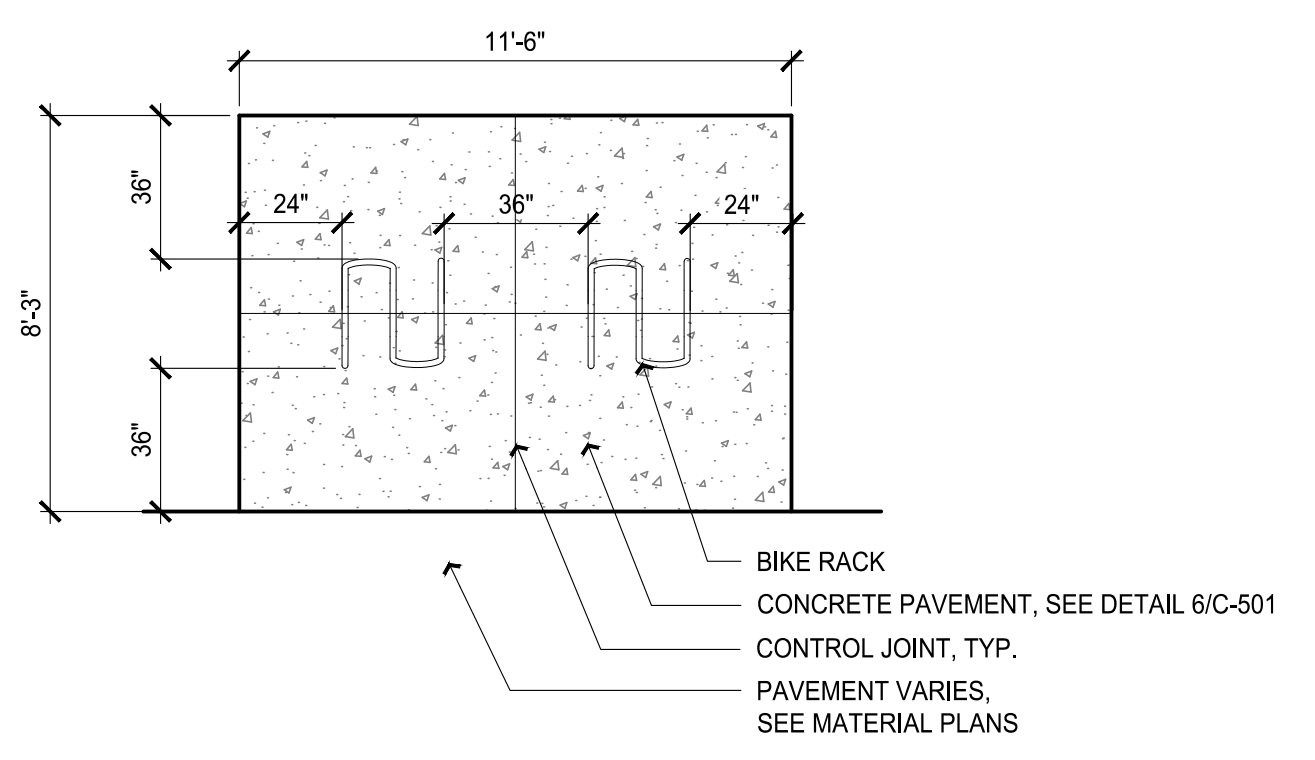


**5 BENCH AND TRASH RECEPTACLE PAD**  
 SCALE: 1/4" = 1'-0"

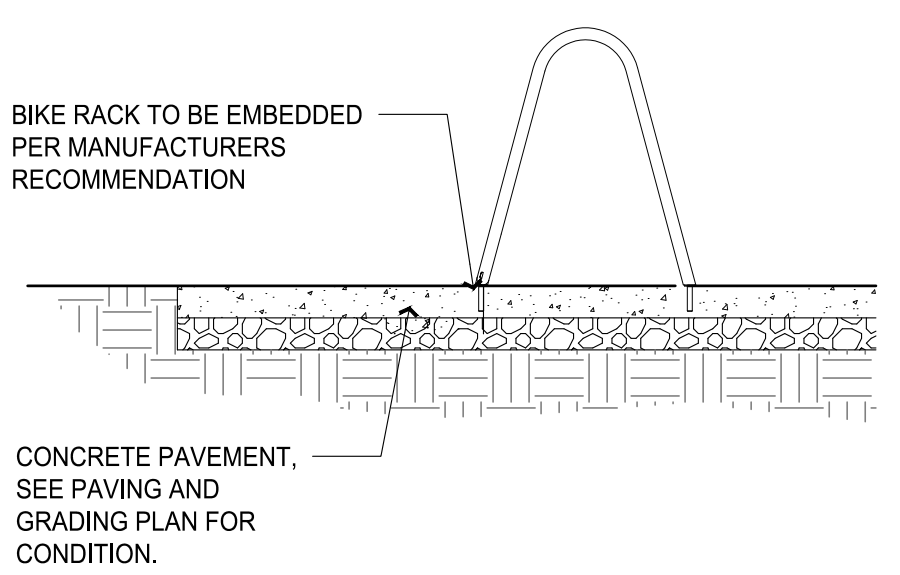
**LANDSCAPE FORMS:**  
 HARPO BENCH, SURFACE MOUNTED (69")  
 POWDER COAT COLOR: BRONZE METALLIC  
 WIDE WOOD SLATES - IPE  
 \* PROVIDE COLOR & MATERIAL SAMPLES FOR REVIEW AND APPROVAL BEFORE FINAL SELECTION



**6 BENCH**  
 SCALE: NTS



**LANDSCAPE FORMS:**  
 FLO BIKE RACK, EMBEDDED  
 COLOR: STAINLESS STEEL



**7 BICYCLE RACK**  
 SCALE: NTS

ISSUED FOR:	BID SET	2024/11/22
REVISION:	DESCRIPTION	DATE

PROJECT NUMBER: 0133-24-020  
 PM: CM  
 CANTON CHARTER TOWNSHIP  
 CHERRY HILL VILLAGE PHASE 1  
 CANTON TOWNSHIP, MICHIGAN

SITE DETAILS



Know what's below.  
 Call before you dig.

DRAWING PATH: P:\0126 - 016610133240020 - Cherry Hill Village Phase 1\Drawings\PLN\_ID\Sheets\230060 - DTL5.dwg Nov 22, 2024 - 1:11pm

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**2 LEG U-FRAME WITH LOUNGE SWING**  
CARBON STEEL CONSTRUCTION WITH POWDERCOAT FINISH  
STANDARD LANDSCAPE FORMS POWDERCOAT COLORS AVAILABLE  
WOOD SPECIES CUSTOMIZABLE  
SWING STRUCTURE MUST BE ANCHORED SECURELY  
ANCHORING HARDWARE NOT SUPPLIED  
BY LANDSCAPE FORMS

FOOTING DESIGN AND ANCHOR SELECTION BY OTHERS  
SWING AND FRAME WEIGHT AS SHOWN - 1000 LBS.  
SWING SEATING CAPACITY - 600 LBS. (MAX LIVE LOAD)

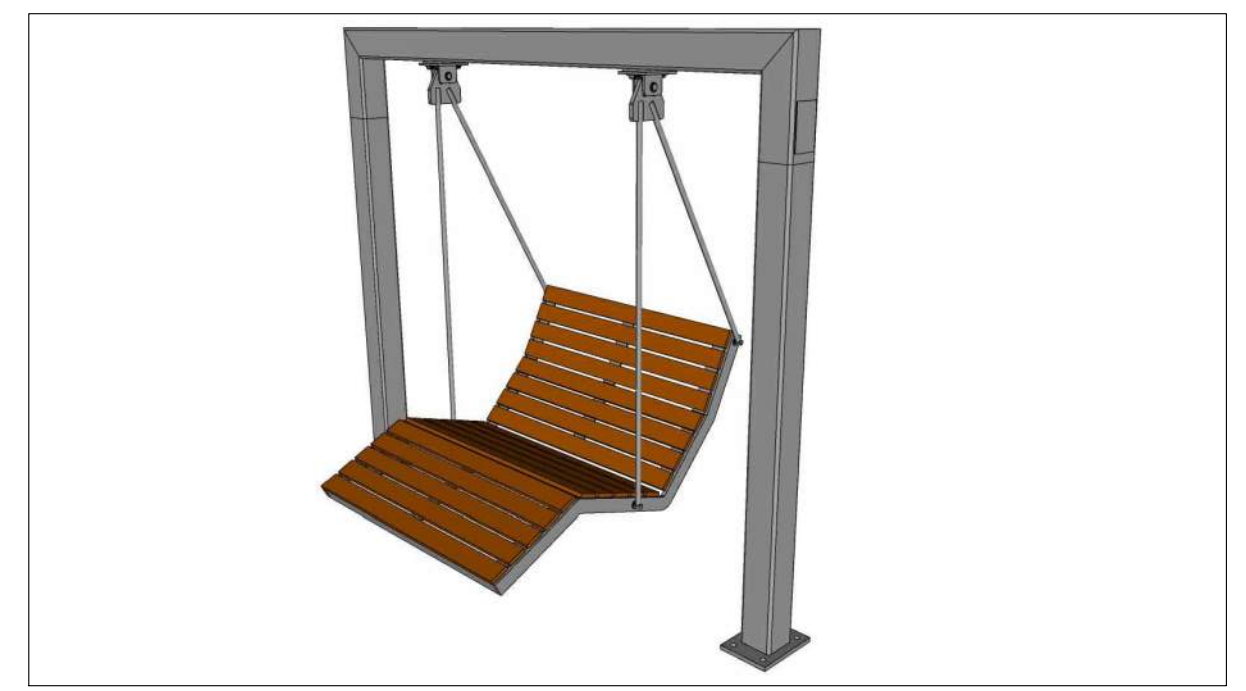
FOR DESIGN INTENT PURPOSES ONLY

**STUDIO431**  
landscapeforms  
7800 E. MICHIGAN AVE. P 800.430.6209  
KALAMAZOO, MI 49008 P 800.521.2546  
USA landscapeforms.com

TITLE: 2 LEG U-FRAME - LOUNGE  
PROJECT: CUSTOM READY SWINGS  
FILE NAME: SFCR-S-007  
LIMIT OF MEASURE: INCHES (FEET & INCHES)  
DRAWING CREATED: Thursday, May 12, 2022 12:33:33 PM  
DRAWING REVISION: DATE REVISED:

SCALE: 1:28  
AUTHOR: JCS  
SHEET: 1 OF 1

B-SIZE SHEET



- NOTES:
- MANUFACTURER - LANDSCAPE FORMS.  
2 LEG U-FRAME WITH LOUNGE SWING  
- FRAME TO BE POWER COATED - METALLIC BRONZE  
- WOOD GRAIN: IPE
  - FOUNDATION DESIGN IS DELEGATED DESIGN. CONTRACTOR TO PROVIDE ENGINEERED STAMPED SHOP DRAWINGS FOR REVIEW AND APPROVAL.
  - PROVIDE COLOR & MATERIAL SAMPLES FOR REVIEW AND APPROVAL BEFORE FINAL SELECTION

ISSUED FOR:	BID SET	2024/11/22
REVISION:	DESCRIPTION	DATE

**1 SWINGING BENCH**  
SCALE: NTS

**LANDSCAPE FORMS:**  
HARPO DOUBLE CHAISE LOUNGE  
POWDER COAT COLOR: BRONZE METALLIC  
WIDE WOOD SLATES - IPE  
\* PROVIDE COLOR & MATERIAL SAMPLES FOR REVIEW AND APPROVAL BEFORE FINAL SELECTION

STAINLESS STEEL ANCHOR BOLT, DOUBLE NUT AND WASHER BETWEEN CHAIR AND CONCRETE TO RAISE CHAIR 1" FROM CONCRETE BASE. EACH LEG (4) TO BE ANCHORED INTO CONCRETE BASE. FILL OVER CONCRETE BASE

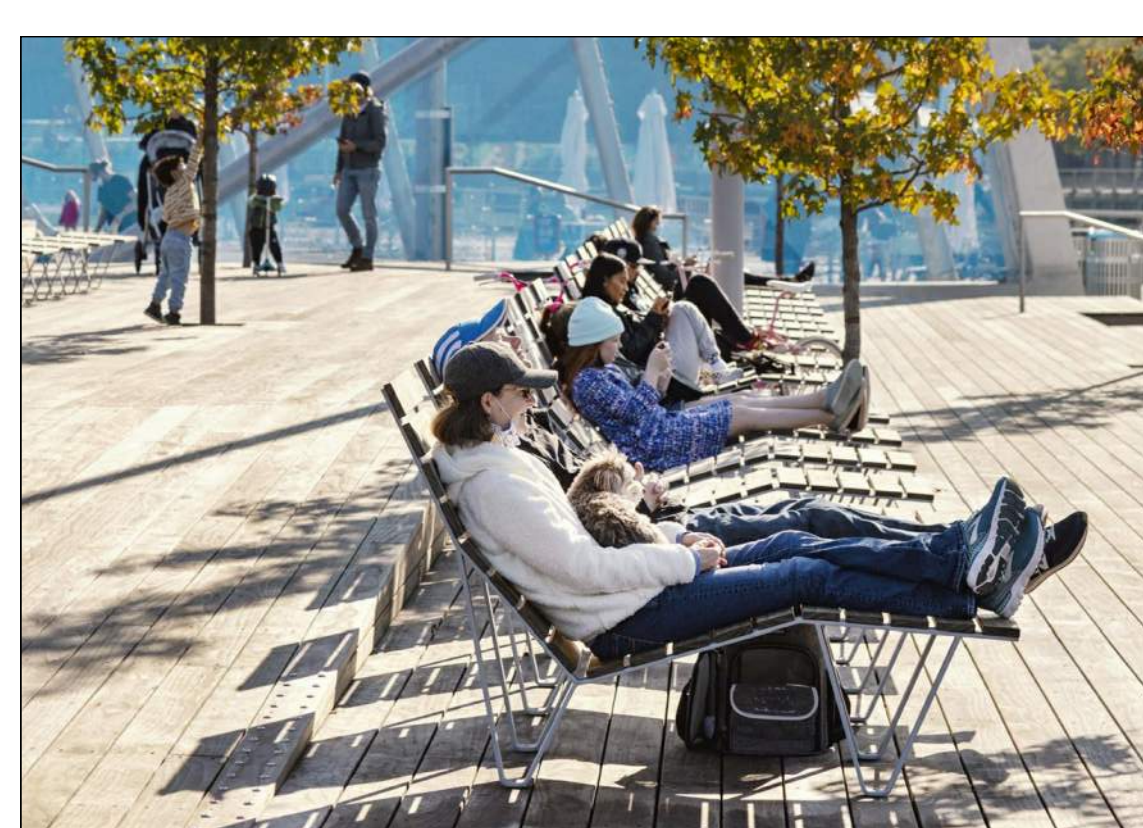
SANTACOLE  
urbisseries  
**Harpo** double chaise lounge  
Product Drawing  
www.landscapeforms.com  
Date: 09/16/2022  
Ph: 800.521.2546

(4) M10.75 THRU HOLES IN FRAME WITH FREESTANDING GLIDES INSTALLED. GLIDES MAY BE REMOVED FOR ANCHORING. SURFACE MOUNTING HARDWARE NOT INCLUDED.

WOOD BOARDS  
STEEL FRAME  
FREESTANDING GLIDES

Drawing: AX02-01  
Dimensions are in inches (mm)

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**2 CHAISE LOUNGE CHAIR**  
SCALE: 3/4" = 1'-0"

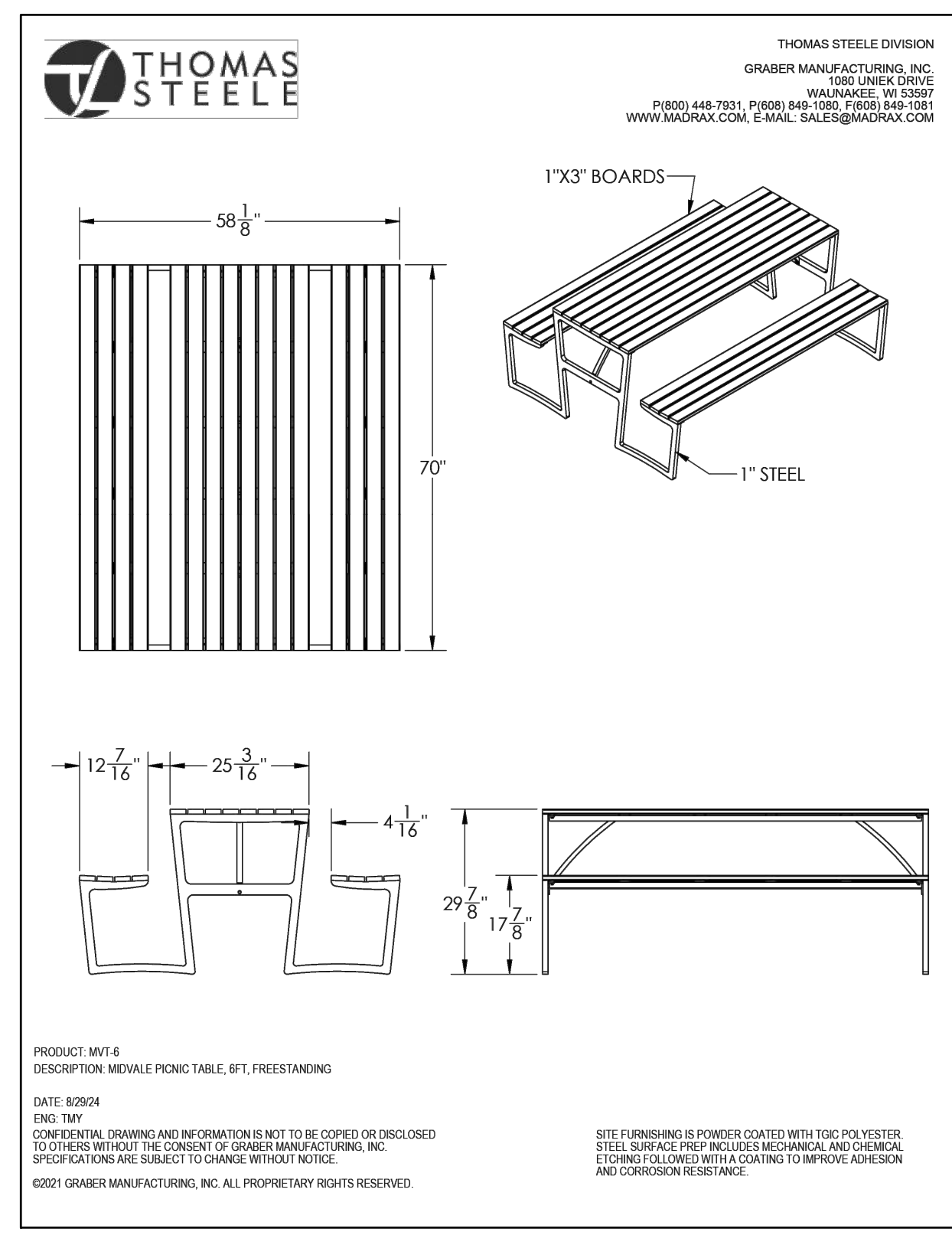


PROJECT NUMBER	0133-24-020
PM	CM
CANTON CHARTER TOWNSHIP CHERRY HILL VILLAGE PHASE 1 CANTON TOWNSHIP, MICHIGAN	
SITE DETAILS	

DRAWING PATH: P:\0126\_016810133240020\_Cherry Hill Village Phase 1\Drawings\PLN\_ID\Sheets\230060\_DTLs.dwg Nov 22, 2024 - 1:11pm

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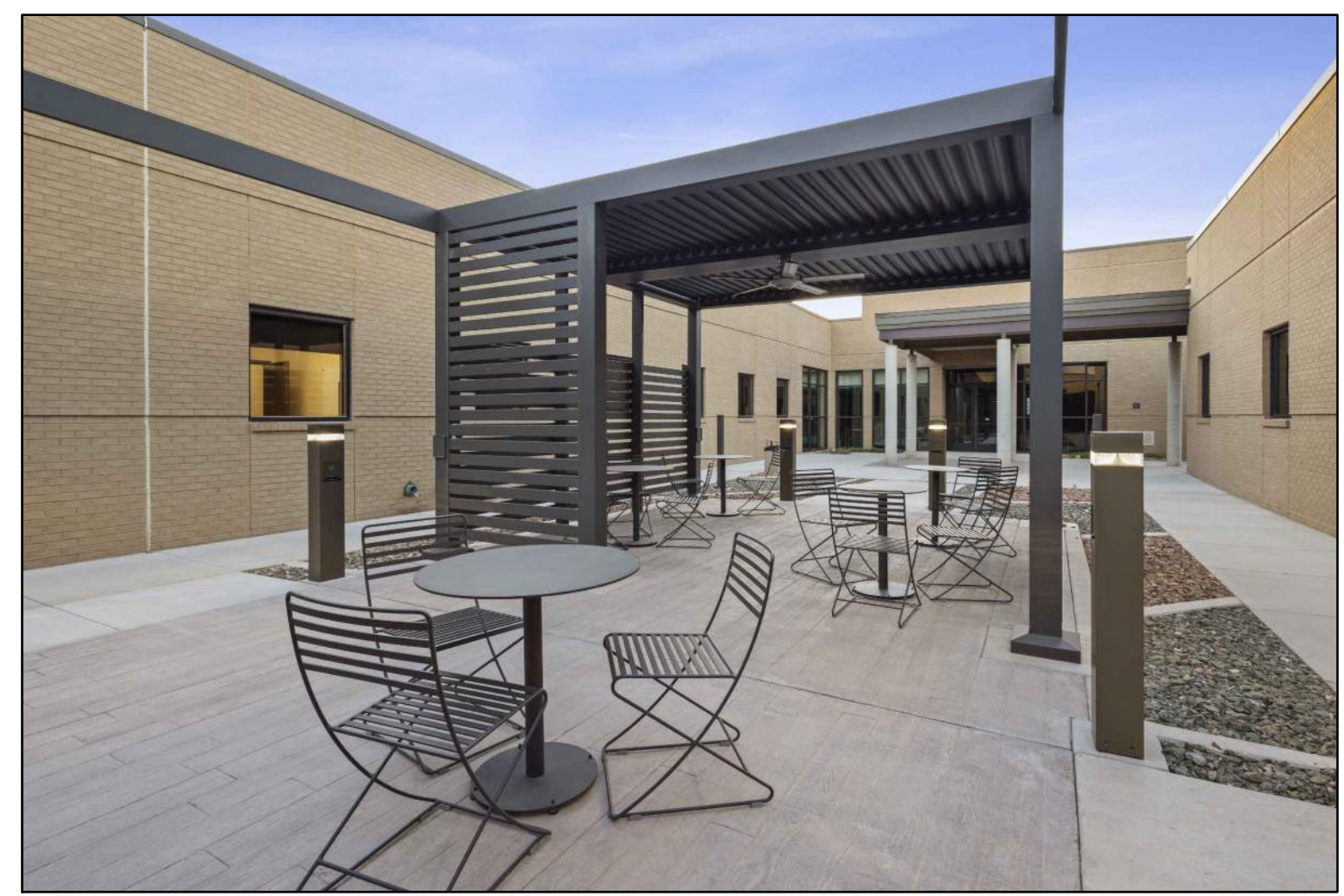




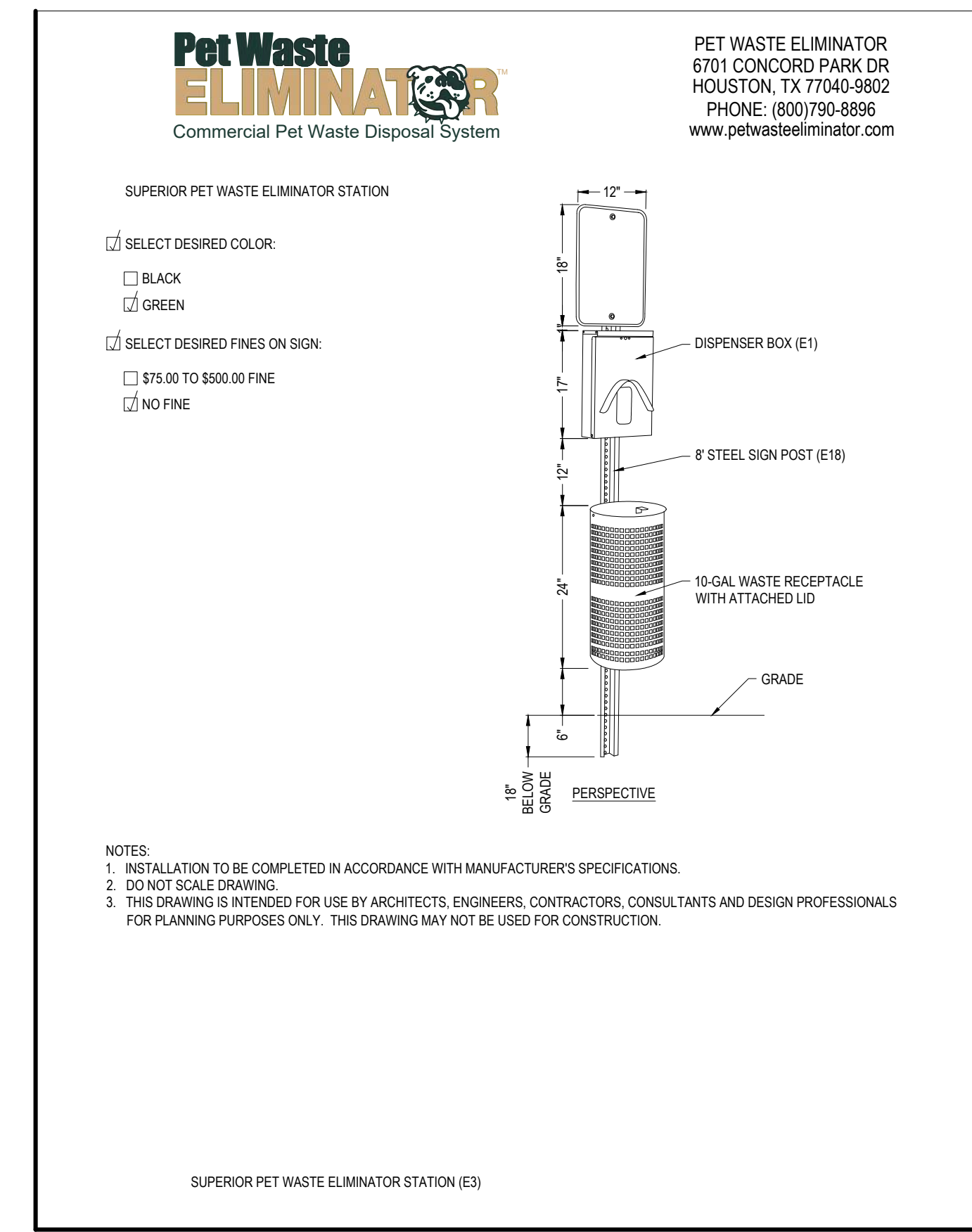
**THOMAS STEELE:**  
MIDVALE PICNIC TABLE  
\* PROVIDE COLOR & MATERIAL SAMPLES FOR REVIEW AND APPROVAL BEFORE FINAL SELECTION

**1 PICNIC TABLE**  
SCALE: NTS

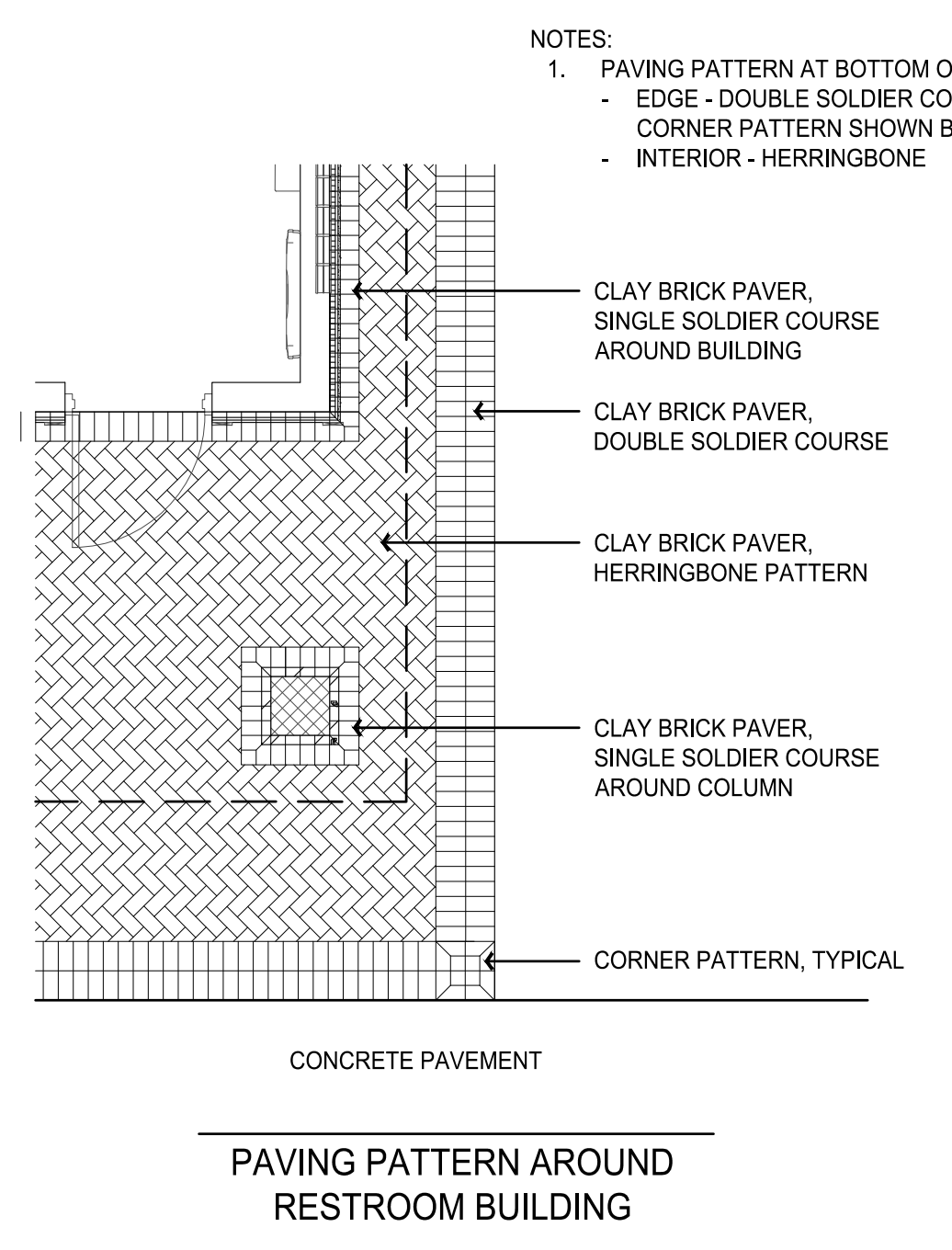
**LANDSCAPE FORMS:**  
PARC CENTRE TABLE AND CHAIR  
3 TABLES, 3 CHAIRS PER TABLE  
COLOR - BRONZE METALLIC  
\* PROVIDE COLOR & MATERIAL SAMPLES FOR REVIEW AND APPROVAL BEFORE FINAL SELECTION



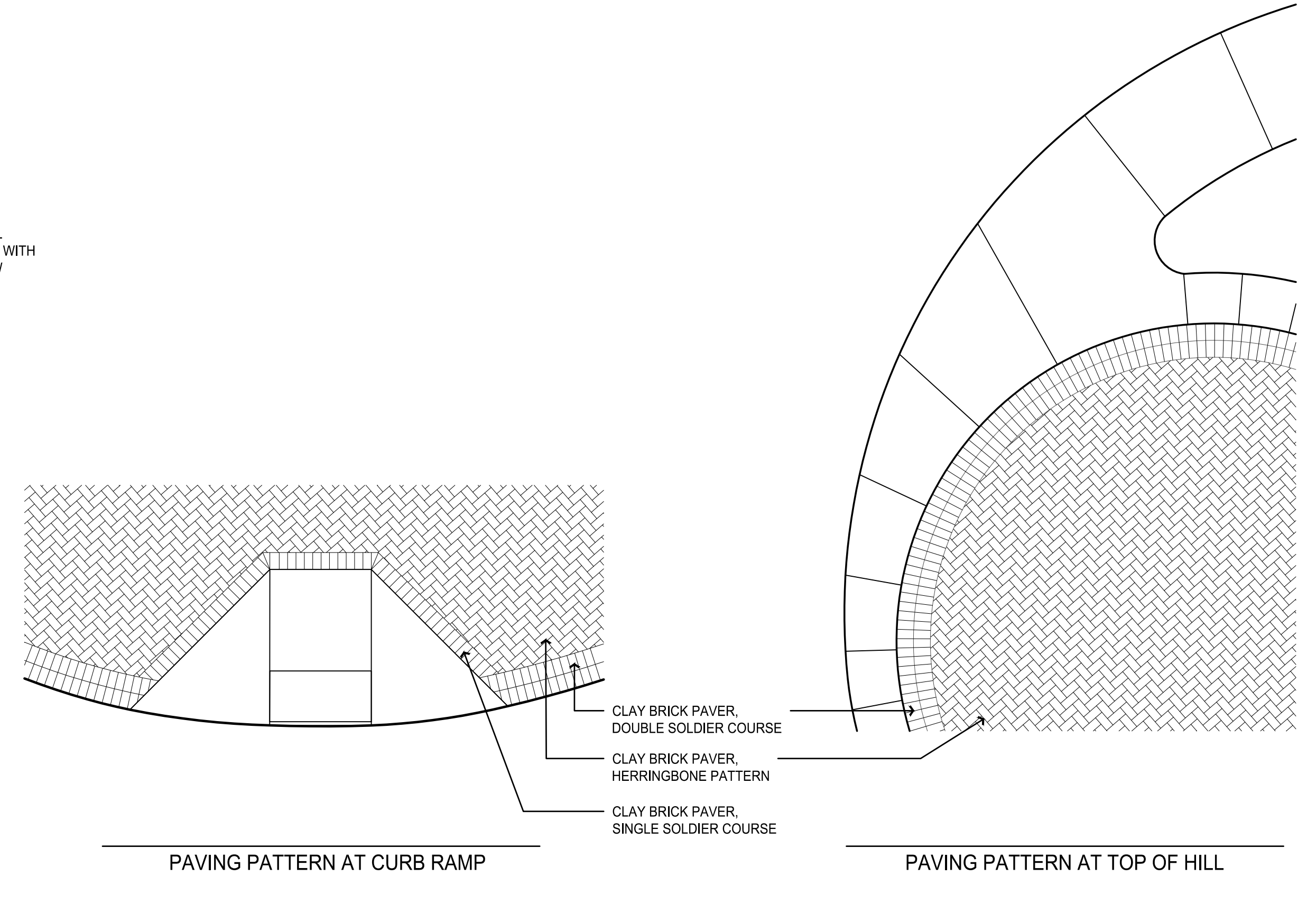
**3 MOVABLE TABLE AND CHAIRS**  
SCALE: NTS



**2 PET WASTE STATION**  
SCALE: NTS



**4 CLAY BRICK PAVER LAYOUT**  
SCALE: 1/4" = 1'-0"



ISSUED FOR:	BID SET	DATE
REVISION <td>DESCRIPTION <td></td> </td>	DESCRIPTION <td></td>	

PROJECT NUMBER: 01-33-24-0020  
PM: CM

CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN

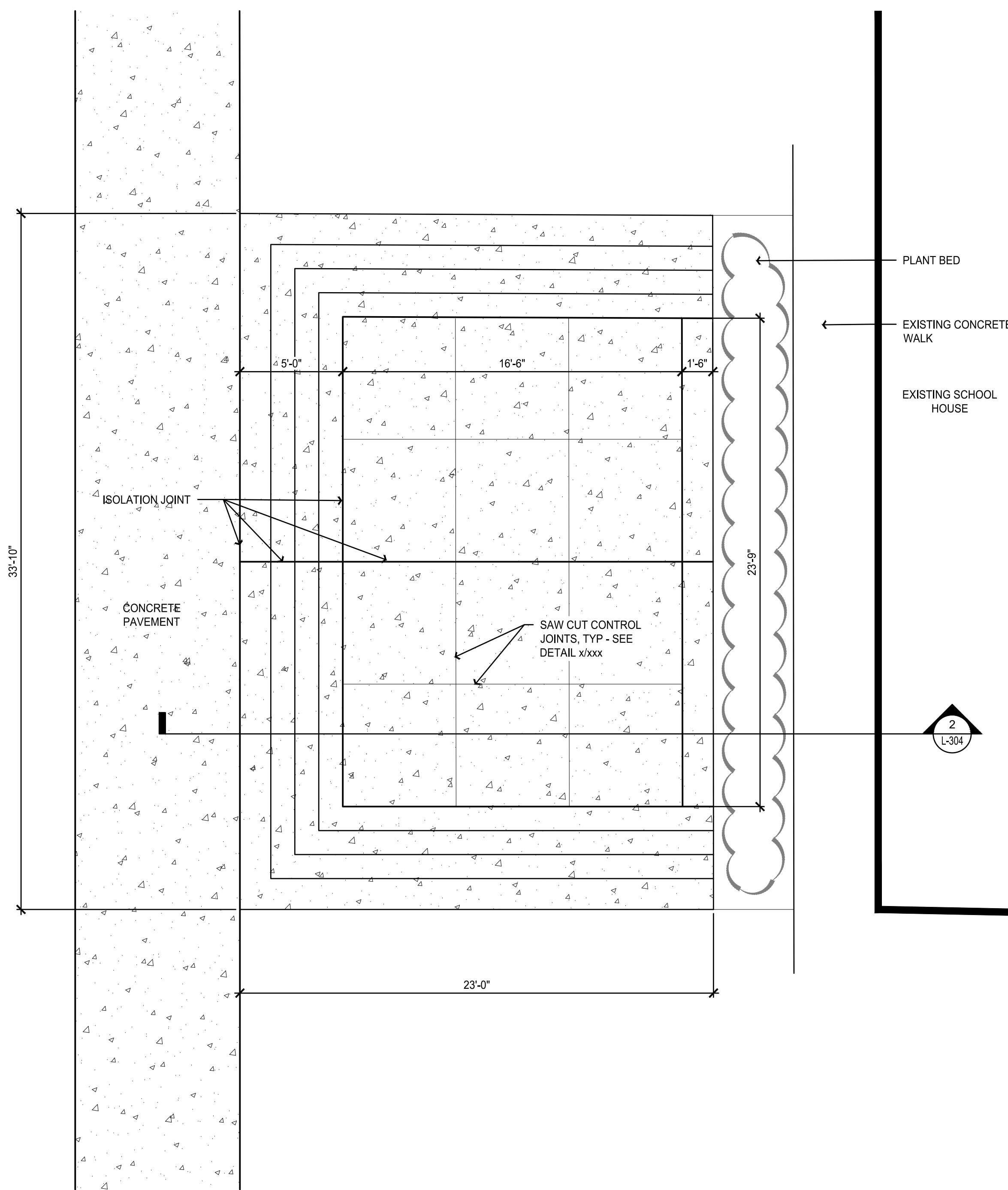
SITE DETAILS



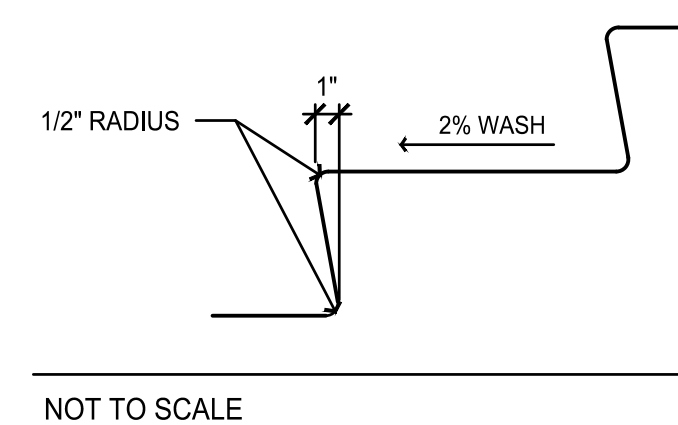
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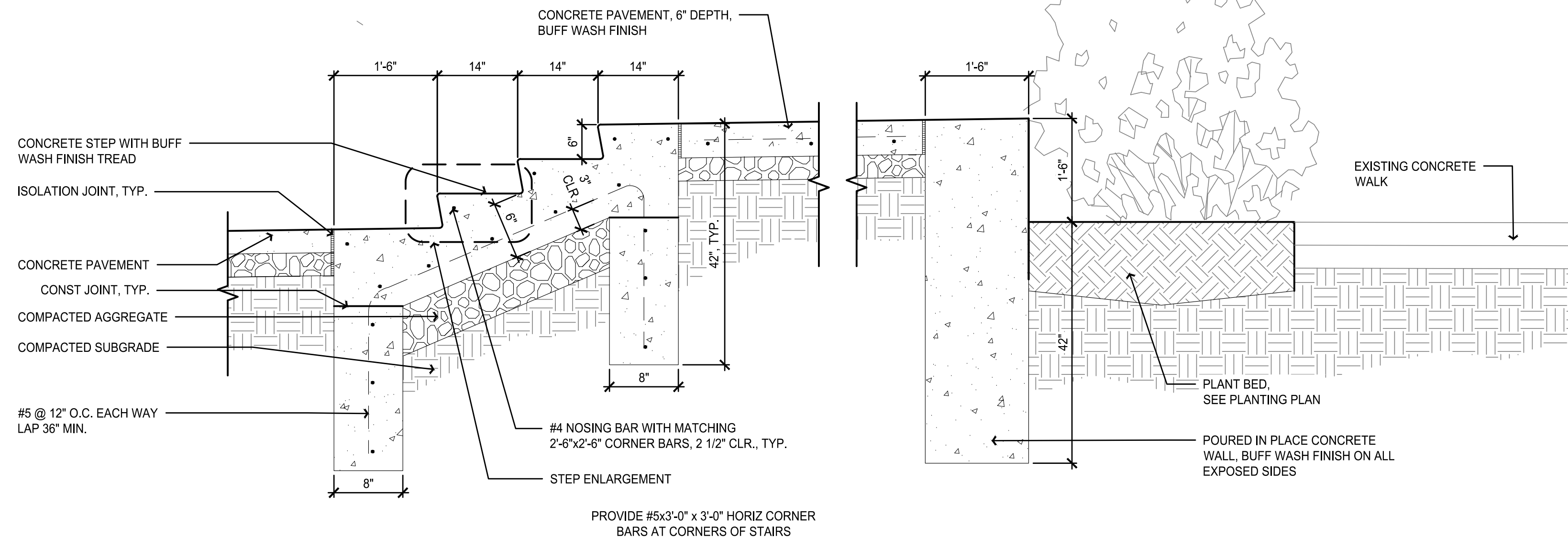




**1** STAGE - PLAN (ALTERNATE)  
SCALE: 1/4" = 1'-0"



NOT TO SCALE



**2** STAGE - SECTION (ALTERNATE)  
SCALE: 3/4" = 1'-0"

- PROVIDE MINIMUM 28-DAY CONCRETE COMPRESSIVE STRENGTH OF 5,000 psi ( $f_c = 5,000$  psi) WITH 6% ± 1.5% ENTRAINED AIR, MAXIMUM W/C RATIO < 0.40, AND MAXIMUM 4" SLUMP, UNLESS SUPER-PLASTICIZERS ARE USED FOR EXTERIOR APPLICATIONS. USE OF SUPER-PLASTICIZERS IS SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. DO NOT PROVIDE AIR CONTENT > 3% FOR TROWEL FINISHED SLABS.
- PROVIDE READY-MIX CONCRETE CONFORMING TO ASTM C-94.
- CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 117 301, 305R, 306.1, AND 308.1, LATEST APPLICABLE EDITION.
- REINFORCING STEEL CONFORMING TO ASTM A-615, GRADE 60 IS REQUIRED. PLACE REINFORCING STEEL IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE.
- REINFORCING STEEL SHALL NOT BE WELDED.
- REINFORCING STEEL SHALL HAVE A MINIMUM CONCRETE COVER AS LISTED BELOW UNLESS OTHERWISE NOTED.
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED EARTH: 3"
  - CONCRETE CAST AGAINST FORMS BUT EXPOSED TO EARTH OR WEATHER
    - NO. 5 OR SMALLER 1 1/2"
    - GREATER THAN NO. 5 2"
  - SLAB ON GRADE: 2" FROM TISLAB

BAR SIZE	REINFORCEMENT LAP SPlice LENGTH+					
	$f_c=3,000$ psi		$f_c=4,000$ psi		$f_c=5,000$ psi	
	TOP BARS*	ALL OTHER BARS	TOP BARS*	ALL OTHER BARS	TOP BARS*	ALL OTHER BARS
#3	28"	22"	24"	19"	22"	17"
#4	37"	29"	33"	25"	29"	23"
#5	47"	36"	40"	31"	36"	28"
#6	56"	43"	49"	38"	44"	34"
#7	81"	63"	70"	54"	63"	49"
#8	93"	72"	81"	62"	72"	56"

\* TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE BELOW BAR.

+ LAP SPlice LENGTHS SHOWN ARE CLASS B SPlice LENGTHS FOR UNCOATED OR GALVANIZED BARS WITH CLEAR COVER OF 4d OR MORE AND WITH CLEAR SPACING OF 2db OR MORE. INCREASE LAP LENGTHS BY 50% FOR EPOXY COATED OR DUAL ZINC-EPOXY COATED BARS WITH CLEAR COVER LESS THAN 3db OR WITH CLEAR SPACING LESS THAN 4db. INCREASE LAP LENGTHS BY 20% FOR EPOXY COATED OR DUAL ZINC-EPOXY COATED BARS WITH CLEAR COVER OF 3db OR MORE AND WITH CLEAR SPACING OF 4db OR MORE. SPlice LENGTHS SHOWN ARE FOR NORMAL WEIGHT CONCRETE AND REINFORCEMENT WITH A YIELD STRENGTH OF 60,000 PSI (60 KSI).

ISSUED FOR:	BID SET	2024/11/22	DATE
REVISION:	DESCRIPTION		

PROJECT NUMBER: 0133-24-020  
PM: CM  
CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN  
SITE DETAILS

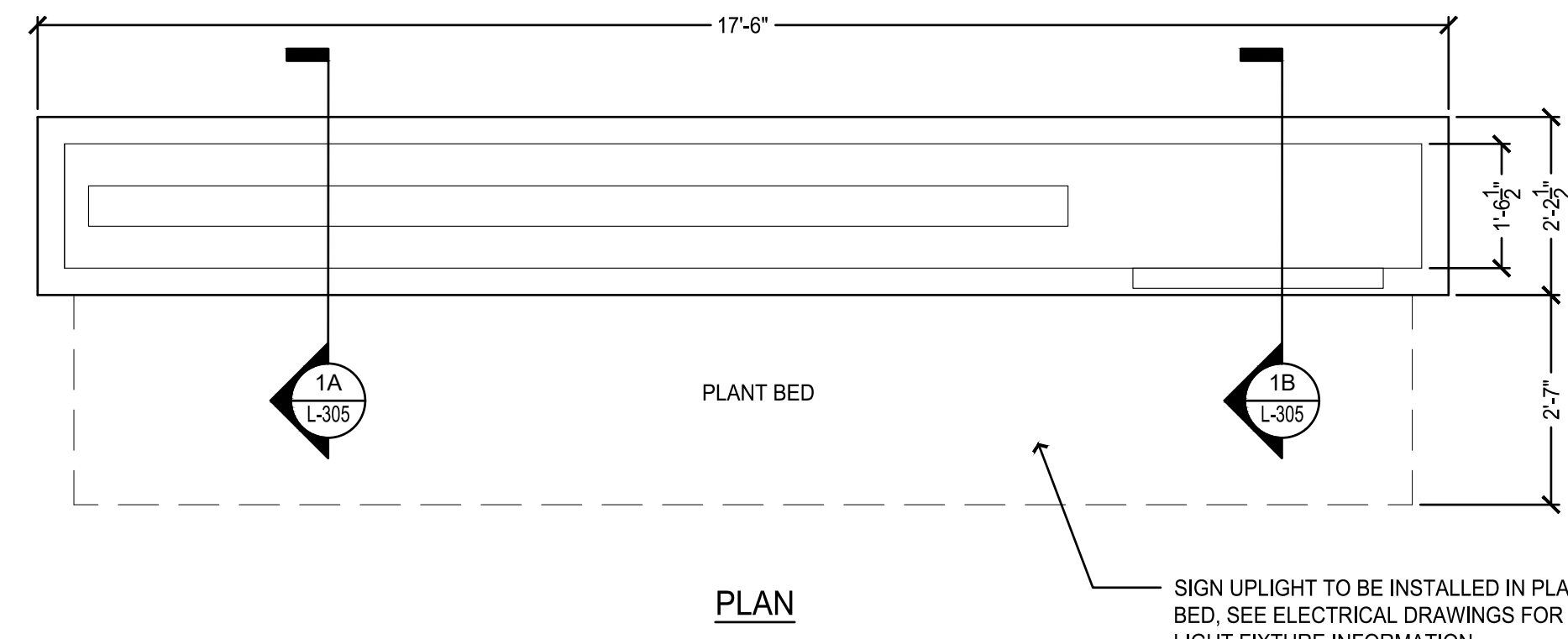


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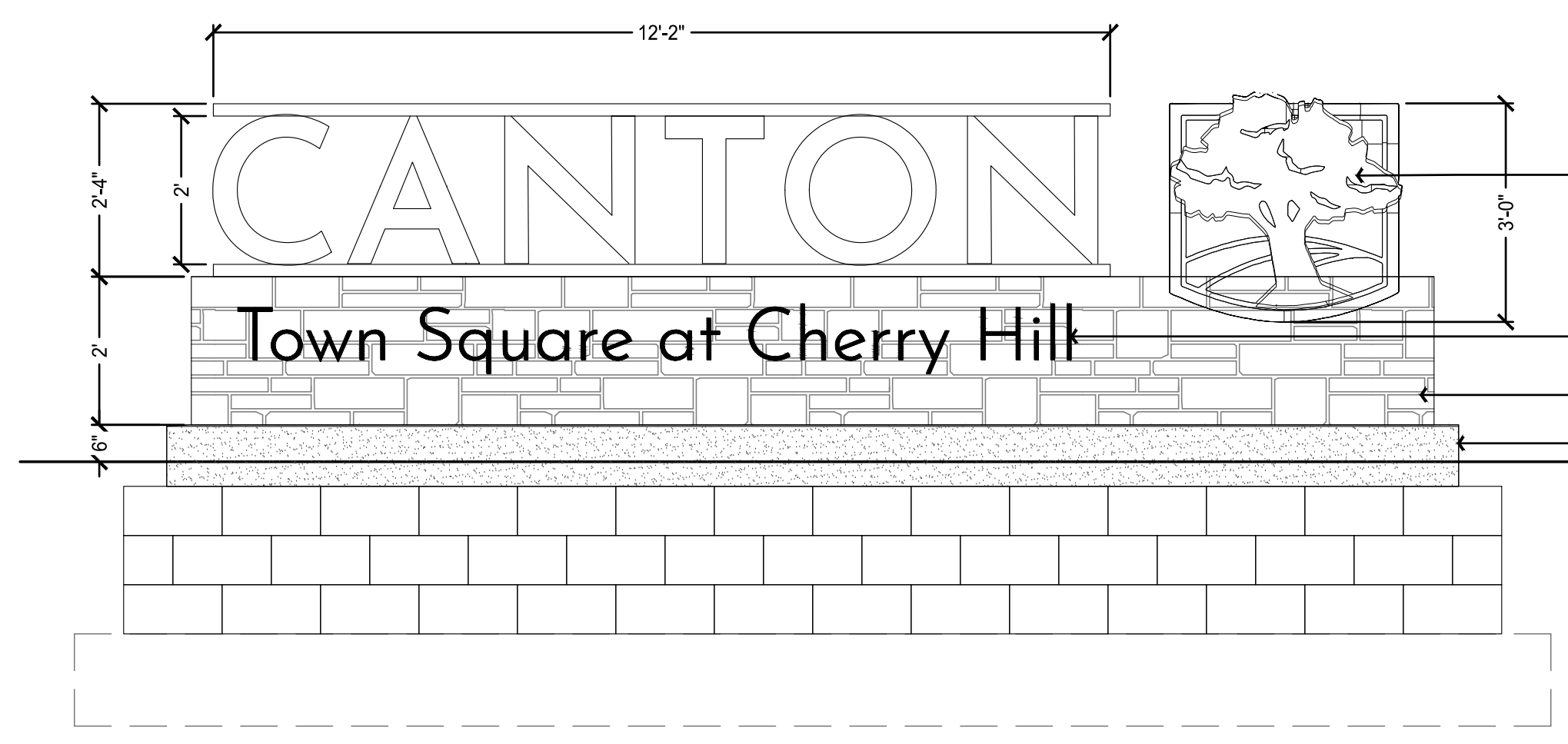


DRAWING SERVES AS 'BASIS OF DESIGN'. CONTRACTOR TO SUBMIT SHOP DRAWINGS AND COLOR SAMPLES FOR ALL SIGNAGE COMPONENTS AND ENGINEERED STAMPED SHOP DRAWINGS FOR MASONRY BASE AND FOUNDATION.

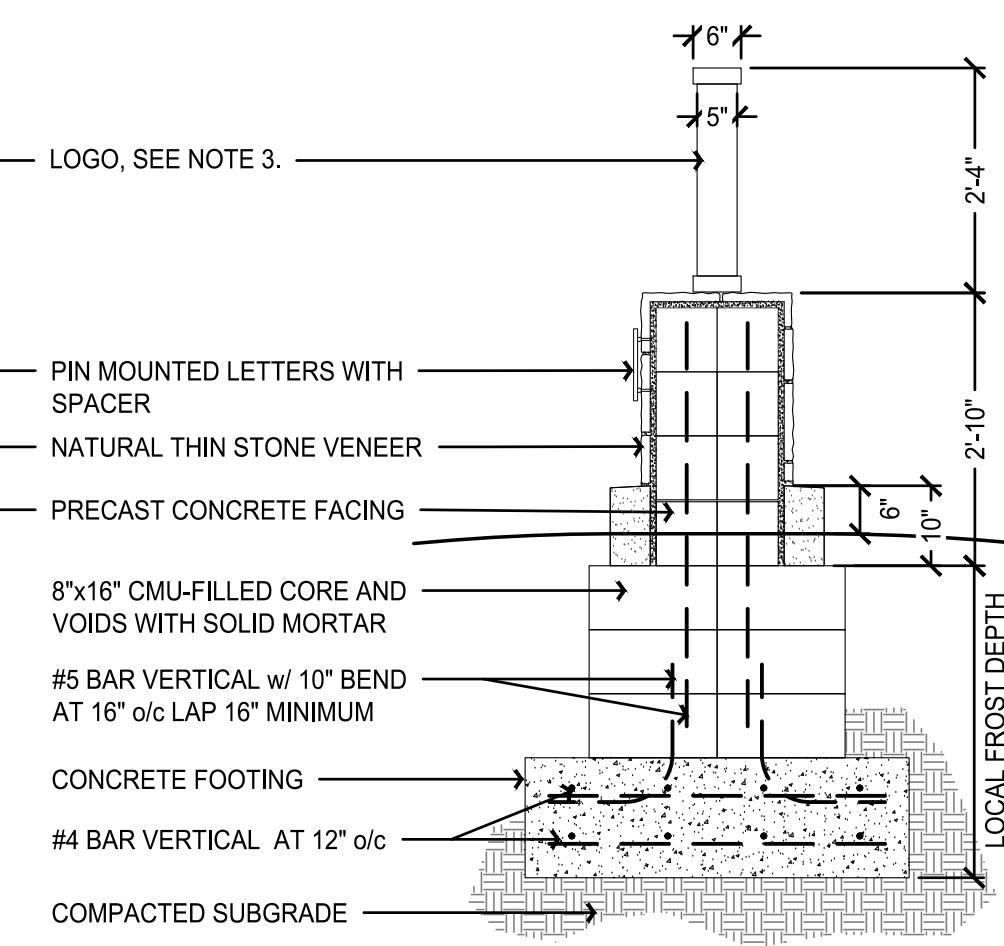
- NOTES:**
- STONE VENEER
    - BUECHEL STONE CORPORATION
      - FOND DU LUC - MORTAR SET THIN VENEER.
      - MORTAR COLOR - WHITE. MORTAR TO BE BROUGHT TO FACE OF STONE FOR A FLUSH JOINT
      - INSTALLED PER MANUFACTURERS SPECIFICATIONS
  - CANTON
    - FONT: JOSEFIN SANS
    - HEIGHT: 24" LETTER WITH 2" TOP AND BOTTOM ALUMINUM CHANNEL, FULLY WELDED, AND FINISHED ON ALL SIDES.
    - COLOR: TBD, PAINTED SHERWIN WILLIAMS GENESIS PAINT
    - MOUNT: 1/2" X 4" WIDE ALUMINUM BAR STOCK TO MOUNT THE CANTON LETTERS TO SIGN BASE
  - TOWN SQUARE AT CHERRY HILL
    - FONT: JOSEFIN SANS
    - HEIGHT: UPPER CASE LETTER - 8 1/2", LOWER CASE - 5"
    - 1/2" THICK, STUD MOUNTED ALUMINUM PLATE LETTERS
    - FLUSH MOUNTED
  - CANTON TOWNSHIP LOGO
    - 4" ALUMINUM CABINET (NOTCHED TO FIT OVER LIP OF WALL), MOUNTED WITH 1/2" X 4" WIDE ALUMINUM BAR STOCK. LOGO TO BE 3DIMENSIONAL WITH 1/2" STACKED ALUMINUM PLATES ROUTED OUT IN FOR LOGO
    - COLOR: CHERRY HILL TOWNSHIP LOGO COLORS
  - QUALIFIED SIGNAGE MANUFACTURER AND INSTALLER
    - UNIVERSAL SIGN, INC.
    - 5001 FALCON VIEW SE
    - GRAND RAPIDS, MI 49512



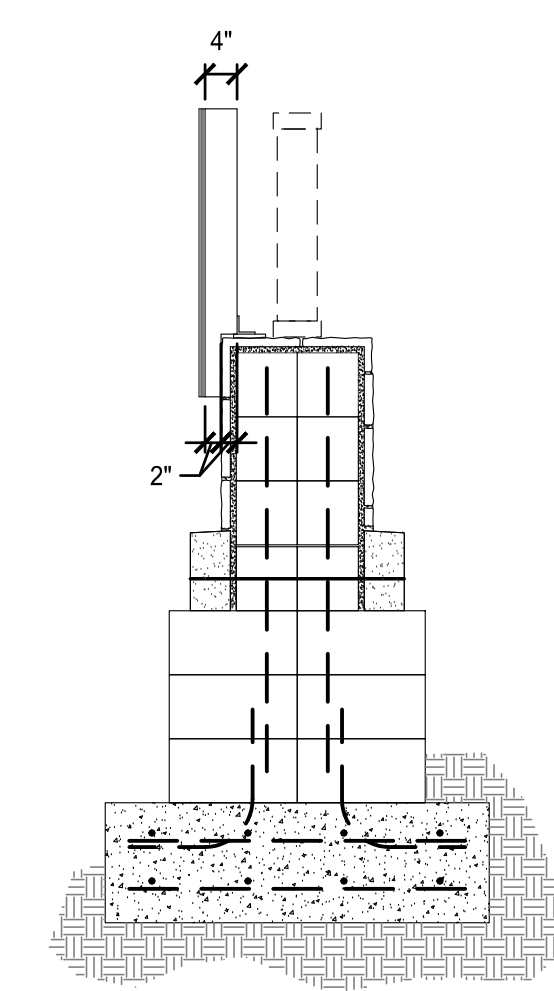
SIGN UPLIGHT TO BE INSTALLED IN PLANT BED, SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE INFORMATION.



FRONT ELEVATION



SECTION - A



SECTION - B



**1 ENTRY SIGN**  
SCALE: 1/2" = 1'-0"

ISSUED FOR:	BID SET	20241122	DATE
REVISION	DESCRIPTION		

PROJECT NUMBER	0133-24-020
PROJECT NAME	CANTON CHARTER TOWNSHIP CHERRY HILL VILLAGE PHASE 1 CANTON TOWNSHIP, MICHIGAN
SITE DETAILS	



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L-305





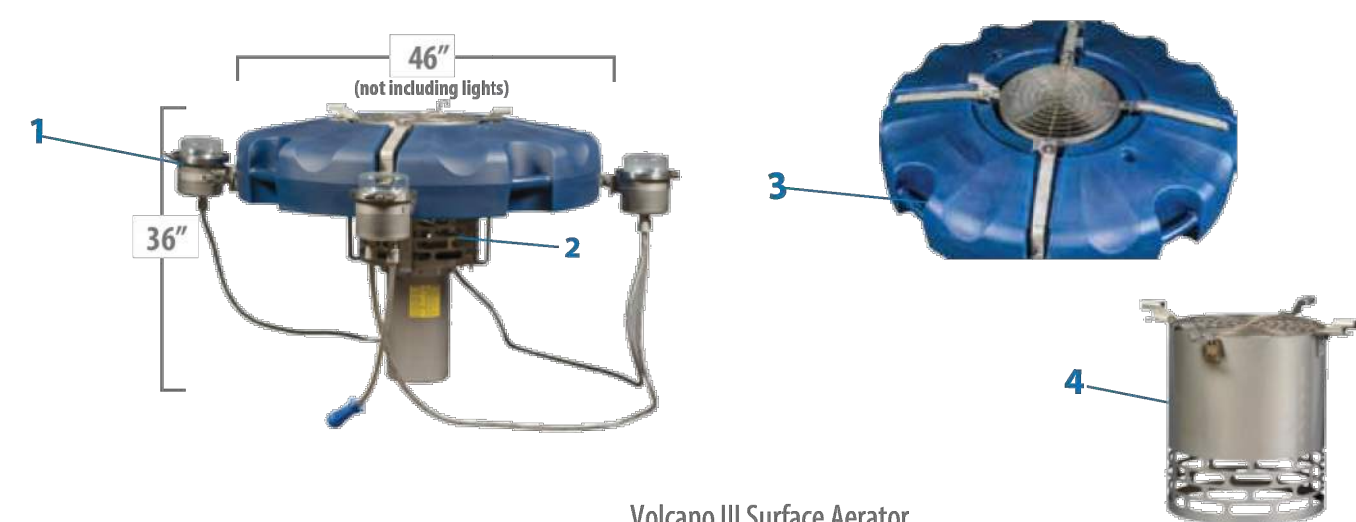
16024 County Rd X, Kiel, WI USA 53042  
800-693-3144  
www.aquamasterfountains.com

**VOLCANO III SURFACE AERATOR  
STANDARD**



HORSEPOWER	1.5	3.5	5.5
HT X DIA. ft.	3 x 8.5	4 x 12	5 x 14
GPM	1234	3130	2734
ELECTRICAL RANGE IN (VOLTAGE/AMPS)	1   220-240   16 3   208-240   16	1   220-240   16 3   208-240   11	1   220-240   16 3   208-240   16
HT X DIA. m	0.9 x 3.1	1.2 x 3.7	1.4 x 4.8
ELECTRICAL RANGE IN (VOLTAGE/AMPS)	1   220-240   11 3   380-415   3	3   380-415   5.5	3   380-415   8

**VOLCANO III SURFACE AERATOR DESIGN**



Volcano III Surface Aerator  
(Min. Operating Depth - 3ft.)

- 1 - Tool less light bracket
- 2 - High efficiency 316 stainless steel propeller system
- 3 - Handles on float/tie downs
- 4 - Removable (without tools) large capacity, rigid 16 gauge stainless steel intake screen



**1 SOUTH POND FOUNTAIN**  
SCALE: NTS

SEE ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS

**VOLCANO II**

**VOLCANO II**  
1/2 HP STANDARD

HORSEPOWER	1/2	HORSEPOWER	1/2
HT X DIA. ft.	1 x 4	HT X DIA. m	0.3 x 1.2
GPM	420	m <sup>3</sup> /hr	58

**ETNA**  
1/2 HP ETNA

HORSEPOWER	1/2	HORSEPOWER	1/2
HT X DIA. ft.	4 x 12	HT X DIA. m	1.2
GPM	258	m <sup>3</sup> /hr	36

**SHASTA**  
1/2 HP SHASTA

HORSEPOWER	1/2	HORSEPOWER	1/2
HT X DIA. ft.	1.5 x 7	HT X DIA. m	0.5 x 1.5
GPM	324	m <sup>3</sup> /hr	66

**1/2 HP VOLCANO II KEY FEATURES**

- Available in 120V & 240V single phase
- Easily installed, similar to Floating Fountain Aerators
- Only requires two feet of operating depth
- Works in deeper depths with optional float mounted deep water intake
- Quality stainless steel components
- Night Glow LED or RGBW Lighting Systems available
- Creates a fluid boil effect, resulting in maximum pumping rates and O<sub>2</sub> transfer

**VOLCANO II WARRANTY**

**DOMESTIC**  
1/2 HP: 3 Years Parts and Labor

**INTERNATIONAL**  
1/2 HP: 2 Years Parts and 1 Year Labor

Warranties subject to change. Please contact AquaMaster® for most current warranties.

**25** High Performance Aeration Systems  
SEE PAGES 46 - 48 FOR CABLE & POND SIZING CHARTS

SEE ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS

**2 NORTH POND FOUNTAIN**  
SCALE: NTS



ISSUED FOR:	BID SET	20241122
REVISION	DESCRIPTION	DATE

PROJECT NUMBER: 0133-24-020  
CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN

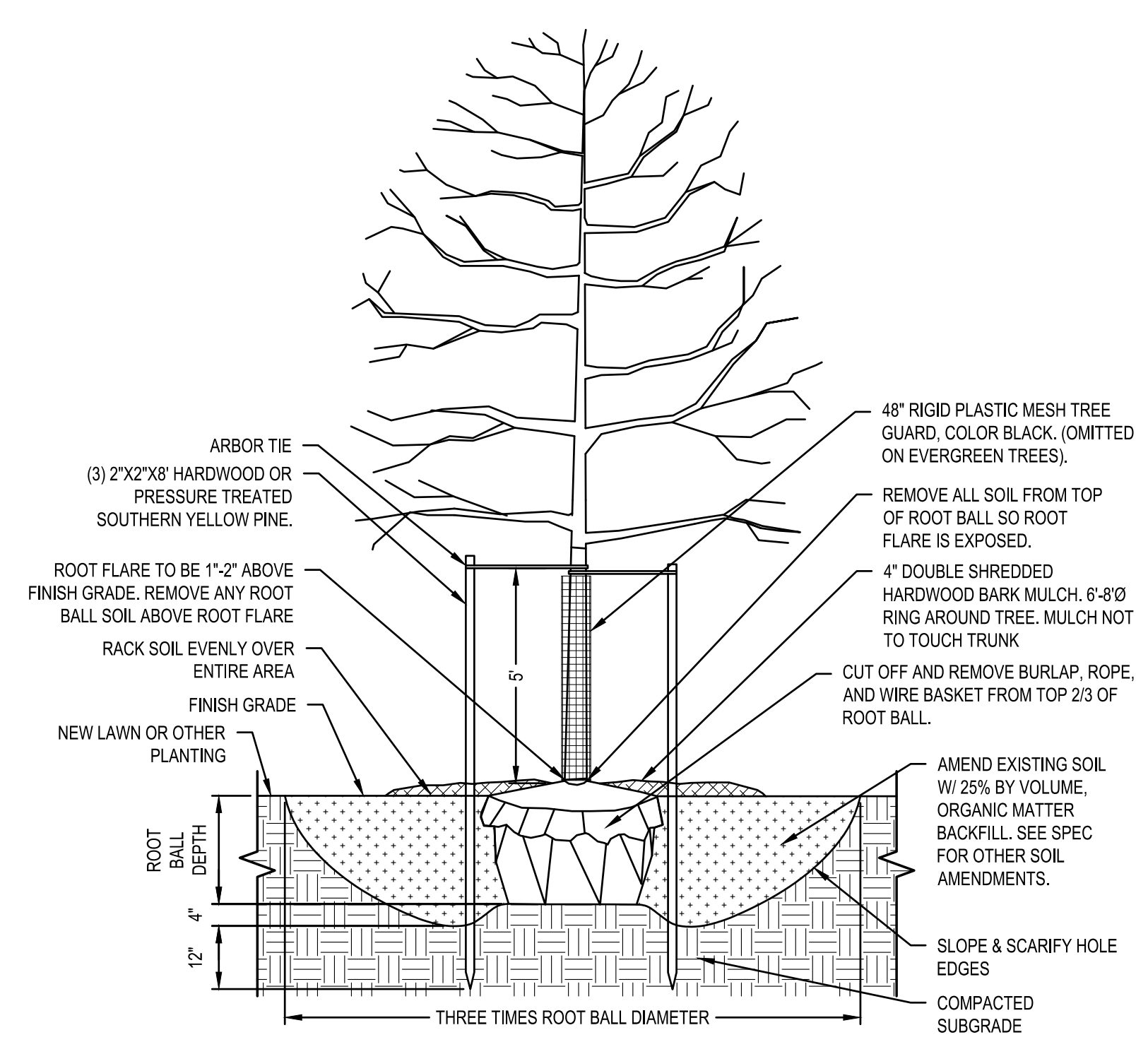
SITE DETAILS



DRAWING PATH: P:\0126\_0165013324020\_Cherry\_Hill\_Village\_Phase\_1\Drawings\PLN\_LID\Sheets\2301060\_DTL5.dwg Nov 22, 2024 - 1:15pm

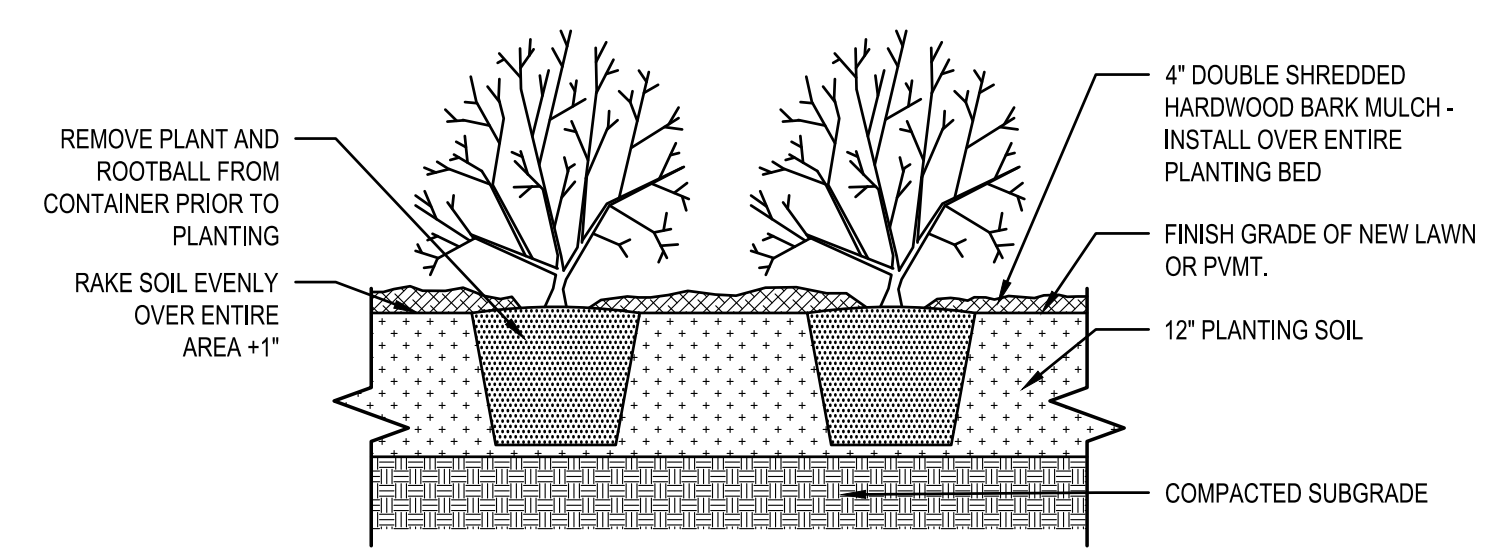
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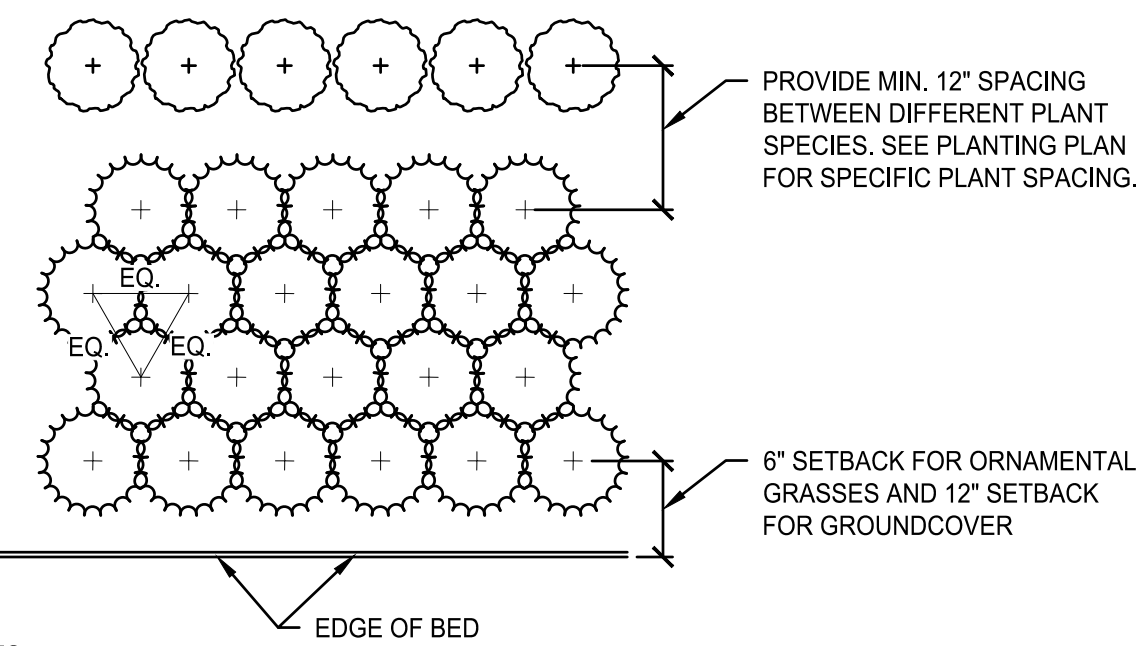
- NOTES:**
1. SET ALL PLANTS SO THAT THEY BEAR THE SAME RELATION TO THE FINISH GRADE AS THEY DID IN THEIR PRIOR LOCATION.
  2. THOROUGHLY TILL AREA EQUAL TO 3 TIMES THE DIAMETER OF THE ROOT BALL AND TO THE DEPTH OF THE ROOT BALL. PRIOR TO TILLING, REMOVE ANY EXISTING LAWN OR VEGETATION.
  3. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1).
  4. HANDLE THE TREE BY ROOT BALL ONLY. DO NOT LIFT OR LEVERAGE TREE BY TREE TRUNK.
  5. BACKFILL AROUND TREE WITH TILLED SOIL AND "WATER IN" BACKFILL IN 6" LIFTS TO SETTLE IN BACKFILL. INSTALL BACKFILL 1" HIGHER THAN SURROUNDING GRADE TO ALLOW FOR SETTLEMENT.
  6. PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY, AND SHALL BE IN ACCORDANCE WITH ANSI SPECIFICATIONS.
  7. REMOVE STAKES AND ARBOR TIES AFTER ONE YEAR, UNLESS DIRECTED OTHERWISE.

**1 DECIDUOUS & ORNAMENTAL TREE PLANTING**  
SCALE: NTS



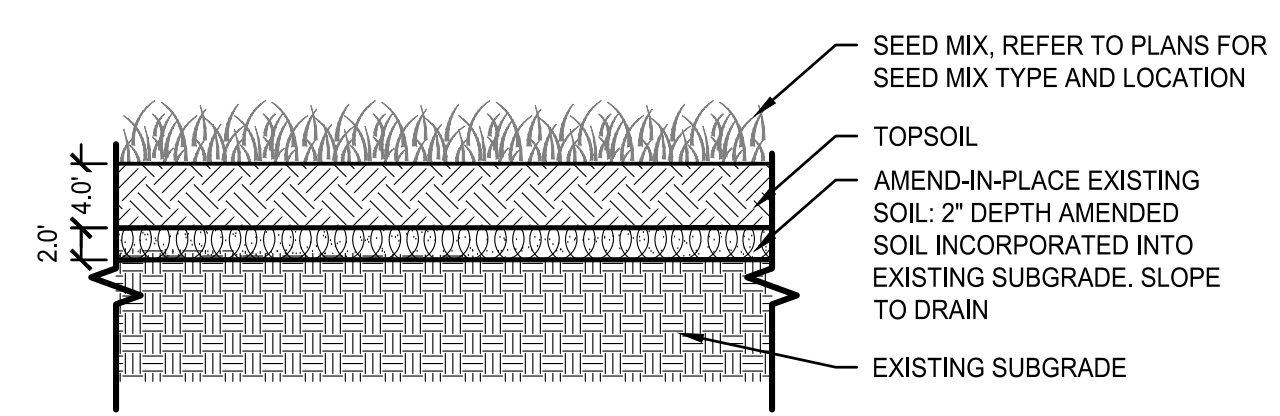
- NOTES:**
1. PRIOR TO INSTALLATION, REMOVE ANY EXISTING LAWN OR OTHER VEGETATION.
  2. EXCAVATE & REMOVE 12" MIN. EXISTING SOIL TO ALLOW FOR INSTALLATION OF PROPOSED SHRUB ROOTBALL.
  3. SET SHRUB SO IT BEARS THE SAME RELATION TO THE FINISH GRADE AS IT DID TO THE NATURAL GRADE AT THE NURSERY.
  4. BACKFILL AROUND SHRUB WITH PLANTING SOIL AND "WATER-IN" BACKFILL IN LAYERS TO SETTLE BACKFILL. INSTALL BACKFILL 1" HIGHER THAN SURROUNDING GRADE TO ALLOW FOR SETTLEMENT.

**3 SHRUB PLANTING**  
SCALE: 3/4" = 1'-0"

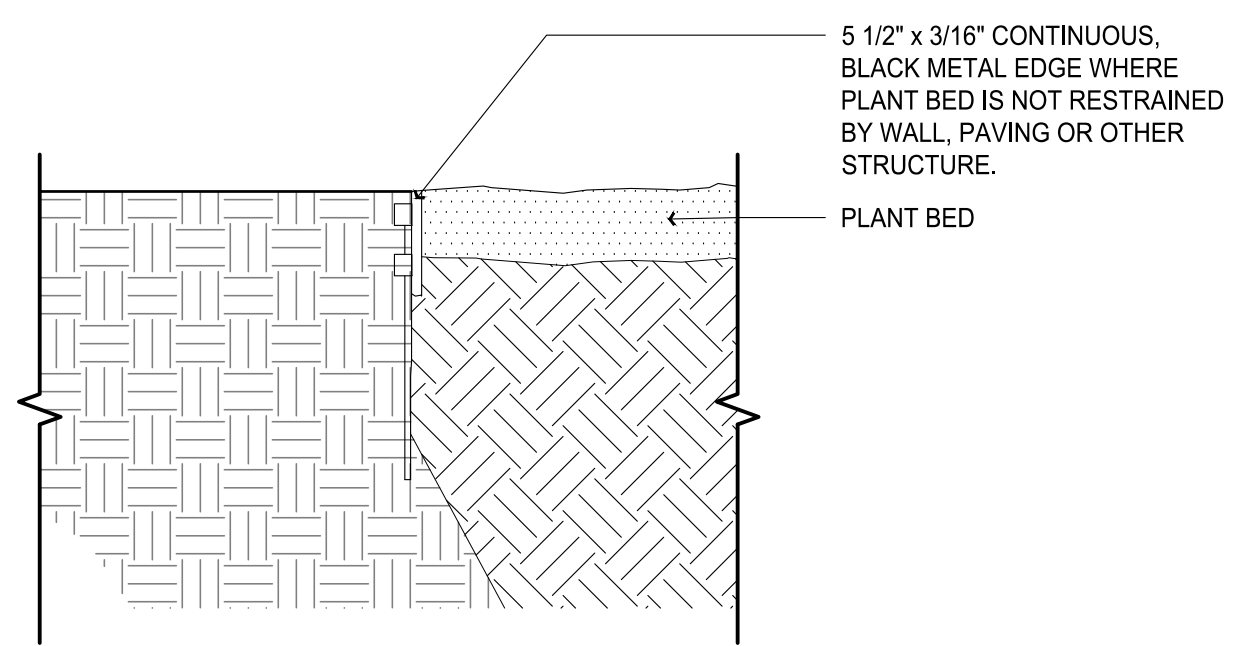


- NOTES:**
1. ALL ORNAMENTAL GRASS AND GROUNDCOVER MASSES TO USE TRIANGULAR SPACING, UNLESS NOTED OTHERWISE ON PLANS.
  2. SEE PLANTING PLANS FOR INDIVIDUAL PLANT SPECIES SPACING.

**4 PLANT SPACING**  
SCALE: 1/2" = 1'-0"

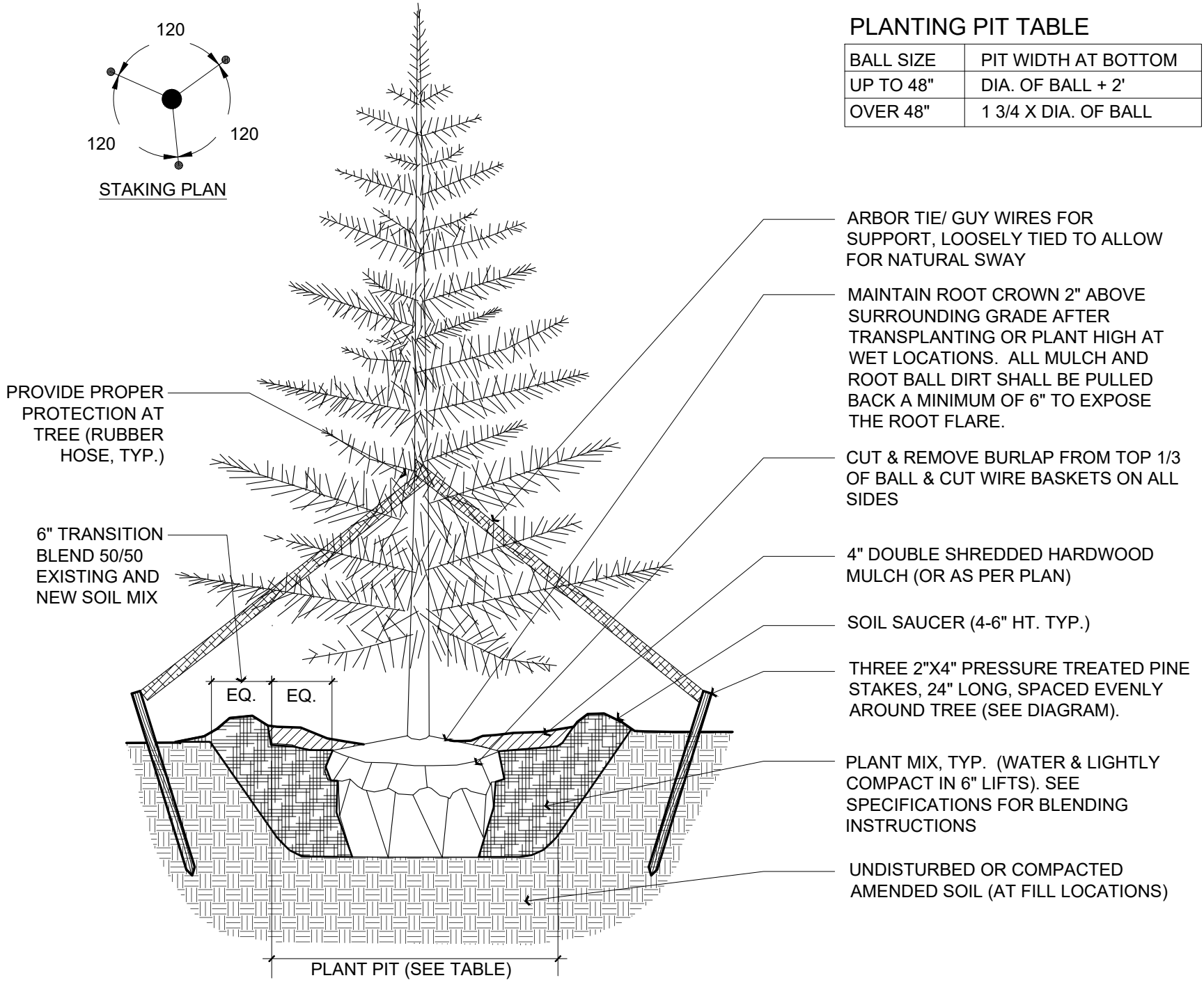


**6 SEEDED LAWN AND TOPSOIL**  
SCALE: NTS



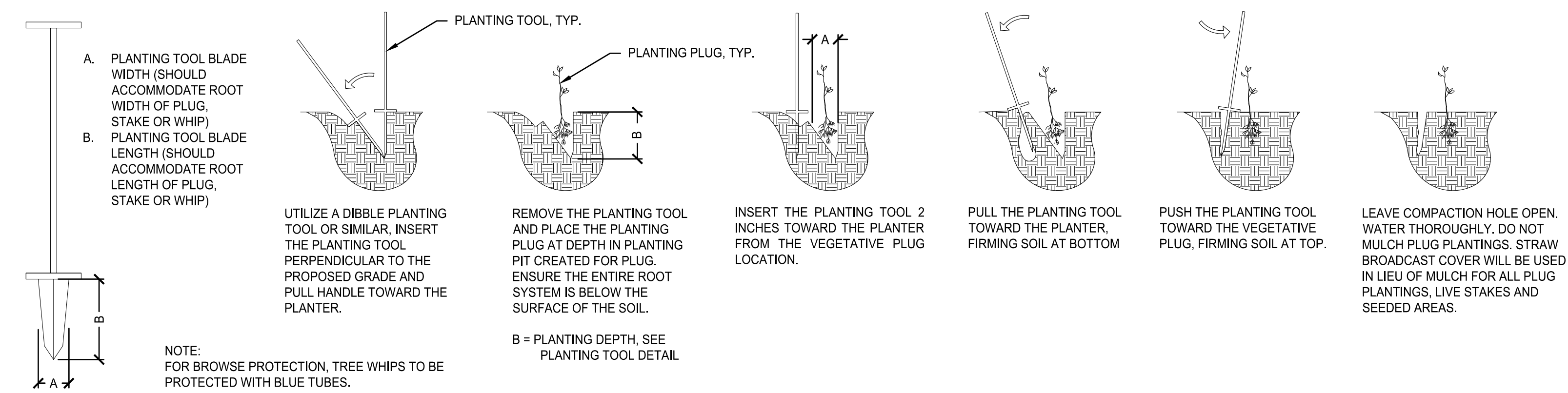
**7 PLANT BED EDGE**  
SCALE: 1 1/2" = 1'-0"

- NOTES:**
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
- FINAL TREE STAKING PLACEMENT TO BE APPROVED BY ENGINEER.
- STAKE ALL EVERGREEN TREES UNDER 12' TALL. GUY WIRES TO BE USED ON ALL EVERGREEN TREES 12' TALL AND OVER.
- PRUNE ONLY DEAD AND BROKEN BRANCHES. NEVER CUT THE CENTRAL LEADER.
- MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
- IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN (8" MIN.) INTO PLANTING HOLE.
- REMOVE ALL TWINE, SISAL, ROPE, WIRE, AND BURLAP FROM TOP HALF OF ROOTBALL.
- SET TREE PLUMB IN PLANTING PIT. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.



**PLANTING PIT TABLE**

BALL SIZE	PIT WIDTH AT BOTTOM
UP TO 48"	DIA. OF BALL + 2"
OVER 48"	1 3/4 X DIA. OF BALL



**5 PLANTING WHIP STAKE PLUG PLANTING DETAIL**  
SCALE: 1" = 1'-0"

**2 EVERGREEN TREE PLANTING**  
SCALE: NTS



Know what's below.  
Call before you dig.

ISSUED FOR: BID SET  
REVISION: DESCRIPTION  
DATE: 2024/11/22

PROJECT NUMBER: 0133-24-0020  
CANTON CHARTER TOWNSHIP  
CHERRY HILL VILLAGE PHASE 1  
CANTON TOWNSHIP, MICHIGAN  
PLANTING DETAILS

DRAWING PATH: P:\0126\_01650133240020\_Cherry Hill Village Phase 1\Drawings\PLN\_ID\Sheets\230060\_DTL5.dwg Nov 22, 2024 - 1:17pm

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