

MARKHAM SQUARE

WATER QUALITY DEMONSTRATION PROJECT

A PROJECT OF
THE CITY OF CONWAY ARKANSAS
1201 STREET, CONWAY, AR 72032

ISSUE FOR BID
01/11/2021

Landscape Architect

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Revision

1
2
3
4
5

Date

JANUARY 11, 2021

Phase

ISSUE FOR BID

Job Number

CAKT011

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8/31/20 CD PROGRESS SET	01/11/21 BID SET					SHEET NUMBER	SHEET TITLE
●	●					L0.0.0	COVER
●	●					L0.0.1	GENERAL CONSTRUCTION NOTES AND SHEET INDEX
	●					L0.0.2	SITE RENDERING
	●					L0.0.3	SITE PERSPECTIVE RENDERINGS
●	●					L0.1.0	DEMOLITION AND TREE REMOVAL NOTES
●	●					L0.1.1	DEMOLITION AND TREE REMOVAL PLAN
●	●					L0.1.2	DEMOLITION AND TREE REMOVAL PLAN
●	●					L0.2.1	DEMOLITION AND TREE PROTECTION DETAILS
●	●					C1.0.0	CIVIL SITE PLAN
●	●					C2.0.0	CIVIL GRADING AND DRAINAGE PLAN
●	●					C3.0.0	CIVIL EROSION CONTROL PLAN
●	●					C5.0.1	CIVIL DETAILS
●	●					C5.0.2	CIVIL DETAILS
●	●					C5.0.3	EROSION CONTROL DETAILS
●	●					L1.0.1	LANDSCAPE DRAINAGE SCHEDULE AND DETAILS
	●					L1.1.0	OVERALL FINE GRADING AND DRAINAGE PLAN
●	●					L1.1.1	FINE GRADING AND DRAINAGE PLAN
●	●					L1.1.2	FINE GRADING AND DRAINAGE PLAN
●	●					L1.1.3	FINE GRADING AND DRAINAGE ENLARGEMENT PLAN
●	●					L2.0.1	MATERIAL SCHEDULE
	●					L2.1.0	OVERALL LAYOUT AND MATERIALS PLAN
●	●					L2.1.1A	MATERIALS PLAN
●	●					L2.1.1B	LAYOUT PLAN
●	●					L2.1.2A	MATERIALS PLAN
●	●					L2.1.2B	LAYOUT PLAN
●	●					L2.1.3	LAYOUT AND MATERIALS ENLARGEMENT PLAN
●	●					L2.2.1	HARDSCAPE DETAILS
●	●					L2.2.2	HARDSCAPE DETAILS
●	●					L2.2.3	WALL DETAILS
●	●					L2.2.4	WALL DETAILS
	●					L2.2.5	DECK DETAILS
	●					L2.2.6	SITE SECTIONS
	●					L2.2.7	SITE SIGNAGE DETAILS
	●					L2.2.8	SITE SIGNAGE DETAILS
	●					L2.2.8A	SITE SIGNAGE GRAPHICS
	●					L2.2.8B	SITE SIGNAGE GRAPHICS
	●					L2.2.8C	SITE SIGNAGE GRAPHICS
	●					S1.0.0	SITE STRUCTURAL
	●					S1.0.1	SITE STRUCTURAL DETAILS
	●					S5.0.2	SITE STRUCTURAL DETAILS
●	●					L3.0.1	IRRIGATION NOTES AND LEGEND
●	●					L3.1.1	IRRIGATION PLAN
●	●					L3.1.2	IRRIGATION PLAN
●	●					L3.2.1	IRRIGATION DETAILS
●	●					L3.2.2	IRRIGATION DETAILS
●	●					L4.0.1	PLANT MATERIAL SCHEDULES
	●					L4.0.2	PLANT MATERIAL SCHEDULES
	●					L4.1.0	OVERALL TREE PLANTING PLAN
●	●					L4.1.1	PLANTING PLAN
●	●					L4.1.2	PLANTING PLAN
●	●					L4.2.1	PLANTING DETAILS
●	●					L4.2.2	PLANTING DETAILS

LANDSCAPE GENERAL NOTES:

- THE CONTRACTOR SHALL PERFORM ALL WORK AND SERVICES NOTED, DESCRIBED OR RELAYED IN THE PLAN AND SPECIFIED CONTRACT DOCUMENTS AND AS SUCH REQUIRED BY THE CONTRACT INCLUDING, WITHOUT LIMITATION, THE SCOPE OF WORK DEPICTED IN THESE DRAWINGS AND SPECIFICATIONS AND ANY SUPPLEMENTAL DOCUMENTS.
- CONTRACTOR TO VERIFY SITE INFORMATION AS NEEDED, INCLUDING PROPERTY LINES, EASEMENTS, BUILDINGS, ROADWAY CURB AND GUTTERS, UTILITIES AND OTHER INFORMATION AFFECTING THE SCOPE OF WORK INCLUDED ON THESE DRAWINGS. MORE SPECIFIC UTILITY INFORMATION IS INDICATED ON THE CIVIL DRAWINGS.
- CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT FOR DIRECTION ON HOW TO PROCEED IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS. FAILURE TO NOTIFY THE LANDSCAPE ARCHITECT WILL NOT RELIEVE CONTRACTOR OF RESPONSIBILITY TO COMPLETE WORK AS INDICATED IN CONTRACT DOCUMENTS.
- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING, LOCATING AND PROTECTING ALL EXISTING UTILITIES TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY INFORMATION TO THEIR BEST ABILITIES WITH ASSISTANCE FROM OWNER OR DESIGN TEAM IF APPLICABLE SUCH THAT THEY ARE SATISFIED AS TO ALL LOCATIONS OF UTILITIES, SHOWN AND NOT SHOWN HEREIN.
- EXCAVATION IN THE VICINITY OF UTILITIES SHALL BE UNDERTAKEN WITH CARE. CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SITE UTILITIES PRIOR TO BEGINNING EXCAVATION AND ABIDE BY ALL AUTHORITIES UNDER JURISDICTION REQUIREMENTS AND REGULATIONS.
- BASE INFORMATION INCLUDING THE LOCATION OF PROPERTY LINES, EASEMENTS, BUILDINGS, ROADS, CURBS AND UTILITIES HAVE BEEN PROVIDED FROM A SURVEY PROVIDED BY THE CIVIL ENGINEER.
- CONTRACTOR SHALL NOTIFY LOCAL UTILITY OR CITY AUTHORITIES FOR PROVISION OF ALL LOCATIONS OF EXISTING UNDERGROUND UTILITIES. POT HOLE EXCAVATE AS NECESSARY TO CONFIRM LOCATIONS PRIOR TO ANY EXCAVATIONS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND MAINTAINING ALL FEDERAL STATE AND LOCAL PERMITS INCLUDING BUT NOT LIMITED TO STORMWATER POLLUTION PREVENTION, TREE REMOVAL, GRADING AND UTILITY, ETC.
- THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE AND LOCAL ENVIRONMENTAL PROTECTION STANDARDS, LAWS AND REGULATIONS.
- CONTRACTOR IS RESPONSIBLE TO ADHERE TO ALL ACCESSIBILITY REQUIREMENTS FOR FEDERAL, STATE, AND LOCAL GOVERNING DOCUMENTS AND AGENCIES. IF ANY CONDITION IN THESE DOCUMENTS DOES NOT ALLOW OR REPRESENT COMPLIANCE CONTACT LANDSCAPE ARCHITECT FOR RESOLUTION.
- CONTRACTOR IS REQUIRED TO REPAIR OR REPLACE WITH APPROVED IN KIND MATERIALS ANY DAMAGE DONE TO BUILDINGS, STRUCTURES, UTILITIES, PAVING, PLANTING OR ANY OTHER SITE IMPROVEMENTS TO REMAIN AT NO COST TO OWNER. ANY DAMAGE BY THE CONTRACTOR DURING THE EXECUTION OF WORK TO UTILITIES OR ELEMENTS TO REMAIN IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ANY MATERIALS DEPOSITED OUTSIDE THE WORK AREA INCLUDING GENERAL TRASH AND DEBRIS.
- ON-SITE CONSTRUCTION DRAINAGE SYSTEMS AND OFF-SITE STORMWATER DRAINAGE SYSTEMS AND ASSOCIATED EROSION CONTROL SHALL BE MAINTAINED, MODIFIED AND/OR REMOVED AS NOTED ON CIVIL ENGINEERING OR OTHER ENTITY PLANS.
- FOLLOW ALL DRAWN OR NOTED DIMENSIONS IN PLAN DOCUMENTS AND DO NOT SCALE PLAN DOCUMENTS.
- WHEN NEW PAVEMENTS ARE PLACED AGAINST EXISTING PAVEMENTS, SAWCUT EXISTING AT NEAREST JOINT DESIGNATED AND APPROVED BY LANDSCAPE ARCHITECT. INSTALL NEW PAVEMENT FLUSH, CONTINUOUSLY, WITH EXISTING PAVEMENT. PROTECT EXISTING PAVEMENT FROM DAMAGE DURING DEMOLITION AND NEW PAVEMENT INSTALLATION.

ABBREVIATIONS:

ABBREVIATION	EXTENSION
ADA	AMERICANS WITH DISABILITIES ACT
ADJ.	ADJACENT (LAYOUT, MEASUREMENT)
AM	APICAL MERISTEM (PALM TREE REFERENCE)
ARCH	ARCHITECT
BC	BOTTOM OF CURB
BS	BOTTOM OF STEP
BW	BOTTOM OF WALL
CAD	COMPUTER-AIDED DESIGN
CIP OR C.I.P.	CAST-IN-PLACE (CONCRETE APPLICATIONS)
CIVIL	CIVIL ENGINEER
CL	CENTERLINE (LAYOUT, MEASUREMENT)
CLS	CENTER LINE OF SWALE (GRADIENT)
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
DIA	DIAMETER (LAYOUT, MEASUREMENT)
EJ	EXPANSION JOINT (CONCRETE APPLICATIONS)
EQ	EQUAL (LAYOUT, MEASUREMENT)
EXT.	EXTERIOR
F.O.B.	FACE OF BUILDING
FG OR F.G.	FINISHED GRADE (TOP OF SOIL GRADIENT)
FS OR F.S.	FINISHED SURFACE (HARD SURFACES)
GALV.	GALVANIZED
GEOTECH	GEOTECHNICAL ENGINEER
GPH	GALLONS PER HOUR (IRRIGATION)
GPM	GALLONS PER MINUTE (IRRIGATION)
HEX.	HEXAGONAL
HP	HIGH POINT (GRADIENT)
HSS	HOLLOW STRUCTURAL SECTION
IE	INVERT ELEVATION
LA OR L.A.	LANDSCAPE ARCHITECT
LED OR L.E.D.	LIGHT-EMITTING DIODE (ELECTRICAL FIXTURE)
LOW OR L.O.W.	LIMIT OF WORK
LP	LOW POINT (GRADIENT)
MAX.	MAXIMUM
MIN.	MINIMUM
NAP OR N.A.P.	NOT A PART
OC OR O.C.	ON-CENTER (LAYOUT, MEASUREMENT)
OD OR O.D.	OUTSIDE DIAMETER (LAYOUT, MEASUREMENT)
PA OR P.A.	PLANTING AREA

LEGEND	
DRAWING NOT ISSUED	
DRAWING ISSUED FOR COORDINATION	○
DRAWING ISSUED FOR BID	●
DRAWING DELETED	✕
DRAWING ISSUED FOR CONSTRUCTION	■
DRAWING NOT USED	⊠

PERF.	PERFORATED
POB OR P.O.B.	POINT OF BEGINNING (LAYOUT, MEASUREMENT)
PL	PROPERTY LINE
PSI	POUNDS PER SQUARE INCH (IRRIGATION)
PT	PRESSURE-TREATED
R	RADIUS (LAYOUT, MEASUREMENT)
REF	REFERENCE OR REFER TO
REINF.	REINFORCEMENT
SE	STRUCTURAL ENGINEER
SPECS	CONTRACT SPECIFICATIONS
S/S OR SS	STAINLESS STEEL
SWMP	STORM WATER MANAGEMENT PLAN
TBD	TO BE DETERMINED
TC	TOP OF CURB (GRADIENT ELEVATION)
TG	TOP OF GRATE (GRADIENT ELEVATION)
TS	TOP OF STEP (GRADIENT ELEVATION)
TW	TOP OF WALL (GRADIENT ELEVATION)
TYP	TYPICAL
W/	WITH

CODE INFORMATION:

ALL ELEMENTS WERE DESIGNED TO AND CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE FOLLOWING CODES NOTED AND OTHER GOVERNANCES SUBJECT TO THIS PROJECT. THIS MAY NOT BE A FULL OR EXHAUSTIVE LIST AND CONTRACTOR IS REQUIRED TO VERIFY ALL PERTINENT CODES ARE REFERENCED AS NEEDED.

2009 INTERNATIONAL BUILDING CODE
2017 NATIONAL ELECTRIC CODE
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

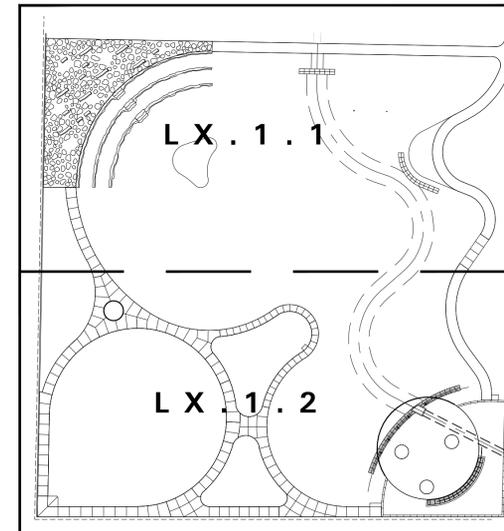
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DRAWING SCALE NOTIFICATION:

NOTE: ALL DRAWING SCALES PROVIDED (TEXT AND GRAPHIC) THROUGHOUT THIS DOCUMENT SET ARE ESTABLISHED AND SET PER A DOCUMENT SIZE OF 24" X 36" ONLY. REDUCED PRODUCTION SETS ARE NOT PER NOTED SCALES.



SHEET KEY PLAN

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM, SPENCER STREET CONWAY, ARKANSAS 72032

Client
CITY OF CONWAY ARKANSAS
1201 OAK STREET
CONWAY, ARKANSAS 72032

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Stamp



01/11/2021

Revisions

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Date
11 JANUARY 2021
Phase
ISSUE FOR BID
Job Number
CAKT001

Drawing Title

GENERAL CONSTRUCTION NOTES AND SHEET INDEX

Drawing Number

FOR BID

L0.0.1

P:\CAK\CAKT001 Markham Square\4 Drawings\Graphics\AutoCAD\Sheets\GENERAL\LO.0.2 SITE RENDERING.dwg | SFTZGERALD | PREVIOUS PAPER SIZE (24.00 X 36.00 INCHES) | 1/11/2021



MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

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Revisions

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Date

11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAKT001

Drawing Title

SITE PLAN RENDERING

Drawing Number

FOR BID

LO.0.2

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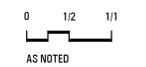
01/11/2021

Revisions

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Date
11 JANUARY 2021
Phase
ISSUE FOR BID
Job Number
CAKT001

Scale



Drawing Title

SITE PERSPECTIVE RENDERINGS

Drawing Number

FOR BID

L0.0.3

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04 STONE RETAINING WALLS CONCEPT IMAGE
NOT TO SCALE



02 OVERLOOK DECK CONCEPT IMAGE
NOT TO SCALE



03 CONCRETE AND DG TERRACE CONCEPT IMAGE
NOT TO SCALE



01 SIGNAGE WALL CONCEPT IMAGE
NOT TO SCALE

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

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Revisions

- 1
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- 4
- 5

Date

11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAKTO01

Drawing Title

DEMOLITION AND TREE REMOVAL
NOTES

Drawing Number

FOR BID

L0.1.0

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EXISTING TREE LIST:

TREE NUMBER	CALIPER INCHES	TREE SPECIES	TREE TO BE REMOVED	TREE TO REMAIN	COMMENTS/ NOTES
100	24	PECAN		X	
101	24	TBD	⊗		
102	8"	TBD	⊗		
103	15"	TBD	⊗		
104	24	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
105	15	OAK		X	PROVIDE A CLASS I TREE RIMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
106	15	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
107	15	OAK		X	PROVIDE A CLASS I TREE RIMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
108	30	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
109	15	TBD	⊗		
110	19	TBD	⊗		
111	18	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
112	12	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
113	12	TBD	⊗		
114	24	TBD	⊗		
115	12	TBD	⊗		
116	12	TBD	⊗		
117	15	TBD	⊗		
118	24	TBD	⊗		
119	15	TBD	⊗		
120	24	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
121	24	OAK		X	PROVIDE A CLASS I TREE TRIMMING UNDER THE DIRECTION OF LANDSCAPE ARCHITECT
122	30	TBD	⊗		
123	12	TBD	⊗		

SITE TREE SCHEDULE NOTES:

1. TREE NUMBERS NOTED IN THE SCHEDULES HAVE BEEN ASSIGNED BY SWA AS NO TREE NUMBERS WERE PROVIDED ON THE SURVEY OR APPEARED ON THE ACTUAL TREES. SWA DID NOT APPLY NUMBER TAGS TO THE ACTUAL TREES.

TREE PROTECTION LEGEND:

-  EXISTING TREE TO REMAIN
-  EXISTING TREE TO BE REMOVED
-  6' CHAIN-LINK TREE PROTECTION FENCE. REFER TO DETAILS ON SHEET: L0.2.1

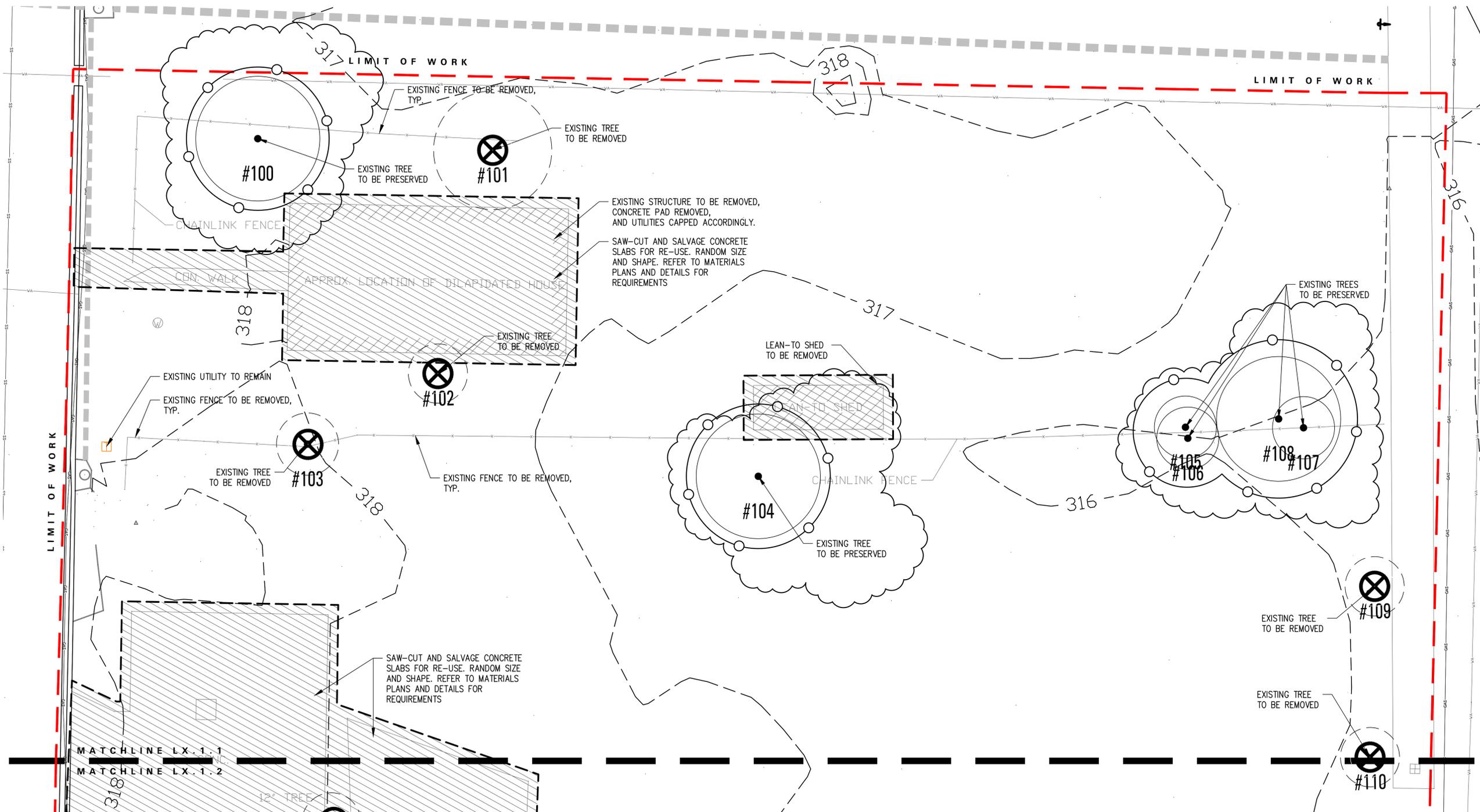
GENERAL TREE PROTECTION NOTES:

1. ALL GUIDELINES STATED BELOW SHALL BE STRICTLY ADHERED TO AND MONITORED BY CONTRACTOR AND ALL ENTITIES ASSOCIATED WITH THE OWNER OR DESIGN CONSULTANTS.
2. ANY DAMAGE, REMOVAL OR DESTRUCTION OF ANY TREE NOT SUBJECT TO REMOVAL BY THESE DOCUMENTS OR OTHER WRITTEN PERMISSIONS SHALL BE SUBJECT TO FINES OR CONTRACTUAL PENALTIES ASSESSED TO THE CONTRACTOR OR OTHER ENTITIES RESPONSIBLE FOR DAMAGE OR REMOVAL. FINES OR PENALTIES SHALL BE THE VALUE OF TREE, MINIMUM, AS PROVIDED BY INDEPENDENT ARBORIST AS SELECTED BY THE OWNER/LANDSCAPE ARCHITECT.
3. TREE DRIP LINE IS DEFINED AS THE OUTER LIMIT OF THE TREE CANOPY EDGE AT ALL POINTS (360° AROUND TREE PERIMETER) SET AT FURTHEST OUTREACH OF SUCH NOTED TREE CANOPY.
4. PRIOR TO TREE CLEARING, BRUSH REMOVAL, MASS GRADING OR ANY OTHER TYPE OF CONSTRUCTION OPERATION, CONTRACTOR SHALL CLEARLY TAG OR MARK ALL TREES TO BE REMOVED OR RELOCATED (PER SPECIFICATIONS) AND OBTAIN THE LANDSCAPE ARCHITECT'S FINAL APPROVAL PRIOR TO SUCH TREE REMOVAL.
5. CONTRACTOR SHALL PROVIDE AND SET TREE PROTECTION FENCING AROUND EACH TREE OR GROUP OF TREES TO BE RETAINED AS DEPICTED IN THESE DOCUMENTS TO PREVENT THE REMOVAL OF PROTECTED TREES, STORAGE OF CONSTRUCTION MATERIALS, PLACEMENT OF DEBRIS OR FILL, CONSTRUCTION OPERATIONS AND/OR EQUIPMENT USAGE/STORAGE WITHIN THE DRIP LINE.
6. REFER TO DEMOLITION DOCUMENTS FOR FENCING LAYOUT AND TYPE OF FENCE INCLUDING HEIGHT AND INSTALLATION REQUIREMENTS OF SAID FENCING REQUIRED.
7. DURING CONSTRUCTION OPERATIONS, CONTRACTOR SHALL PROHIBIT CLEANING, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS UNDER THE CANOPY OF TREES AND PREVENT RUN-OFF FROM SUCH NOTED ITEMS INTO AREAS PROTECTED. CONTRACTOR SHALL NOT ALLOW THE DISPOSAL OF ANY WASTE MATERIAL SUCH AS, BUT NOT LIMITED TO, PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR, ETC., OR ALLOW RUN-OFF FROM ANY SUCH ITEMS IN TO THE TREE CANOPY AREA.
8. NO ATTACHMENTS OR WIRES OF ANY KIND, OTHER THAN THOSE OF A TREE PROTECTIVE NATURE SHALL BE ATTACHED TO ANY TREE.
9. NO FILL OR STORAGE OF FILL MATERIALS OR ANY EXCAVATION OPERATIONS SHALL OCCUR WITHIN THE DRIP LINE OF A TREE TO BE PRESERVED UNLESS THERE IS A SPECIFIC APPROVED PLAN FOR USE OF TREE WELLS OR RETAINING WALLS. CHANGES OF GRADE (FOUR INCHES OR GREATER) WILL REQUIRE ADDITIONAL MEASURES TO MAINTAIN PROPER OXYGEN AND WATER EXCHANGE OF THE ROOTS.
10. ANY ADDITIONAL TREES REQUIRED FOR REMOVAL FOR CONSTRUCTION PROCESSES, UTILITY INSTALLATIONS, ETC. THAT ARE NOT NOTED OR REFERENCED ON PLANS SHALL BE NOTED ON PLAN (8.5 X 11) BY CONTRACTOR WITH REASON FOR REMOVAL AND SUBMITTED TO LANDSCAPE ARCHITECT FOR REVIEW AND PROCESSING WITH THE OWNER. UPON APPROVAL OF SUBJECT TREE'S REMOVAL AND FORWARDED BY LANDSCAPE ARCHITECT, SUCH TREE CAN BE REMOVED IN MANNER DEEMED APPROPRIATE. CONTRACTOR SHALL ALLOW MIN. TEN (10) WORKING DAYS FOR SUCH NOTED APPROVAL.
11. ANY TREES WHICH ARE IMPACTED BY EXCAVATION OR TRENCHING, NEED ROOTS 1" AND LARGER TO BE CLEAN CUT (NO TEARS) AS QUICKLY AS POSSIBLE AND BEFORE BEING COVERED WITH SOIL. REFER TO SPECIFICATIONS.
12. ALL TREES OVER 8" CALIPER NOT ON SURVEY SHALL BE PROTECTED UNLESS NOTED TO BE REMOVED.
13. ALL FENCE LOCATIONS ARE DIAGRAMMATIC ONLY. LOCATIONS SHALL BE STAKED IN FIELD BY CONTRACTOR REFERENCING FENCE LAYOUT AND ALL PROPOSED SCOPES OF WORK TO OCCUR. STAKING SHALL THEN BE APPROVED BY LANDSCAPE ARCHITECT, REVISIONS (IF ANY) MADE AND FENCE INSTALLED PRIOR TO ANY DEMOLITION OF TREES OR OTHER SCOPE OF WORK OCCURS.
14. PLACE TREE PROTECTION FENCING MIN 3' OUTSIDE OF DRIPLINE OF TREES (REFER TO SPECIFICATIONS AND DETAILS) UNLESS OTHERWISE NOTED ON THIS SHEET OR APPROVED BY LANDSCAPE ARCHITECT.
15. NO OVERCUT AND MACHINERY TRESPASSING IN ROOT ZONE.
16. AIR SPADE OR HAND EXCAVATE ONLY IN THE TREE ROOT ZONE.
17. REFER TO PLANS FOR PROPOSED LAYOUT OF TREE PROTECTION FENCE AND TREE ARMORING REQUIREMENTS.

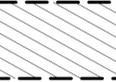
EXISTING TREE MAINTENANCE NOTES:

1. TREE MAINTENANCE SHALL OCCUR AS NOTED FOR ALL EXISTING TREES AS REQUIRED PER SPECIFICATIONS. SUCH OPERATIONS MAY INCLUDE TRIMMING, PRUNING, FERTILIZING, WATERING, ROOT PRUNING AND/OR FOLIAGE WASHING AS REQUIRED BY LANDSCAPE ARCHITECT OR ARBORIST DESIGNATED BY LANDSCAPE ARCHITECT OR OWNER.
2. TREE MAINTENANCE OPERATIONS SHALL BE DEEMED HIGH PRIORITY AND SHALL OCCUR WHEN SUCH AFOREMENTIONED OPERATIONS ARE NOTED TO OCCUR AND SHALL OCCUR AS DIRECTED BY LANDSCAPE ARCHITECT.
3. IF STORM DAMAGE OCCURS DURING COURSE OF CONTRACT, IMMEDIATE PROPER PRUNING AND MAINTENANCE OF DAMAGED AREAS SHALL OCCUR UNDER DIRECTION OF LANDSCAPE ARCHITECT OR DESIGNATED ARBORIST. ALL DEBRIS SHALL BE REMOVED OF PROPERLY. COSTS ASSOCIATED WITH THESE OPERATIONS SHALL BE PROVIDED FOR APPROVAL BY OWNER PRIOR TO WORK OCCURRING.

P:\CAK\CAKT001 Markham Square\4 Drawings\Graphics\AutoCAD\Sheets\DEMOLITION\0.1.1 DEMOLITION AND TREE REMOVAL PLAN.dwg | HTHOMAS | PREVIOUS PAPER SIZE (24.00 X 36.00 INCHES) | 1/11/2021



DEMOLITION LEGEND:

-  TREE TO REMAIN
-  TREE TO BE REMOVED
-  TREE PROTECTION FENCE REFER TO SHEET L0.2.1 FOR DETAILS
-  EXISTING STRUCTURE OR PAVEMENTS TO BE DEMOLISHED/ REMOVED/ SALVAGED AS NOTED. ANY EXISTING UTILITIES SHALL BE MADE SAFE AND CAPPED AS NEEDED FOR FUTURE CONSTRUCTION/USE

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM, SPENCER STREET
CONWAY, ARKANSAS 72032

Client
CITY OF CONWAY ARKANSAS
1201 OAK STREET
CONWAY, ARKANSAS 72032

Landscape Architect

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01/11/2021

Revisions

- 1
- 2
- 3
- 4
- 5

Date

11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAKT001

Scale

0 5' 10'

1" = 10'

North



Drawing Title

DEMOLITION AND TREE REMOVAL PLAN

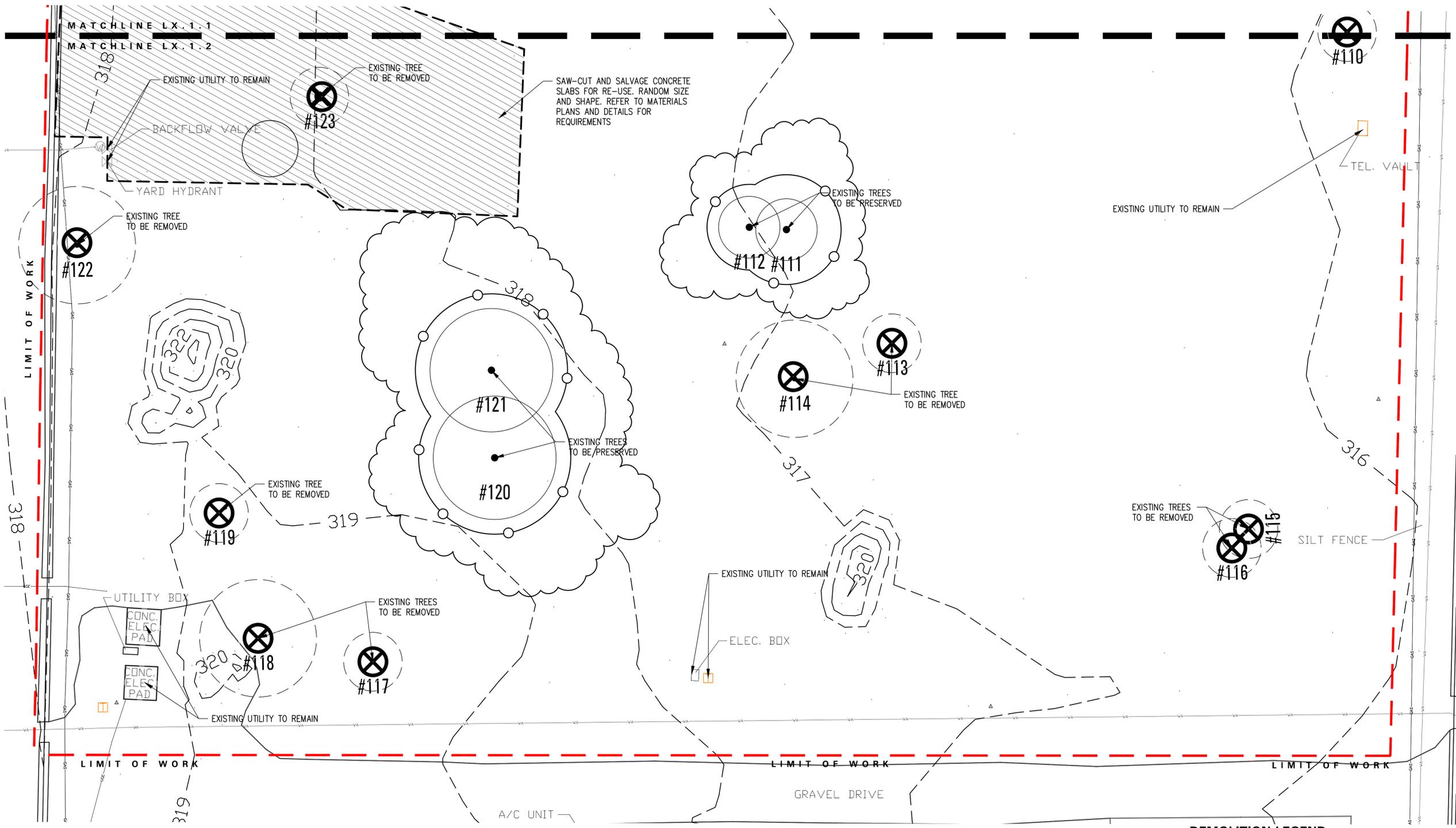
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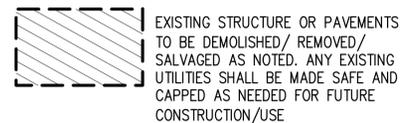
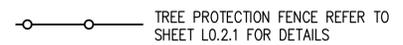
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DEMOLITION LEGEND:



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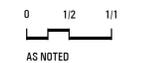
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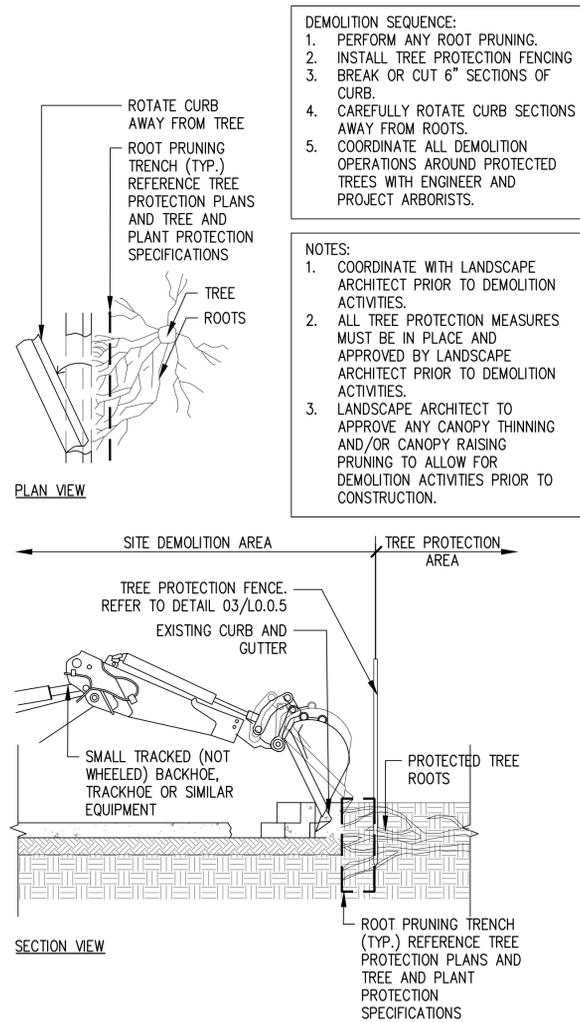
DEMOLITION AND TREE
PROTECTION DETAILS

Drawing Number

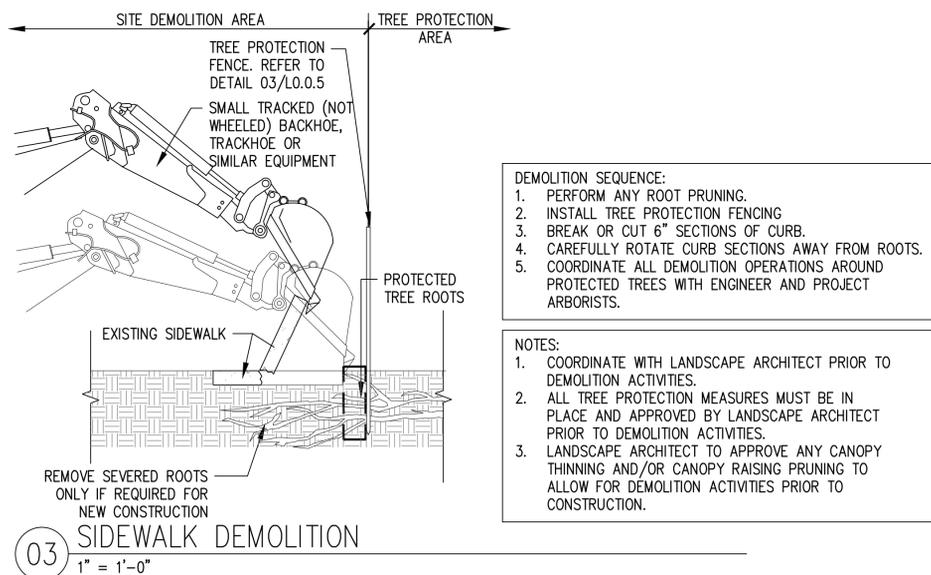
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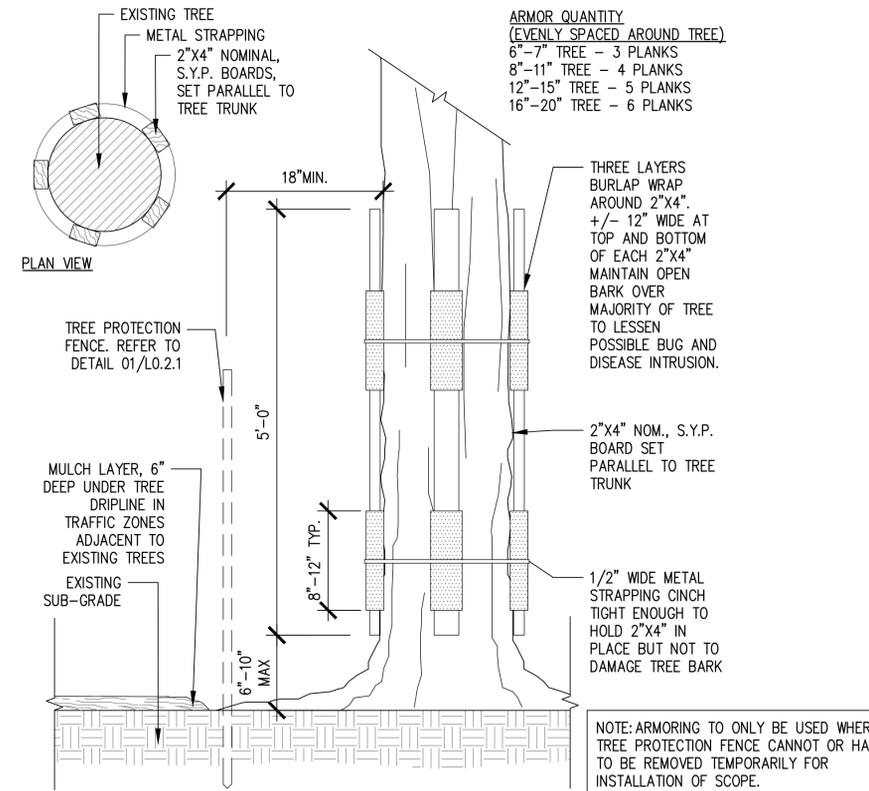
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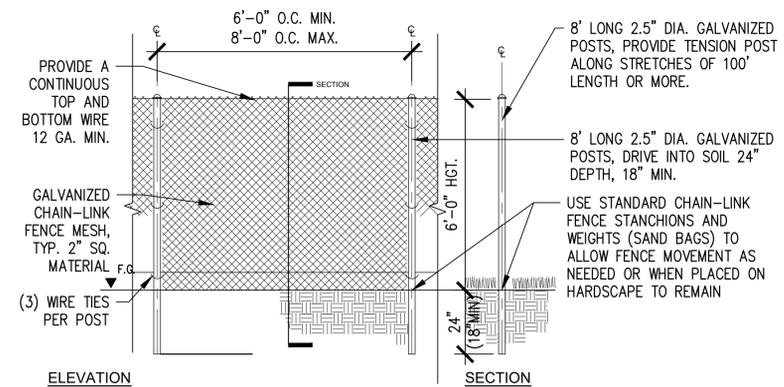
04 CURB DEMOLITION
1" = 1'-0"



03 SIDEWALK DEMOLITION
1" = 1'-0"



02 TREE PROTECTION
1" = 1'-0"



01 TREE PROTECTION FENCE
1/2" = 1'-0"

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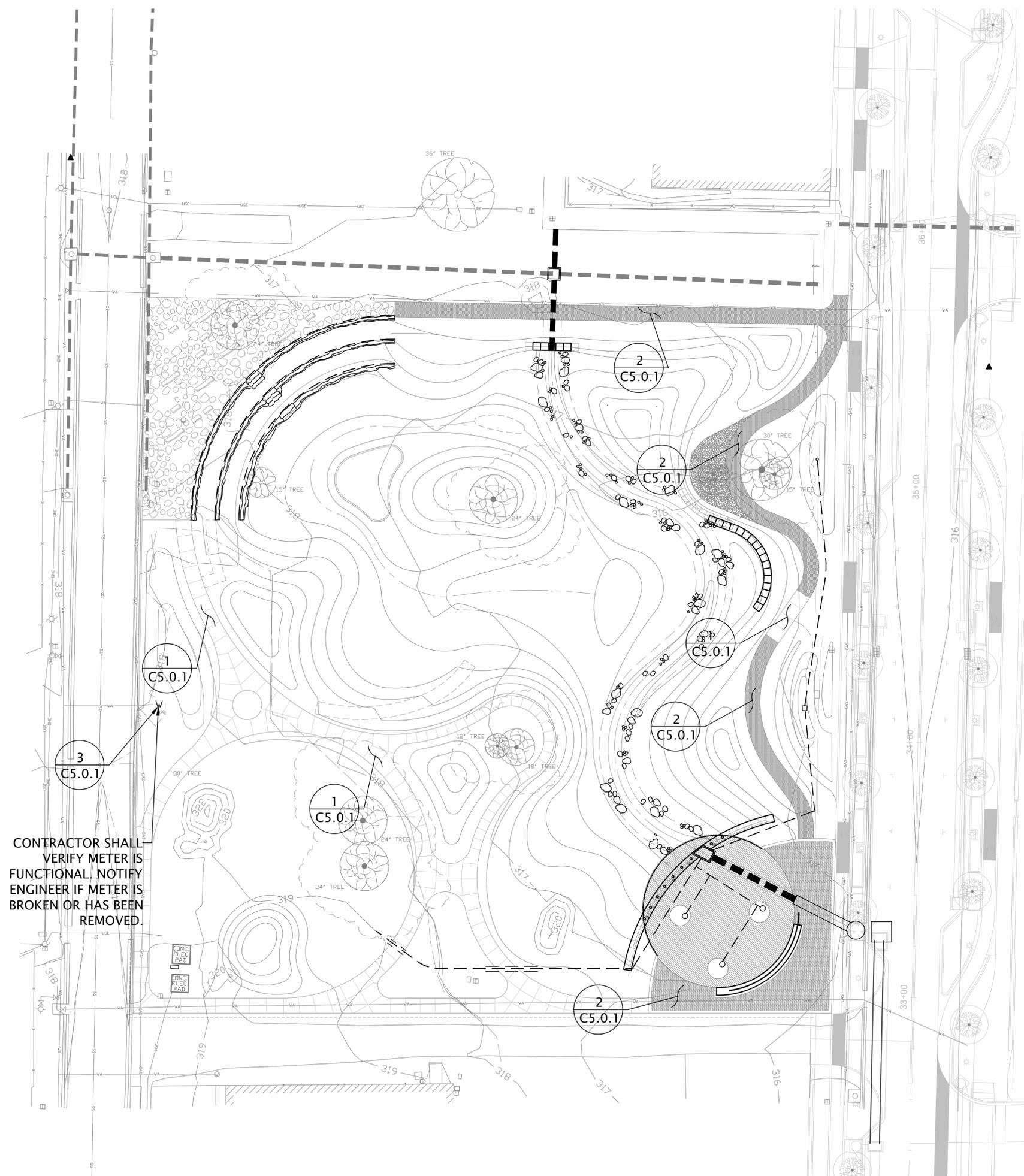
CIVIL SITE PLAN

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LEGEND	
●	FOUND MONUMENT
○	SET 1/2" REBAR
⊕	FIRE HYDRANT
⊗	WATER VALVE
⊙	WATER METER
⊚	GAS METER
⊛	POWER POLE
⊜	POWER POLE W/ LIGHT
⊝	GUY WIRE
⊞	LIGHT POLE
⊟	TELEPHONE PEDESTAL
⊠	ELECTRIC METER
⊡	SANITARY SEWER MANHOLE
⊢	SIGN
—WA—	WATER LINE
—GAS—	GAS LINE
—OHE—	OVERHEAD ELECTRIC
—UGT—	UNDERGROUND TELEPHONE
—UGFO—	UNDERGROUND FIBER OPTIC

- GENERAL NOTES
1. LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL LOCATION.
 2. CONTRACTOR TO UNCOVER AND MARK UTILITY LINES BEFORE CONSTRUCTION.
 3. CONTRACTOR SHALL BEAR ALL RESPONSIBILITY AND COST OF REPAIR OR REPLACEMENT OF EXISTING UTILITIES, DAMAGED OR INTERRUPTED AS A RESULT OF THIS CONSTRUCTION PROJECT.
 4. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE OWNER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.
 5. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER PRIOR TO BEGINNING WORK.
 6. ALL DISTURBED AREAS NOT WITHIN THE PAVED AREA ARE TO RECEIVE LOOSE STRAW TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 1.5 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
 7. CONTRACTOR WILL CONTROL AND PREVENT OFF-SITE TRACKING OF CONSTRUCTION RUNOFF AND SEDIMENT TO ADJACENT PROPERTY AND PUBLIC ROADS.
 8. CONTRACTOR IS TO PROTECT EXISTING STORM DRAINAGE SYSTEM.
 9. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN ACCORDANCE WITH THE ARKANSAS UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. THIS LAW REQUIRES THAT THE CONTRACTOR MAKE A TELEPHONE CALL TO THE ARKANSAS ONE-CALL SYSTEM AT 1-800-482-8888 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION TO ENSURE THAT ANY EXISTING UTILITIES CAN BE LOCATED.
 10. SURFACE MATERIALS DISTURBED BY THIS WORK TO BE RETURNED TO SIMILAR OR BETTER CONDITION.
 11. ALL SEWER AND WATER TO BE INSTALLED PER FAYETTEVILLE CITY STANDARDS.

- SITE PLAN NOTES
1. ALL PAVING, CONCRETE CURB, GUTTER AND SIDEWALK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UNIVERSITY DESIGN GUIDE.
 2. THE CITY DEPARTMENT OF ENGINEERING, AND THE ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO WORK WITHIN THE STREET RIGHT OF WAY (SIDEWALK, STREET OR DRIVEWAYS).
 3. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL COMPLY WITH THE EROSION CONTROL PLAN AND/OR PERMIT.
 4. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE OWNER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE APPROPRIATE MUTCD STANDARDS.
 6. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
 7. THE DUTY OF THE OWNER OR ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, OR NEAR THE CONSTRUCTION SITE.
 8. ANY SIGN OR FIXTURE REMOVED WITHIN THE RIGHT OF WAY, OR AS PART OF THE SITE WORK SHALL BE REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY REQUIREMENTS.
 9. CLEAR, GRUB AND REMOVE ALL TREES, VEGETATION AND SITE DEBRIS PRIOR TO GRADING. ALL REMOVED MATERIAL SHALL BE HAULLED FROM THE SITE DAILY. ALL CLEARING AND GRUBBING AND REMOVALS SHALL BE PERFORMED PER THE CONTRACT SPECIFICATIONS. EROSION CONTROL MEASURES SHALL BE PERFORMED PER THE CONTRACT SPECIFICATIONS.
 10. PEDESTRIAN RAMPS SHALL BE PROVIDED AT THE LOCATIONS SHOWN AND SHALL BE ADA COMPLIANT.
 11. THE CONTRACTOR SHALL SAW-CUT BITUMINOUS AND CONCRETE PAVEMENTS AS REQUIRED PER THE SPECIFICATIONS.
 12. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL PERMITS FROM AUTHORITIES AND REGULATORY AGENCIES HAVING JURISDICTION OVER THIS SITE AND THE ADJACENT RIGHT OF WAYS, AS REQUIRED, PRIOR TO BEGINNING WORK.
 13. EXCEPT FOR STRIPPED TOPSOIL AND OTHER MATERIALS INDICATED TO BE STOCKPILED OR OTHERWISE REMAIN OWNERS PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
 14. SALVAGEABLE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNERS PREMISES.
 15. DO NOT COMMENCE SITE-CLEARING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROL AND PLANT-PROTECTION MEASURES ARE IN PLACE.
 16. SOIL STRIPPING, HANDLING, AND STOCKPILING: PERFORM ONLY WHEN THE TOPSOIL IS DRY OR SLIGHTLY MOIST.
 17. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
 18. LOCATE AND CLEARLY IDENTIFY TREES, SHRUBS, AND OTHER VEGETATION TO REMAIN, OR TO BE RELOCATED.
 19. THE INTENT OF THE PROPOSED CONSTRUCTION IS TO PRESERVE AS MUCH OF THE EXISTING PAVEMENT, CURB AND GUTTER AND SIDEWALK AS POSSIBLE. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION.
 20. INTERRUPTING EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES ACCORDING TO REQUIREMENTS INDICATED:
 - a. NOTIFY OWNER NOT LESS THAN (TWO) 2 DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.
 - b. DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT OWNER'S WRITTEN PERMISSION.
 21. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL, UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
 22. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
 23. STRIP TOPSOIL TO FULL DEPTH IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
 24. REMOVE SUBSOIL AND NON-SOIL MATERIALS FROM TOPSOIL, INCLUDING CLAY LUMPS, GRAVEL, AND OTHER OBJECTS MORE THAN 2 INCHES IN DIAMETER, TRASH, DEBRIS, WEEDS, ROOTS, AND OTHER WASTE MATERIALS.

CONTRACTOR SHALL VERIFY METER IS FUNCTIONAL. NOTIFY ENGINEER IF METER IS BROKEN OR HAS BEEN REMOVED.

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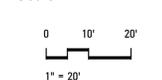
Phase

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Job Number

CAKT001

Scale



North



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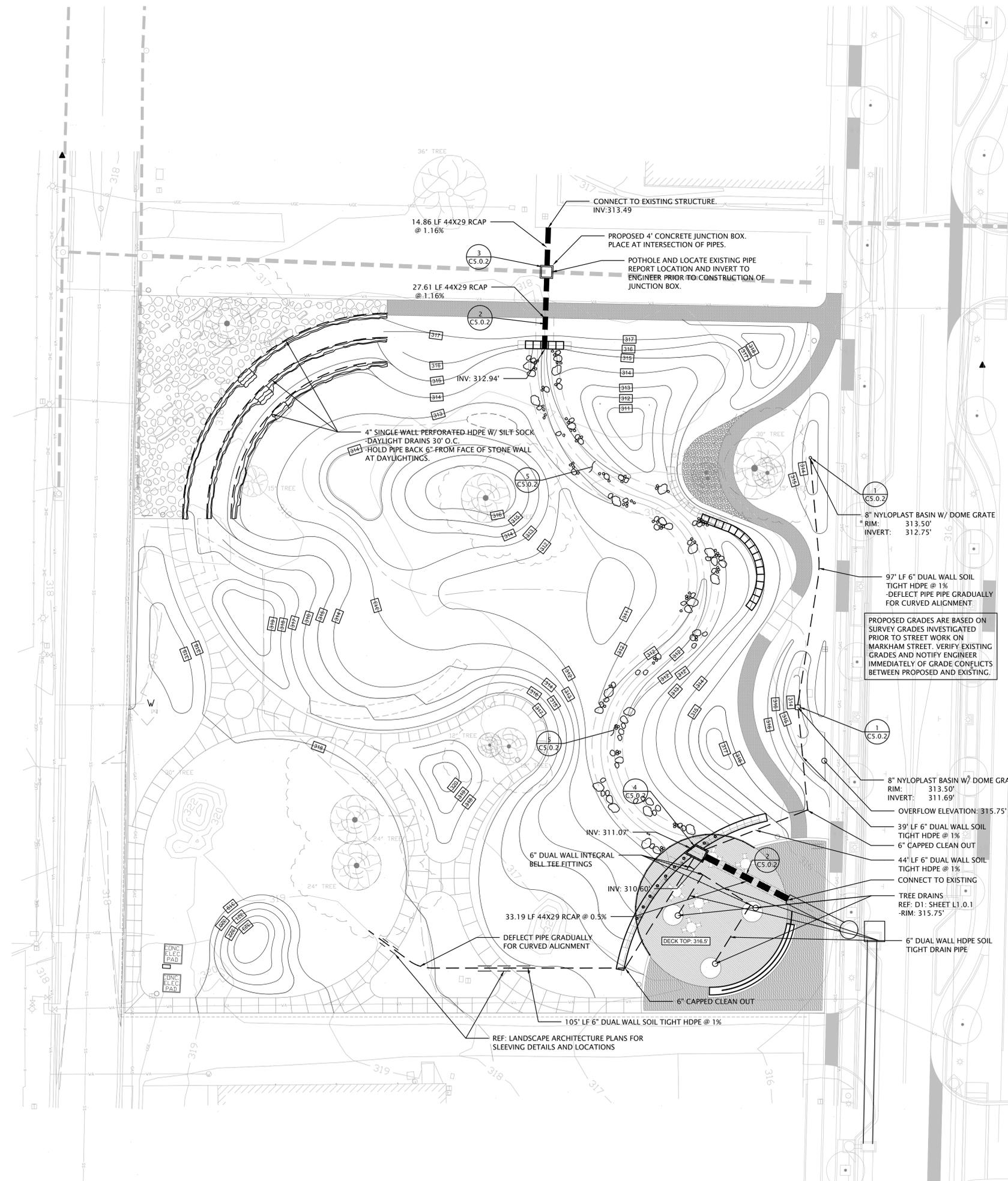
CIVIL GRADING & DRAINAGE PLAN

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GRADING LEGEND	
+ 212.00	PROPOSED ELEVATION
+ HP 212.50	PROPOSED HIGH POINT
+ EX 212.50	EXISTING ELEVATION
+ TS 212.50	PROPOSED TOP OF STEP ELEVATION
+ BS 212.50	PROPOSED BOTTOM OF STEP ELEVATION
+ LP 212.50	PROPOSED LOW POINT
— 600	EXISTING CONTOUR
— 600	PROPOSED CONTOUR
---	STORM PIPE
○	STORM STRUCTURE
2%	DIRECTION & PERCENT SLOPE
+ TW 212.50	PROPOSED TOP OF WALL ELEVATION
+ BW 212.50	PROPOSED BOTTOM OF WALL ELEVATION
+ TC 212.50	PROPOSED TOP OF CURB
+ BC 212.50	PROPOSED BOTTOM OF CURB

- GRADING PLAN NOTES
1. ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM OF 4-INCHES OF TOPSOIL MIXED WITH 2-INCHES OF COMPOST (FOR A TOTAL OF 6-INCHES), AND SOIL OR SEED. THESE AREAS SHALL BE WATERED BY THE CONTRACTOR UNTIL THE SOIL OR SEED IS GROWING IN A HEALTHY MANNER. SEE LANDSCAPE PLAN FOR MORE INFORMATION.
 2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THE PROJECT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES TO ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASE OF THE PROJECT.
 3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE OWNER PRIOR TO PLACEMENT.
 4. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
 5. CONSTRUCTION REVIEW, INSPECTION, AND OBSERVATION OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED AS A REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
 6. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL PERMITS FROM AUTHORITIES AND REGULATORY AGENCIES HAVING JURISDICTION OVER THIS SITE, AS REQUIRED, PRIOR TO BEGINNING WORK.
 7. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL COMPLY WITH THE EROSION CONTROL PLAN AND PERMIT.
 8. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
 9. TRAFFIC: MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING EARTH MOVING OPERATIONS.
 - a. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION.
 - b. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY OWNER OR AUTHORITIES HAVING JURISDICTION.
 10. DO NOT CONDUCT WORK ON ADJOINING PROPERTY UNLESS DIRECTED BY ENGINEER.
 11. DO NOT COMMENCE EARTH-MOVING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROL MEASURES ARE IN PLACE.
 12. INSTALL DETECTABLE WARNING TAPE ABOVE CONSTRUCTED UTILITIES. DETECTABLE WARNING TAPE IS DEFINED AS: ACID- AND ALKALI-RESISTANT, POLYETHYLENE FILM WARNING TAPE MANUFACTURED FOR MARKING AND IDENTIFYING UNDERGROUND UTILITIES, A MINIMUM OF 6 INCHES WIDE AND 4 MILS THICK, CONTINUOUSLY INSCRIBED WITH A DESCRIPTION OF THE UTILITY, WITH METALLIC CORE ENCASED IN A PROTECTIVE JACKET FOR CORROSION PROTECTION, DETECTABLE BY METAL DETECTOR WHEN TAPE IS BURIED UP TO 30 INCHES DEEP. COLORED AS FOLLOWS:
 - a. RED: ELECTRIC.
 - b. YELLOW: GAS, OIL, STEAM, AND DANGEROUS MATERIALS.
 - c. ORANGE: TELEPHONE AND OTHER COMMUNICATIONS.
 - d. BLUE: WATER SYSTEMS.
 - e. GREEN: SEWER SYSTEMS.
 13. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS.
 14. PROTECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS DURING EARTH MOVING OPERATIONS.
 15. PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES AND FROST. REMOVE TEMPORARY PROTECTION BEFORE PLACING SUBSEQUENT MATERIALS.
 16. IF EXCAVATED MATERIALS INTENDED FOR FILL AND BACKFILL INCLUDE UNSATISFACTORY SOIL MATERIALS AND ROCK, REPLACE WITH SATISFACTORY SOIL MATERIALS.
 - a. EXCAVATIONS FOR FOOTINGS AND FOUNDATIONS: DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE. JUST BEFORE PLACING CONCRETE REINFORCEMENT, TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.
 - b. EXCAVATION FOR UNDERGROUND TANKS, BASINS, AND MECHANICAL OR ELECTRICAL UTILITY STRUCTURES: EXCAVATE TO ELEVATIONS AND DIMENSIONS INDICATED WITHIN A TOLERANCE OF PLUS OR MINUS 1 INCH. DO NOT DISTURB BOTTOM OF EXCAVATIONS INTENDED AS BEARING SURFACES.
 17. EXCAVATIONS AT EDGES OF TREE- AND PLANT-PROTECTION ZONES:
 - a. EXCAVATE BY HAND TO INDICATED LINES, CROSS SECTIONS, ELEVATIONS, AND SUBGRADES. USE NARROW-TINE SPADING FORKS TO COMB SOIL AND EXPOSE ROOTS. DO NOT BREAK, TEAR, OR CHOP EXPOSED ROOTS. DO NOT USE MECHANICAL EQUIPMENT THAT RIPS, TEARS, OR PULLS ROOTS.
 - b. GENERAL UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES, COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.
 - a. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.
 - b. CUT OUT SOFT SPOTS, FILL LOW SPOTS, AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED SURFACE TOLERANCES.
 20. SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.

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Drawing Title

EROSION CONTROL PLAN

Drawing Number

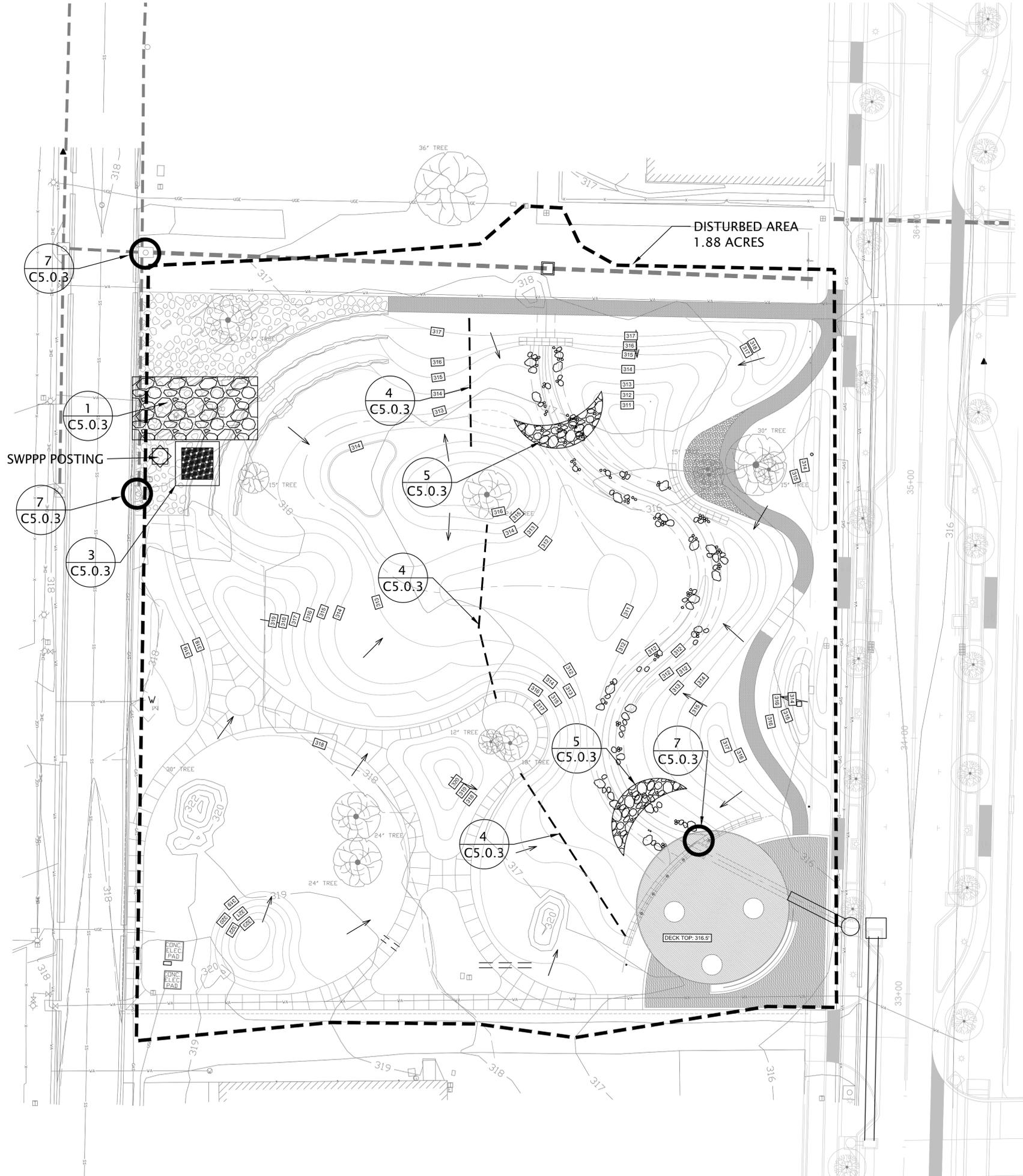
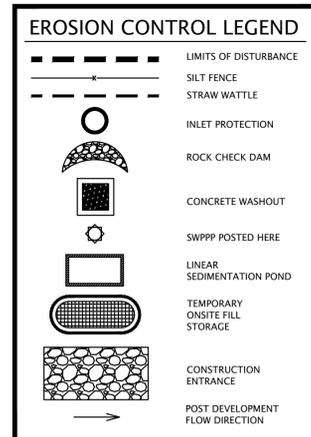
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EROSION CONTROL NOTES

1. ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE A MINIMUM OF 4-INCHES OF TOPSOIL AND 2-INCHES OF COMPOST (FOR A TOTAL OF 6-INCHES) AND SOD OR SEED (AS INDICATED). THESE AREAS SHALL BE WATERED BY THE CONTRACTOR UNTIL THE SOD OR SEED IS GROWING IN A HEALTHY MANNER. SEE LANDSCAPE PLANS FOR MORE REQUIREMENTS.
2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THE PROJECT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES TO ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASE OF THE PROJECT.
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4. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
5. THE DUTY OF THE OWNER (OR OWNER'S REPRESENTATIVE) TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, OR NEAR THE CONSTRUCTION SITE.
6. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A TEMPORARY ROCK ENTRANCE PAD AT ALL POINTS OF VEHICLE EXIT FROM THE SITE. SAID ROCK ENTRANCE PADS SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.
7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE ESTABLISHED AROUND THE ENTIRE SITE PERIMETER AND IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES AND THE PROJECT DETAILS.
8. EROSION CONTROL MEASURES SHALL BE IMMEDIATELY ESTABLISHED UPON COMPLETION OF CLEARING AND GRUBBING.
9. THE INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:
 - a. INSTALL SILT FENCE AROUND THE PERIMETER OF THE SITE, AND THE ROCK CONSTRUCTION ENTRANCE(S).
 - b. INSTALL SILT FENCE AND INLET PROTECTION AROUND, AND WITHIN, ALL STRUCTURES.
 - c. CLEAR AND GRUB.
 - d. SURFACE FEATURE REMOVALS.
 - e. ROUGH GRADING OF THE SITE.
 - f. STABILIZE DENUDED AREAS AND STOCKPILES.
 - g. FINE GRADING OF THE SITE.
 - h. INSTALL TOPSOIL, COMPOST AND SEED.
 - i. REMOVE ACCUMULATED SEDIMENT FROM STRUCTURES.
 - j. WHEN ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE SITE IS STABILIZED, REMOVE SILT FENCE AND RESEED ANY AREAS DISTURBED BY THE REMOVAL WITHIN 30-DAYS OF FINAL STABILIZATION.
10. THE LOCATION OF THE AREAS NOT TO BE DISTURBED MUST BE IDENTIFIED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC. BEFORE CONSTRUCTION BEGINS.
11. ALL STORM DRAINS AND INLETS MUST BE PROTECTED UNTIL ALL SOURCES OF POTENTIAL DISCHARGE ARE STABILIZED.
12. SOLID WASTE MUST BE DISPOSED OF PROPERLY AND COMPLY WITH THE GOVERNING AGENCY'S DISPOSAL REQUIREMENTS.
13. EXTERNAL WASHING OF CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. THE AREA MUST BE IN A CONTAINED LOCATION WITH A LINER. WASHOUT TO BE REMOVE AND PROPERLY DISPOSED OF FOLLOWING ALL APPLICABLE REGULATIONS. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE ALLOWED TO WASH OFF FRESH CONCRETE IN THE STREET OR IN ANY AREA WHERE THE WASHOUT MATERIAL WILL ENTER A WETLAND OR DRAINAGEWAY. CONCRETE WASHOUT WATER SHALL NOT BE DISCHARGED INTO WATER/STORM SYSTEMS.
14. NO ENGINE DEGREASING IS ALLOWED ON SITE.
15. SILT FENCE REQUIRED MAINTENANCE SHALL BE AS FOLLOWS: "WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT FENCE FABRIC, THE SEDIMENT MUST BE REMOVED WITHIN 24-HOURS. "REPAIR OR REPLACE DYSFUNCTIONAL SILT FENCE WITHIN 24-HOURS.
16. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL PERMITS FROM AUTHORITIES AND REGULATORY AGENCIES HAVING JURISDICTION OVER THIS SITE, AS REQUIRED, PRIOR TO BEGINNING WORK.
17. AFTER CONSTRUCTION BEGINS, SOIL SURFACE STABILIZATION SHALL BE APPLIED WITHIN 7-DAYS TO ALL DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN UNDISTURBED FOR PERIODS LONGER THAN AN ADDITIONAL 21 CALENDAR DAYS.
18. WITHIN 7-DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, PERMANENT OR TEMPORARY SOIL SURFACE STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS AND SOIL STOCKPILES.
19. ALL DISTURBED GROUND LEFT INACTIVE FOR 7 DAYS OR MORE MUST BE STABILIZED BY SEEDING, SODDING OR MULCHING. TYPE OF SLOPE DAYS TO STABILIZE STEEPER THAN 3:1 7 DAYS 10:1 TO 3:1 7 DAYS FLATTER THAN 10:1 7 DAYS
20. WHEN STABILIZATION MEASURES ARE STOPPED DUE TO SNOW COVER OR ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE. SOIL STABILIZATION MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO: SURFACE ROUGHENING, TEMPORARY OR PERMANENT VEGETATION, MULCHING, SODDING, LANDSCAPING AND EROSION CONTROL BLANKETS.
21. STABILIZATION MEASURES TO BE USED SHALL BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS AND ESTIMATED DURATION OF USE.
22. EXISTING TURF OUTSIDE OF THE CONSTRUCTION LIMITS SHALL NOT BE DISTURBED. ANY TURF SHALL BE RE-ESTABLISHED.
23. ALL STREETS AND PARKING LOTS ADJACENT TO THE SITE SHALL BE CLEANED AND/OR SWEEPED AT THE END OF EACH WORKING DAY.
24. WHEN STABILIZATION MEASURES ARE STOPPED DUE TO SNOW COVER, STABILIZATION MEASURES SHALL BE RE-INITIATED AS SOON AS POSSIBLE. STABILIZATION MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO: TEMPORARY OR PERMANENT VEGETATION, MULCHING, SODDING, LANDSCAPING AND EROSION CONTROL BLANKETS.
25. TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING THE CONSTRUCTION PHASE AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
26. EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL PERMANENT REVEGETATION IS ESTABLISHED.
27. CONTRACTOR TO LOCATE A CONCRETE WASHOUT AREA ON THE PROJECT SITE PRIOR TO BEGINNING WORK.

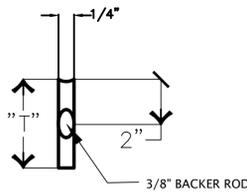
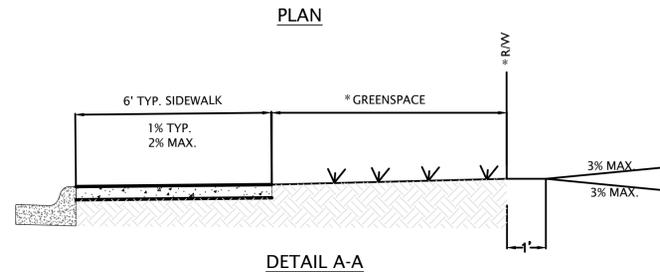
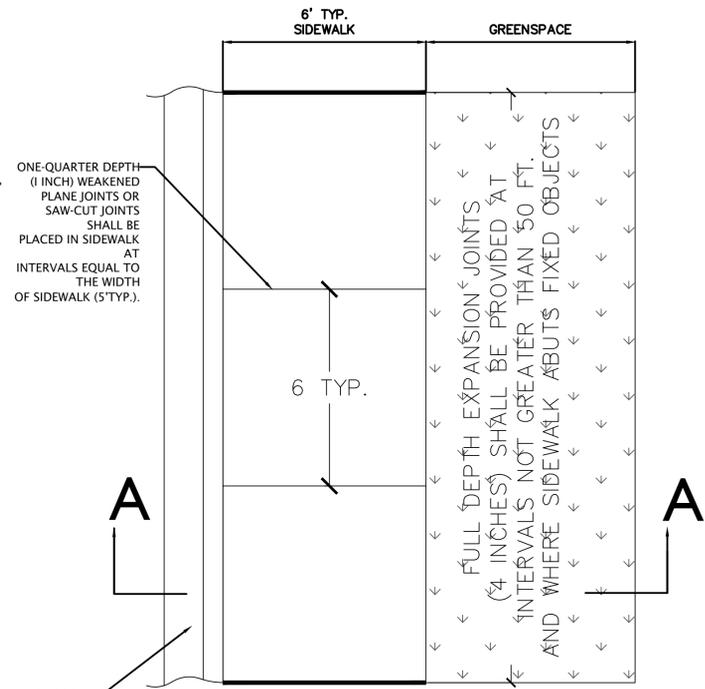


SIDEWALK CONSTRUCTION NOTES:

- EXPANSION MATERIAL SHALL BE REQUIRED AT 60 FT. TYPICAL. REFER TO LANDSCAPE ARCHITECTURE SIDEWALK PLAN.
- SIDEWALK SHALL HAVE TOOLED OR SAW-CUT TRANSVERSE JOINTS AT INTERVALS EQUAL TO THE WIDTH OF SIDEWALK (6' TYP.). THESE WEAKENED PLANE (CONTRACTION) JOINTS SHALL BE CONSTRUCTED TO 1/4 DEPTH OF THE SIDEWALK THICKNESS AND SHALL BE 1/8" TO 3/8" WIDE. REFERENCE LANDSCAPE ARCHITECT SIDEWALK DETAIL.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 p.s.i.
- CONCRETE SHALL HAVE A MINIMUM CEMENT CONTENT OF 5 1/2 BAGS per Cu. Yd. WITH 5 1/2% ± 1 1/2% AIR ENTRAINMENT.
- EXPANSION JOINT MATERIAL SHALL BE PREFORMED ASPHALT IMPREGNATED FIBERBOARD CONFORMING TO AASHTO M-213. EXPANSION JOINT MATERIAL SHALL BE LEFT 1/2" LOWER THAN GRADE OR TRIMMED 1/2" LOWER, AND FILLED WITH SILICONE SEALER TO FINISHED GRADE.
- CONCRETE CURING COMPOUND SHALL BE SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL.
- CONCRETE JOINT SEALANT SHALL BE SONNEBORN "SONOLASTIC SLI" OR AN APPROVED EQUAL. CLOSED CELL BACKER ROD SHALL BE USED IN DEEP JOINTS, AS NEEDED, ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- ALL SIDEWALKS SHALL HAVE 1/4" ROLLED EDGES AND A BROOMED FINISH.
- REINFORCEMENT: 6X6 W2.9XW2.9 WWF
- 2" SMOOTH #3 DOWELS AT ALL EXPANSION JOINTS.
- PROVIDE 2" CLEAR COVER OVER REINFORCING STEEL IN ALL DIRECTIONS MINIMUM.

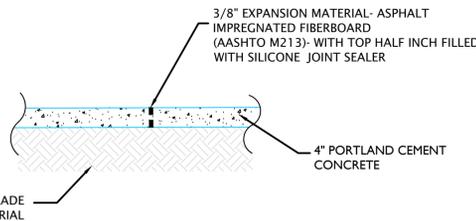
* CONFIRM ALL DIMENSIONS FOR GREENSPACE, SIDEWALK, AND RIGHT-OF-WAY, WITH THE APPROVED PLAT.

ALL SIDEWALKS REQUIRE INSPECTION BEFORE AND AFTER CONCRETE PLACEMENT. SIDEWALK WILL BE CHECKED FOR ADA REQUIREMENTS & WORKMANSHIP



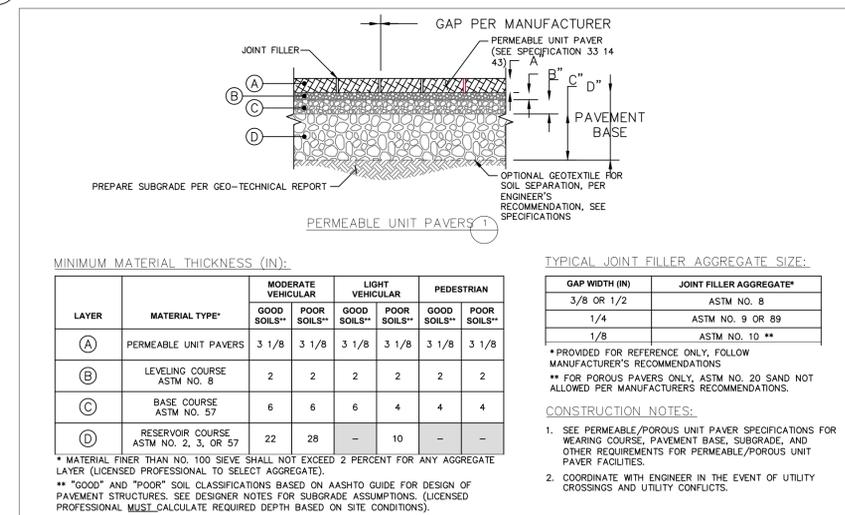
"T"=1/4 SLAB THICKNESS + 1/2"

JOINT SEALANT DETAIL



ELEVATION

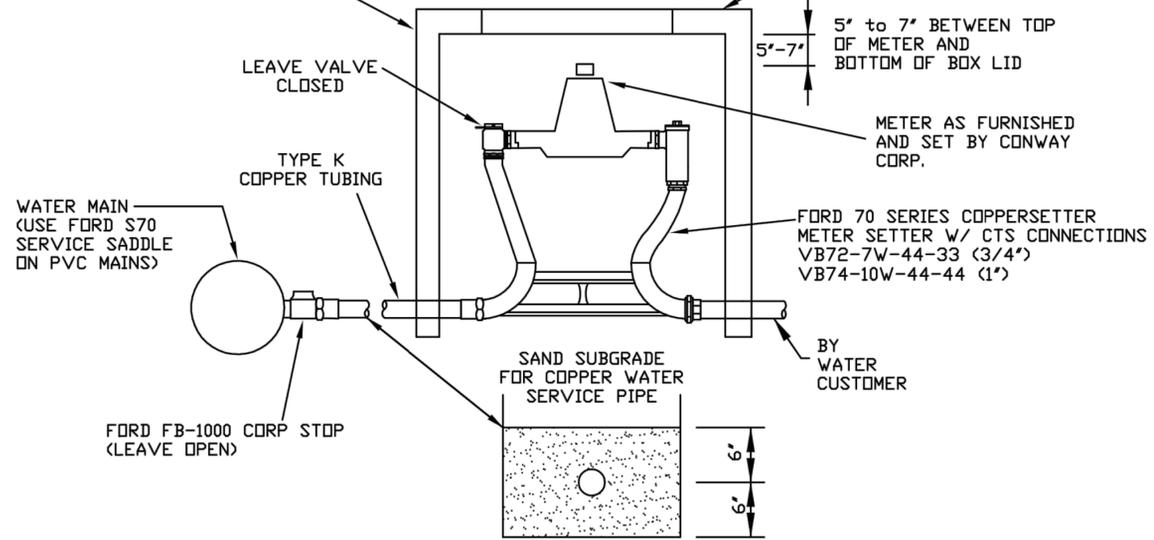
1 SIDEWALK



2 PERMIABLE PAVERS

METER BOXES FOR THREE-QUARTER INCH (3/4") SERVICES SHALL BE EAST JORDAN IRON WORKS MSBCF 1118-12 (ITEM# 32413700) WITH EJIW 1118-R CAST IRON COVER WITH READER (FLIP) DOOR (ITEM# 32131101)

METER BOXES FOR ONE INCH (1") SERVICES SHALL BE EAST JORDAN IRON WORKS MSBCF 1324-12 (ITEM# 32414001) WITH EJIW 1324-R CAST IRON COVER WITH READER (FLIP) DOOR (ITEM# 32131301)



3 WATER METER

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM, SPENCER STREET CONWAY, ARKANSAS 72032

Client
CITY OF CONWAY ARKANSAS
1201 OAK STREET
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Stamp



Revisions

- 1
- 2
- 3
- 4
- 5

Date
11 DECEMBER 2021
Phase
ISSUE FOR BID
Job Number
CAKT001

Scale North



Drawing Title

CIVIL
DETAILS

Drawing Number

FOR BID

C5.0.1

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM,
SPENCER STREET
CONWAY, ARKANSAS 72032

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CITY OF CONWAY ARKANSAS
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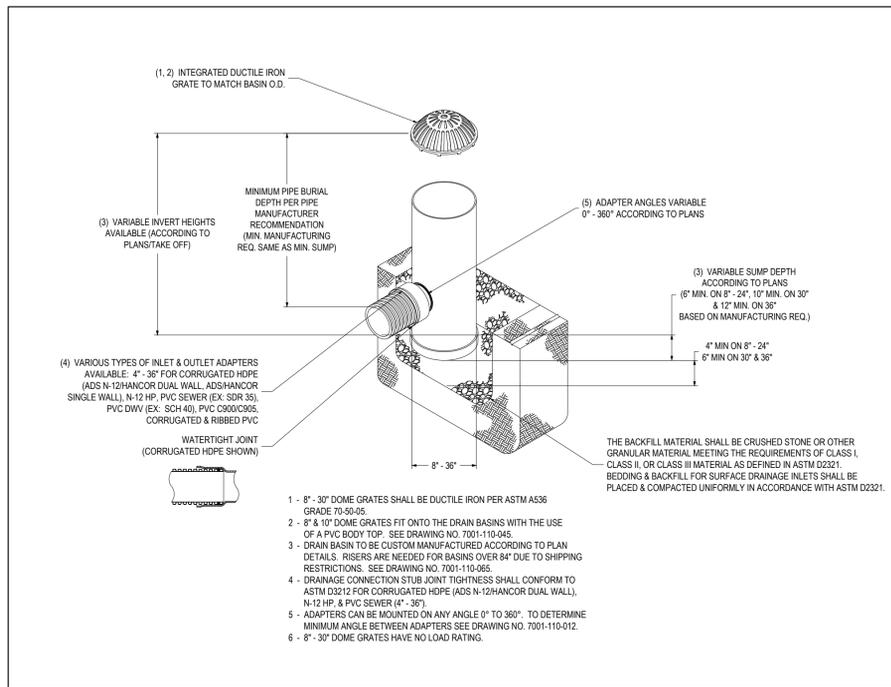
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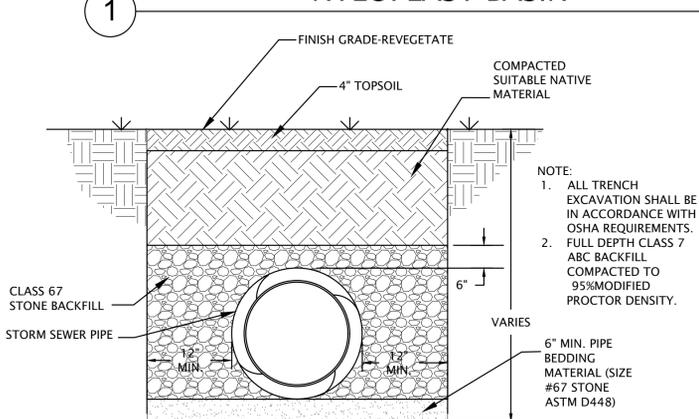
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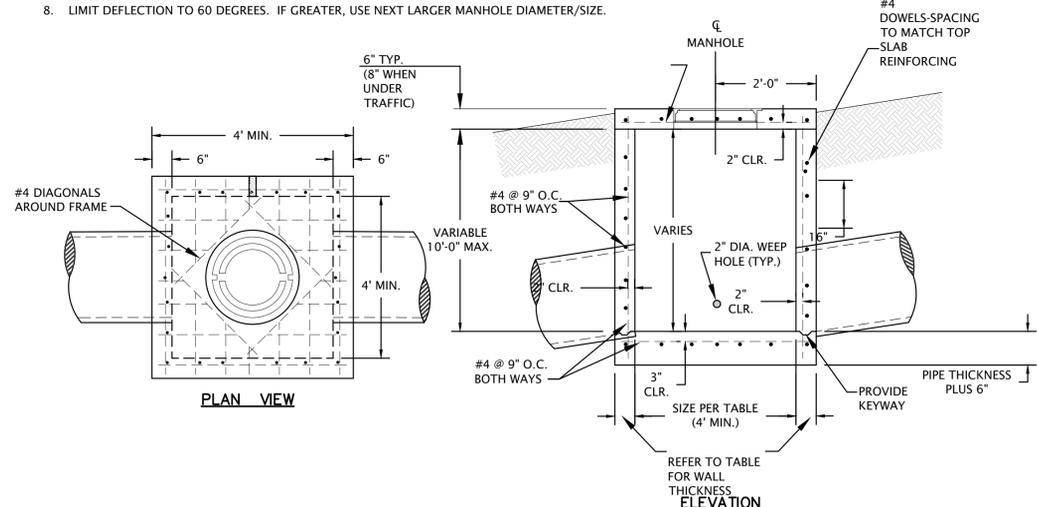
1 NYLOPLAST BASIN



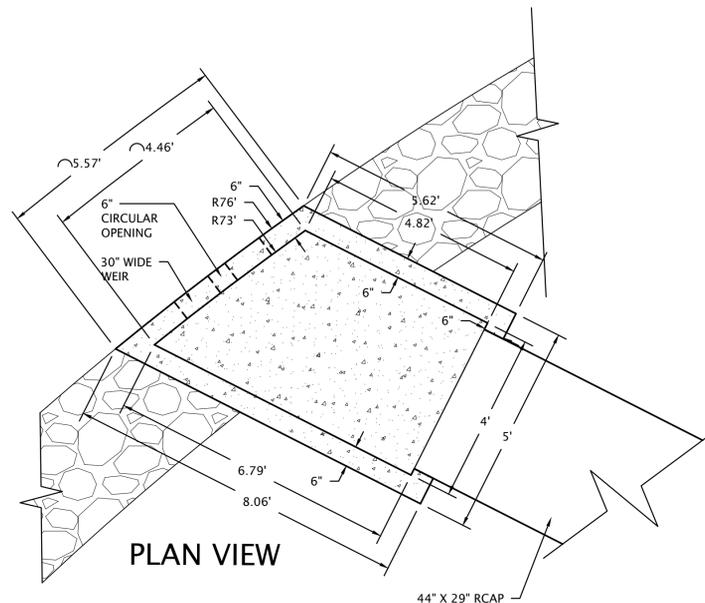
2 STORM SEWER PIPE

JUNCTION BOX NOTES

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINFORCEMENT BARS SHALL BE GRADE 60 AND SHALL HAVE A MINIMUM 2" COVER UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 p.s.i. - TOP 18" SHALL BE CAST-IN-PLACE.
4. INVERTS SHALL BE POURED MONOLITHICALLY WITH FOOTING.
5. PIPES MAY ENTER BOX FROM ANY ANGLE OF ELEVATION AS DIRECTED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 2".
6. STEPS ARE REQUIRED IN STORM DRAIN MANHOLES THAT ARE AT 4 FT OF DEPTH AND GREATER (FROM INVERT TO RIM). CENTERLINE OF MANHOLE LID SHALL BE 2 FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS (6" x 12") SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE AT 16" APART.
7. LID SHALL BE 2 FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS (6" x 12") SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE AT 16" APART.
8. LIMIT DEFLECTION TO 60 DEGREES. IF GREATER, USE NEXT LARGER MANHOLE DIAMETER/SIZE.



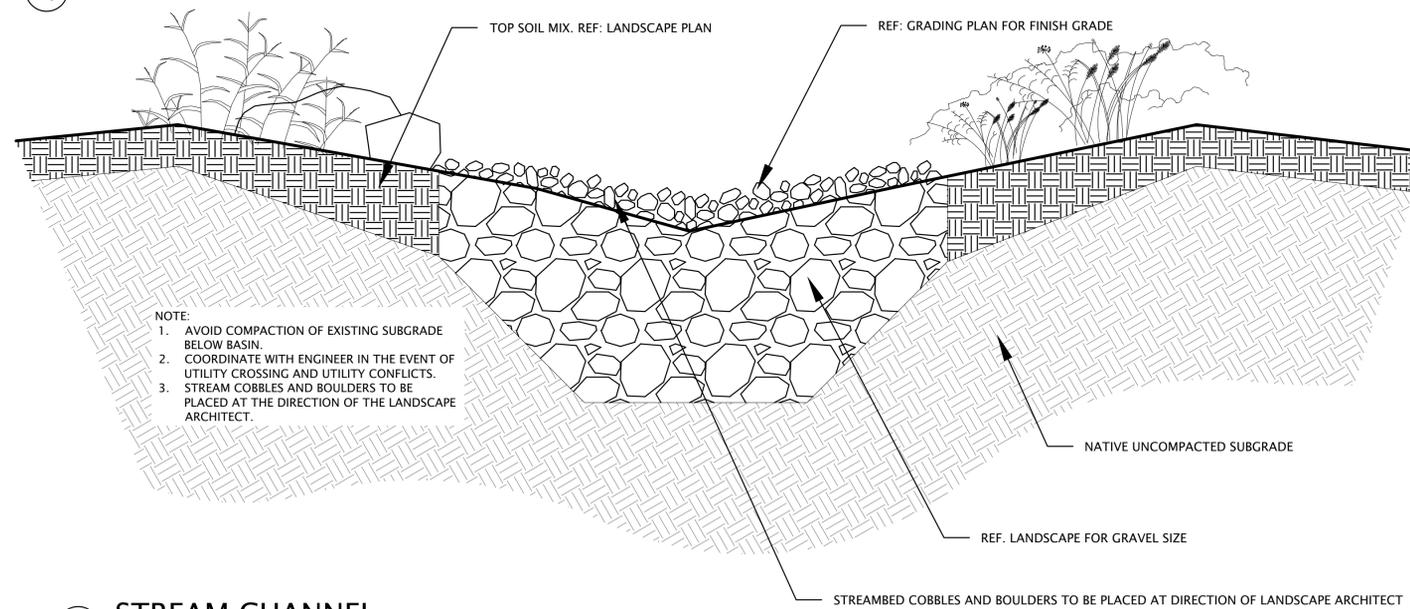
3 JUNCTION BOX



PLAN VIEW

REINFORCEMENT
HORZ: # 5'S @ 9" O.C. E.W.
VERT: # 4'S @ 12" O.C. E.W.

4 CONCRETE OUTFALL BOX



5 STREAM CHANNEL

- NOTE:
1. AVOID COMPACTION OF EXISTING SUBGRADE BELOW BASIN.
 2. COORDINATE WITH ENGINEER IN THE EVENT OF UTILITY CROSSING AND UTILITY CONFLICTS.
 3. STREAM COBBLES AND BOULDERS TO BE PLACED AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

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CONWAY, ARKANSAS 72032

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Phase

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Scale

North



Drawing Title

EROSION CONTROL DETAILS

Drawing Number

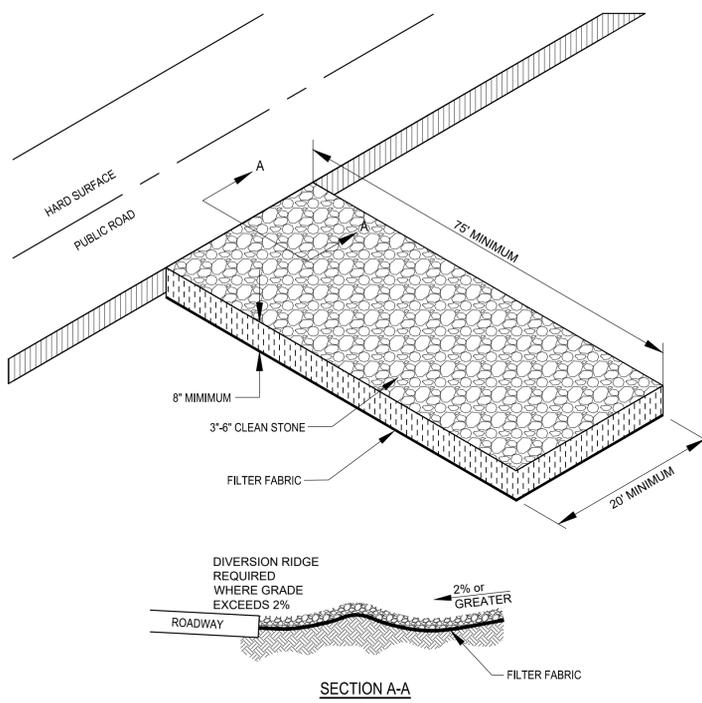
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WASHOUT NOTES

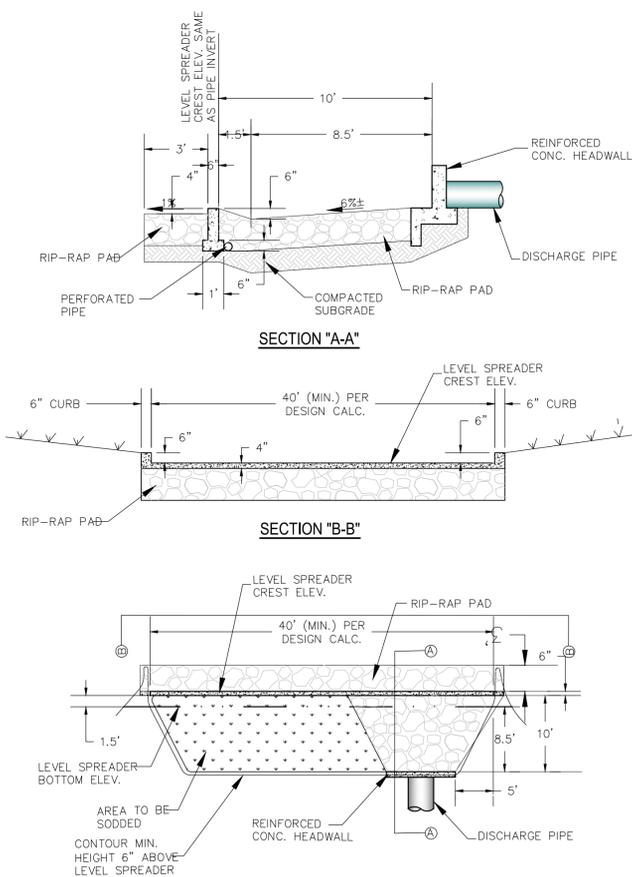
1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
4. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES WILL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL. PLASTIC LINING MATERIAL WILL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
6. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OFF-SITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.



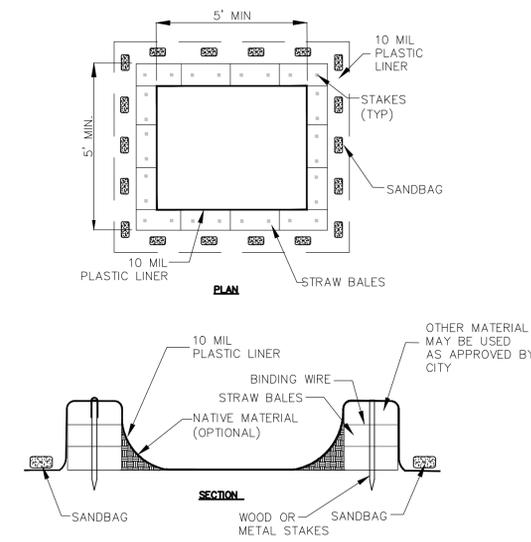
NOTES:

1. REPLACE CONTAMINATED STONE AS REQUIRED TO PREVENT TRACKING OF SEDIMENT OR MUD ON PUBLIC STREETS.
2. CLEAN STREETS DAILY WITH BROOM (NO POWER BROOM) AND SHOVEL. THE USE OF WATER IS PROHIBITED.
3. ALL VEHICLES MUST USE CONSTRUCTION EXIT.
4. IF WHEEL WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

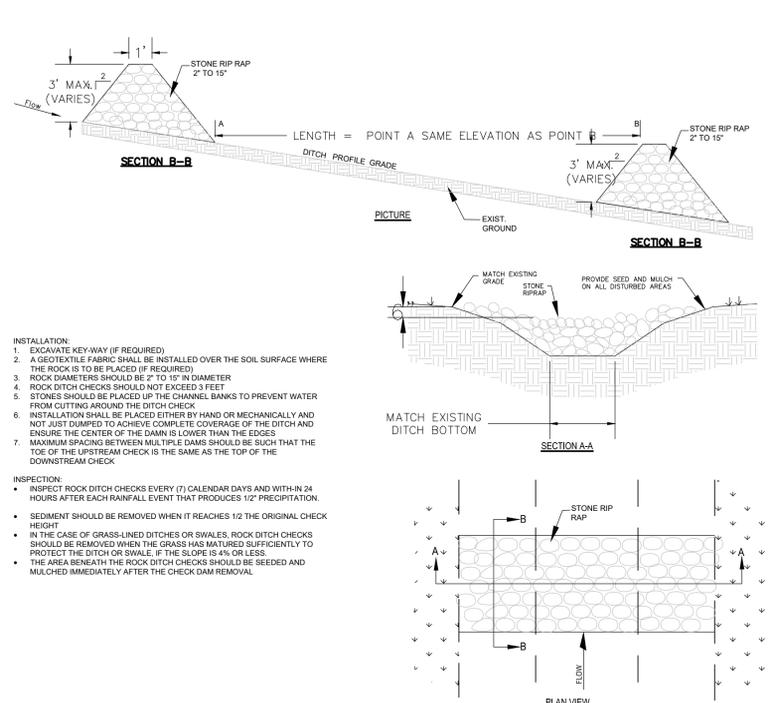
1 STABILIZED CONSTRUCTION ENTRANCE



2 LEVEL SPREADER



3 CONCRETE WASHOUT

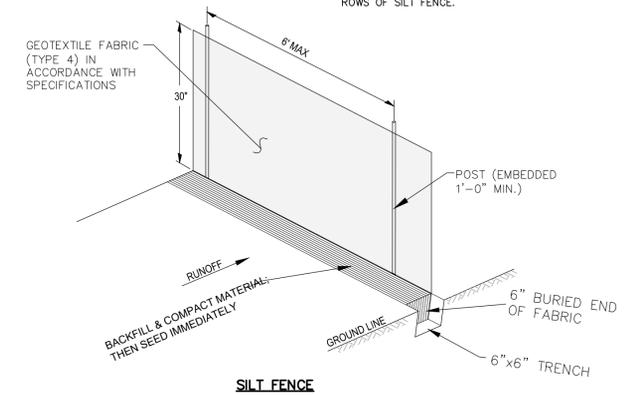


- INSTALLATION:**
1. EXCAVATE KEY-WAY (IF REQUIRED)
 2. A GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK IS TO BE PLACED (IF REQUIRED)
 3. ROCK DIAMETERS SHOULD BE 2" TO 1 1/2" IN DIAMETER
 4. ROCK DITCH CHECKS SHOULD NOT EXCEED 3 FEET
 5. STONES SHOULD BE PLACED UP THE CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK
 6. INSTALLATION SHALL BE PLACED EITHER BY HAND OR MECHANICALLY AND NOT JUST DUMPED TO ACHIEVE COMPLETE COVERAGE OF THE DITCH AND ENSURE THE CENTER OF THE DAM IS LOWER THAN THE EDGES
 7. MAXIMUM SPACING BETWEEN MULTIPLE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS THE SAME AS THE TOP OF THE DOWNSTREAM CHECK
- INSPECTION:**
- INSPECT ROCK DITCH CHECKS EVERY (7) CALENDAR DAYS AND WITH-IN 24 HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2" PRECIPITATION.
 - SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 1/2 THE ORIGINAL CHECK HEIGHT
 - IN THE CASE OF GRASS-LINED DITCHES OR SWALES, ROCK DITCH CHECKS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE. IF THE SLOPE IS 4% OR LESS.
 - THE AREA BENEATH THE ROCK DITCH CHECKS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THE CHECK DAM REMOVAL.

5 ROCK CHECKDAM

Slope	Maximum Slope Length (ft) Above Fence	
	Standard (18" High) Silt Fence	Reinforced (30" High) Silt Fence
2 (or less)	150	250
5	100	250
10	50	150
15	35	100
20	25	70
25	20	55
30	15	45
35	15	40
40	15	35
45	10	30
50	10	25

- NOTES:**
1. THE SLOPE LENGTH SHOWN IS THE DISTANCE FROM THE FENCE TO THE DRAINAGE DIVIDE OR THE NEAREST UPSLOPE CHANNEL.
 2. SLOPE LENGTH CANNOT BE ADDRESSED BY USE OF MULTIPLE ROWS OF SILT FENCE.

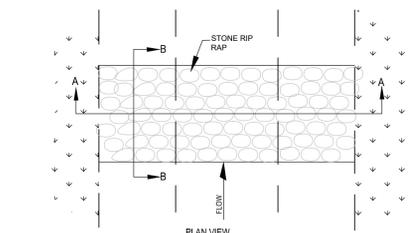


SILT FENCE NOTES

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. HERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT). WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

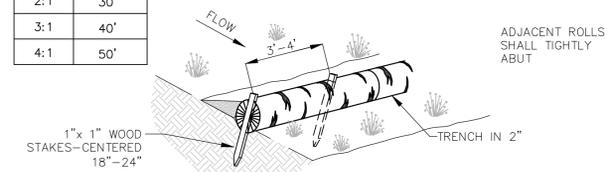
4 SILT FENCE

8 SOIL ROUGHENING



- NOTES:**
1. ONCE THE SLOPE HAS BEEN SHAPED TO FINAL GRADE, A FINAL PASS WITH A TRACKED VEHICLE SHALL BE MADE PERPENDICULAR TO THE GRADE (UP AND DOWN THE SLOPE) AS SHOWN.

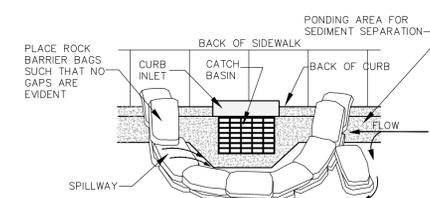
WATTLE SPACING	
SLOPE	MAXIMUM SPACING
1:1	20'
2:1	30'
3:1	40'
4:1	50'



INSTALLATION NOTES

1. WATTLES SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
2. NOT FOR USE IN CONCENTRATED FLOW AREAS.
3. THE WATTLES SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF TWO (2) INCHES.
4. WATTLES SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
5. ON SLOPES, WATTLES SHOULD BE INSTALLED ON CONTOUR WITH A SLIGHT UPWARD CURVE AT THE END OF THE ROW IN ORDER TO CREATE PONDING.
6. RUNNING LENGTHS OF WATTLES SHOULD BE ABUTTED FIRMLY TO ENSURE NO LEAKAGE AT THE ABUTMENTS.
7. WHEN INSTALLING RUNNING LENGTHS OF WATTLES, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST, DO NOT OVERLAP THE ENDS. STAKE THE WATTLES AT EACH END AND FOUR FOOT ON CENTER.
8. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE. LEAVING 2 - 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE. WHEN INSTALLING WATTLES ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE.
9. DRIVE THE FIRST END STAKE OF THE SECOND WATTLE AT AN ANGLE TOWARD THE FIRST WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER.
10. STAKING: THE CITY RECOMMENDS USING WOOD STAKES TO SECURE THE WATTLES. 1/2" TO 5/8" REBAR IS ALSO ACCEPTABLE WITH A SAFETY CAP. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE.
11. THE CONTRACTOR SHALL INSPECT WATTLES EVERY TWO WEEKS AND AFTER ANY SIGNIFICANT STORM EVENT AND MAKE REPAIRS OR REMOVE SEDIMENT ACCUMULATED BEHIND WATTLE AS NECESSARY.
12. SEDIMENT ACCUMULATED BEHIND WATTLE SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DIAMETER OF THE WATTLE.
13. WATTLES SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND IS ACCEPTED BY THE CITY.

6 STRAW WATTLE



- NOTES:**
1. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
 2. LEAVE ONE SANDBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES.
 3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

7 INLET PROTECTION

P:\CAK\CAKT001 Markham Square\4 Drawings\Graphics\AutoCAD\Sheets\DRAINAGE SCHEDULE.dwg | SFTZGERALD | PREVIOUS PAPER SIZE (24.00 X 36.00 INCHES) | 1/11/2021

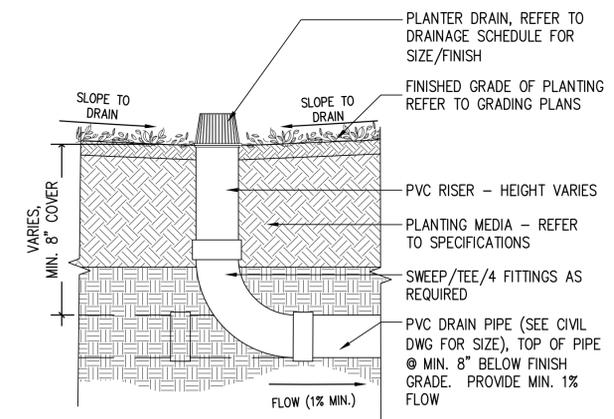
DRAINAGE SCHEDULE							
KEY	DESCRIPTION	MATERIAL	SIZE	FINISH	COLOR	REMARKS	SYMBOL
D1	AREA DRAIN IN PLANTING	HDPE	6" DIA	-	BLACK	NDS 6" ATRIUM HDPE DRAIN GRATE. PART NUMBER 90. SUPPLIED BY NDS 1.800.726.1994	
D2	INLET (RAIN GARDEN)	-	REFER TO CIVIL	PER MANUFACTURER	PER MANUFACTURER	REFER TO CIVIL DETAILS (01/C5.0.2)	
D3	SUB-SURFACE PERFORATED DRAIN PIPE	HDPE OR PVC	4"	PER MANUFACTURER	PER MANUFACTURER	ADS SINGLE WALL CORRUGATED HDPE OR SOLID PVC (SCH.40) DRAIN LINE WITH SLOT (HDPE) OR HOLES (PVC). 4 ROWS. WRAPPED IN FILTER SOCK.	

GENERAL FINISH GRADING NOTES:

- ANY EXISTING AND/ OR ON-SITE CONDITIONS WHICH VARY FROM THOSE SHOWN ON DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
- ALL GRADING SHALL PROVIDE FOR NATURAL RUNOFF OF WATER WITHOUT LOW SPOTS OR POCKETS. FLOW LINES SHALL BE ACCURATELY SET AND SHALL NOT BE LESS THAN 1% GRADIENT UNLESS OTHERWISE NOTED. CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE DRAINAGE IN ALL AREAS. NOT LESS THAN 1% ON PAVED SURFACES. NOT LESS THAN 3% IN SUBSURFACE DRAIN PIPES. NOT LESS THAN 2% ON VEGETATED SURFACES.
- REFER TO THE GENERAL CONDITIONS, SOILS ENGINEER REPORT, AND THE TECHNICAL SPECIFICATIONS FOR THE PLACEMENT, COMPACTION, GRADING AND TESTING OF ALL FILL MATERIAL.
- REFER TO CIVIL DOCUMENTS FOR ALL SITE EROSION CONTROL REQUIREMENTS AND MEASURES AND ALL SWPPP INFORMATION. REFER TO CIVIL DOCUMENTS FOR ALL LANDSCAPE AND SURFACE DRAINAGE PIPING LAYOUT, CONNECTIONS AND SIZING REQUIREMENTS.
- DEBRIS OR EXCESS SOIL CREATED BY GRADING OR EXCAVATION OPERATIONS SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF SITE.
- CONTRACTOR SHALL TAKE CARE IN MINIMIZING THE DISTURBANCE TO EXISTING TREES AND ROOT SYSTEMS. ALL EXCAVATION GRADING UNDER THE DRIPLINES OF EXISTING TREES SHALL BE COMPLETED USING HAND TOOLS ONLY. NO EQUIPMENT OR VEHICLES SHALL BE ALLOWED TO WORK OR DRIVE UNDER THE DRIP LINE OF TREES UNLESS ROUTING FOLLOWS PROPOSED HARDSCAPE SCOPE. HAND EXCAVATE AND HAND COMPACT AREAS UNDER DRIPLINES OF EXISTING TREES. ALL EXCAVATION WITHIN THE DRIPLINES OF EXISTING TREES SHALL BE RADIAL FROM THE TRUNK AND COMPLETED UNDER PRIOR REVIEW OF SAID OPERATIONS WITH LANDSCAPE ARCHITECT.
- FOR EXISTING UNDERGROUND UTILITIES REFER TO CIVIL ENGINEER'S PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD OF THE NEW AMENITIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROTECT EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.
- EXISTING UTILITY STRUCTURES AND ACCESS LIDS ARE TO BE ADJUSTED TO MATCH PROPOSED ADJOINING FINISHED GRADES (UNLESS OTHERWISE NOTED).
- CONTRACTOR SHALL REQUEST A REVIEW FOR INSPECTION BY LANDSCAPE ARCHITECT OF FINAL IN PLACE GRADING AND DRAINAGE A MINIMUM OF (72) BUSINESS HOURS IN ADVANCE OF PERFORMING ANY WORK UNLESS OTHERWISE NOTED ON THIS SHEET. FINAL GRADING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD AND PRIOR TO SURFACE CONSTRUCTION AND PLANTING.
- REFER TO PLANTING NOTES/ DETAILS FOR GRADING REQUIREMENTS FOR AREAS ADJACENT TO PAVEMENTS.

GRADING LEGEND

- + 100.00 EXISTING SPOT GRADE ELEVATION
- 100.00 PROPOSED FINISH SURFACE ELEVATION
- TC 100.00 PROPOSED TOP OF CURB ELEVATION
- BC 100.00 PROPOSED BOTTOM OF CURB ELEVATION
- TW 100.00 PROPOSED TOP OF WALL ELEVATION
- BW 100.00 PROPOSED BOTTOM OF WALL ELEVATION
- LP 100.00 PROPOSED LOW POINT ELEVATION
- HP 100.00 PROPOSED HIGH POINT ELEVATION
- TPC 100.00 PROPOSED TOP OF POOL COPING
- (600)--- EXISTING CONTOUR
- 600 PROPOSED CONTOUR
- ← (2% max.) DIRECTION & PERCENT SLOPE (NOTED MAX. OR MIN.)
- ← 2:1 (max.) DIRECTION & SLOPE RATIO (RISE:RUN) (NOTED MAX. OR MIN.)
- LIMIT OF WORK LINE
- SHEET AND SET MATCHLINES
- ⊕ PROPOSED WATER LEVEL



01 AREA DRAIN IN PLANTING
1" = 1'-0"

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM, SPENCER STREET CONWAY, ARKANSAS 72032

Client

CITY OF CONWAY ARKANSAS
1201 OAK STREET
CONWAY, ARKANSAS 72032

Landscape Architect

swa

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Consultant

CIVIL ENGINEERING:
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31 E. CENTER ST., SUITE 207
FAYETTEVILLE, ARKANSAS 72701
PHONE: 479.935.0644
www.grsmithcivilengineering.com

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01/11/2021

Revisions

- 1
- 2
- 3
- 4
- 5

Date

11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAKT001

Drawing Title

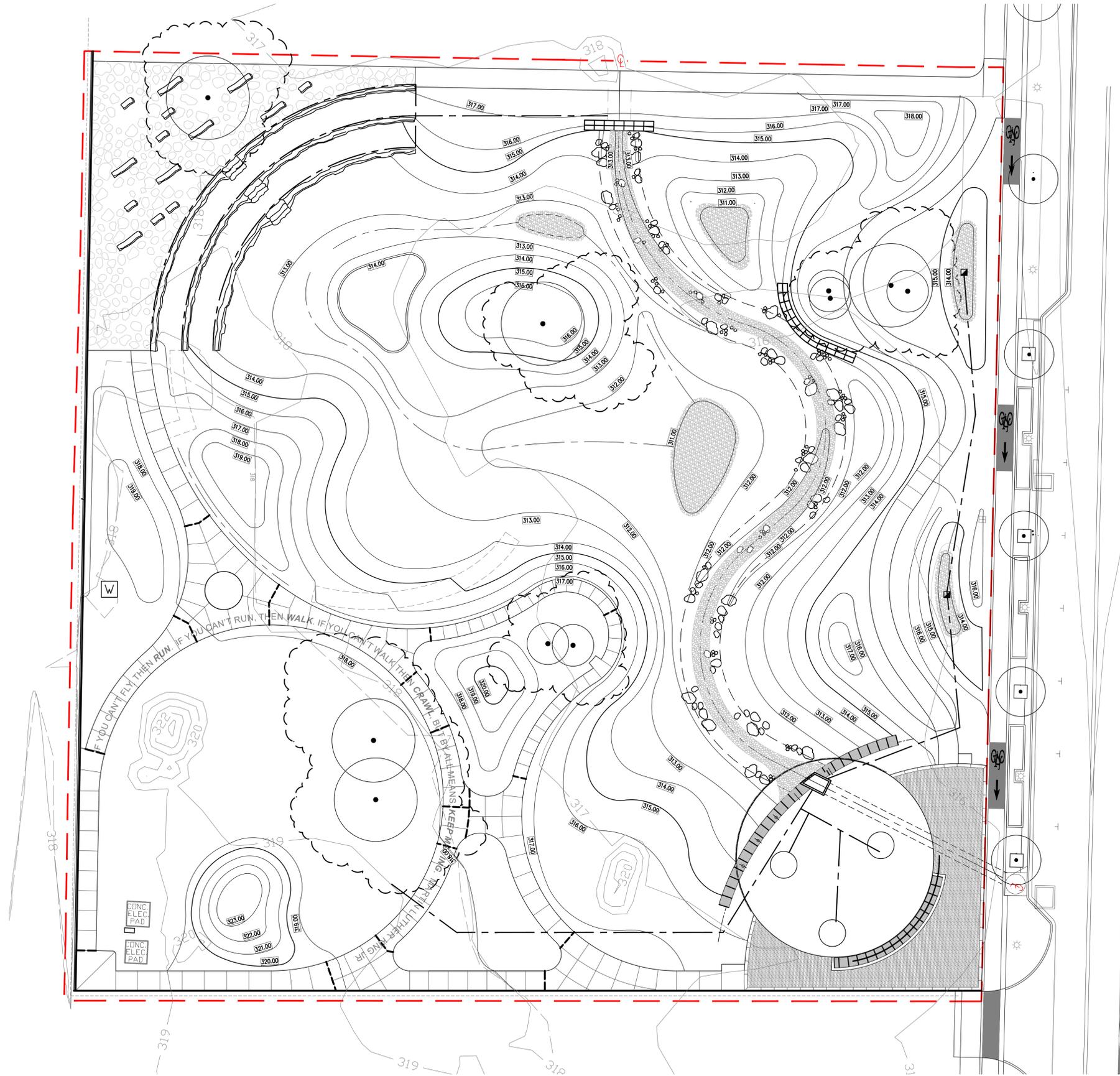
LANDSCAPE DRAINAGE SCHEDULE AND DETAILS

Drawing Number

FOR BID

L1.0.1

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North



Drawing Title

OVERALL FINE GRADING AND
DRAINAGE PLAN

Drawing Number

FOR BID

L1.1.0

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Job Number

CAKTO01

Scale

1" = 10'

North



Drawing Title

FINE GRADING AND DRAINAGE
PLAN

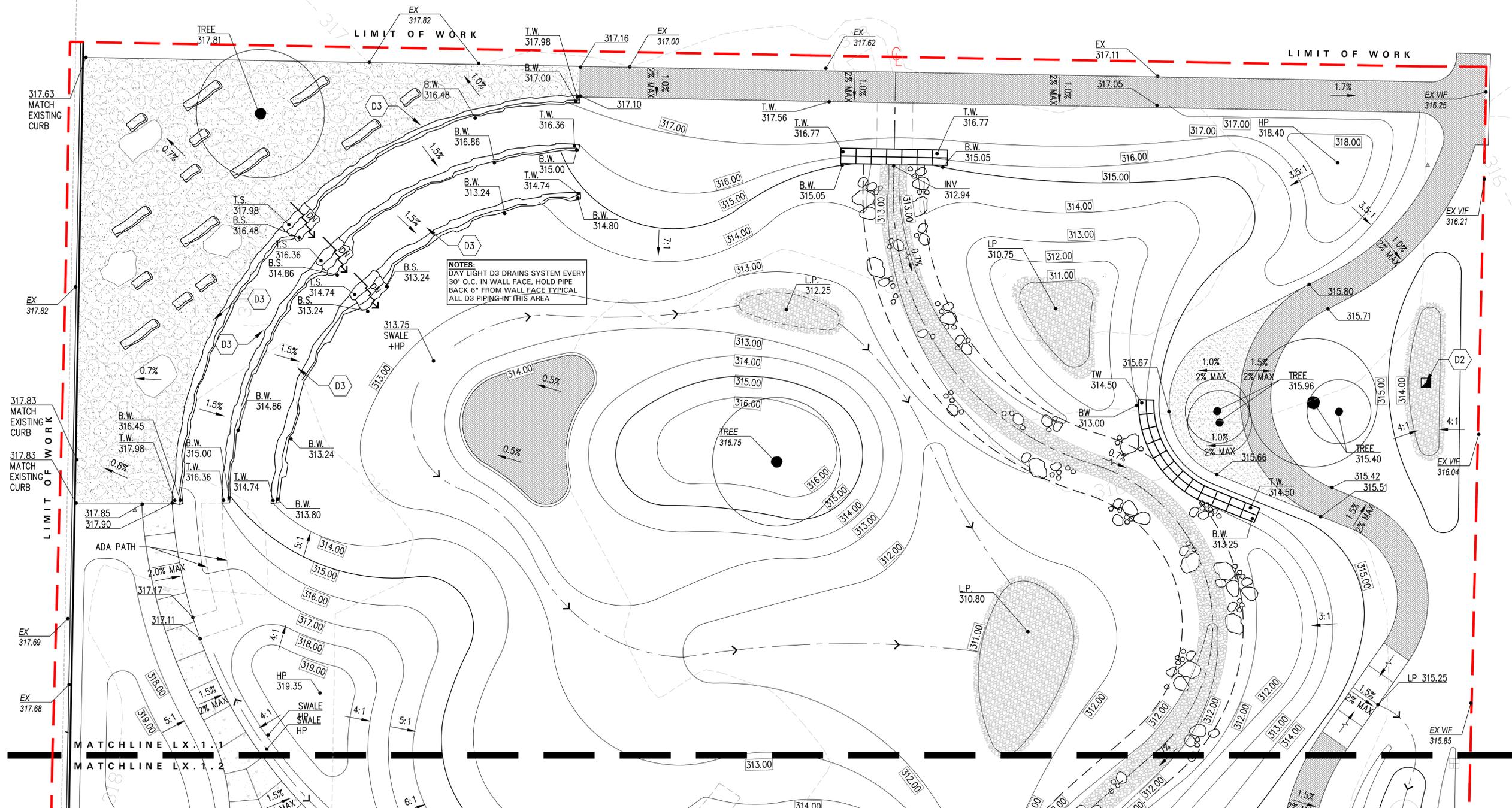
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NOTES:
DAY LIGHT D3 DRAINS SYSTEM EVERY
30' O.C. IN WALL FACE, HOLD PIPE
BACK 6" FROM WALL FACE TYPICAL
ALL D3 PIPING IN THIS AREA

GRADING LEGEND

- + 100.00 EXISTING SPOT GRADE ELEVATION
- 100.00 PROPOSED FINISH SURFACE ELEVATION
- TC 100.00 PROPOSED TOP OF CURB ELEVATION
- BC 100.00 PROPOSED BOTTOM OF CURB ELEVATION
- TW 100.00 PROPOSED TOP OF WALL ELEVATION
- BW 100.00 PROPOSED BOTTOM OF WALL ELEVATION
- LP 100.00 PROPOSED LOW POINT ELEVATION
- HP 100.00 PROPOSED HIGH POINT ELEVATION
- TPC 100.00 PROPOSED TOP OF POOL COPING
- (600)--- EXISTING CONTOUR
- 600 PROPOSED CONTOUR
- (2% max.) DIRECTION & PERCENT SLOPE (NOTED MAX. OR MIN.)
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- LIMIT OF WORK LINE
- SHEET AND SET MATCHLINES
- ⊕ PROPOSED WATER LEVEL

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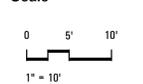
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Job Number

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Scale



North



Drawing Title

FINE GRADING AND DRAINAGE
PLAN

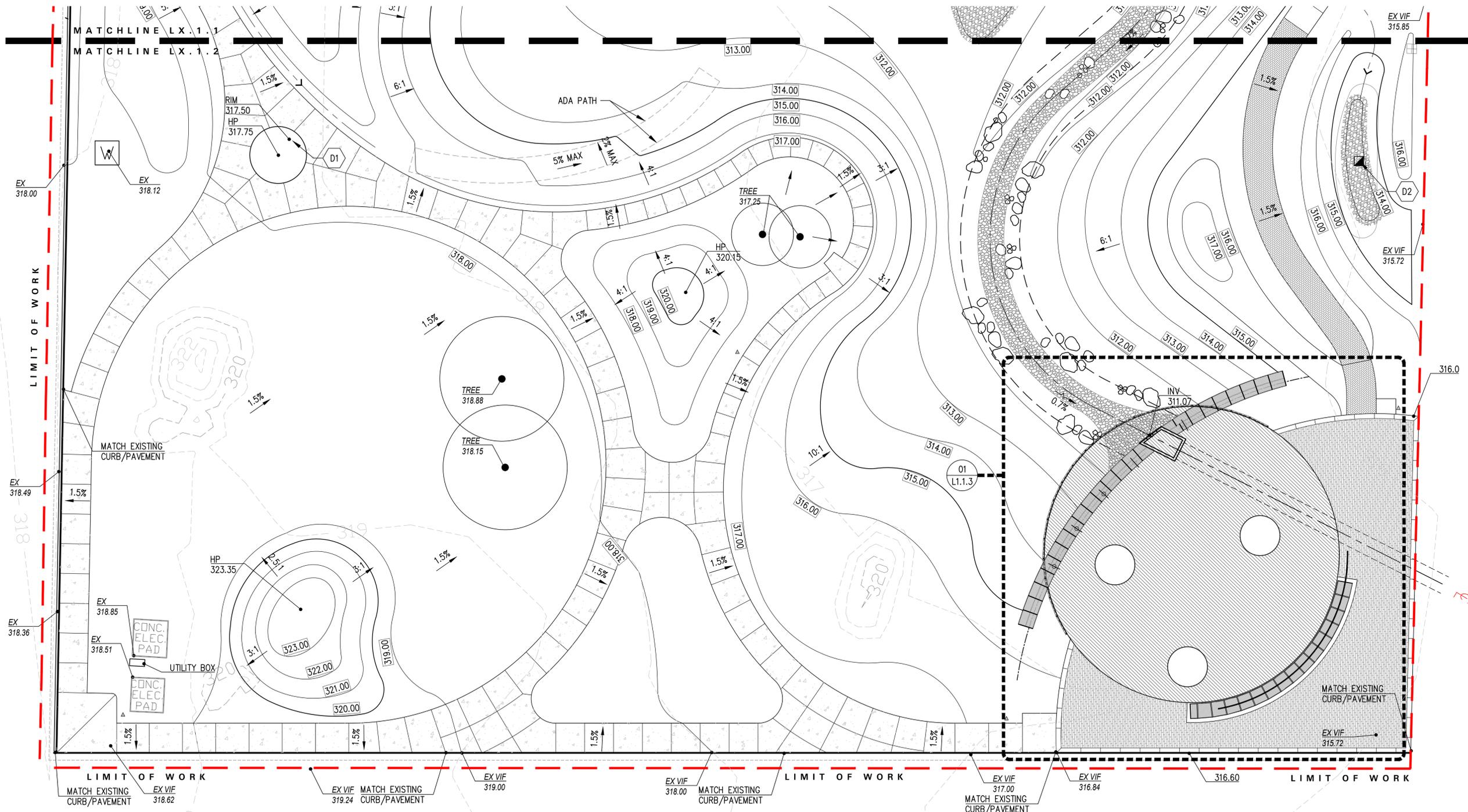
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GRADING LEGEND	
● 100.00	EXISTING SPOT GRADE ELEVATION
○ 100.00	PROPOSED FINISH SURFACE ELEVATION
● TC 100.00	PROPOSED TOP OF CURB ELEVATION
● BC 100.00	PROPOSED BOTTOM OF CURB ELEVATION
● TW 100.00	PROPOSED TOP OF WALL ELEVATION
● BW 100.00	PROPOSED BOTTOM OF WALL ELEVATION
● LP 100.00	PROPOSED LOW POINT ELEVATION
● HP 100.00	PROPOSED HIGH POINT ELEVATION
● TPC 100.00	PROPOSED TOP OF POOL COPING
---(600)---	EXISTING CONTOUR
600	PROPOSED CONTOUR
← (2% max.)	DIRECTION & PERCENT SLOPE (NOTED MAX. OR MIN.)
← (max.)	DIRECTION & SLOPE RATIO (RISE:RUN) (NOTED MAX. OR MIN.)
-----	LIMIT OF WORK LINE
--- ---	SHEET AND SET MATCHLINES
⊕	PROPOSED WATER LEVEL

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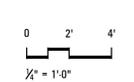
Phase

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CAKT001

Scale



North



Drawing Title

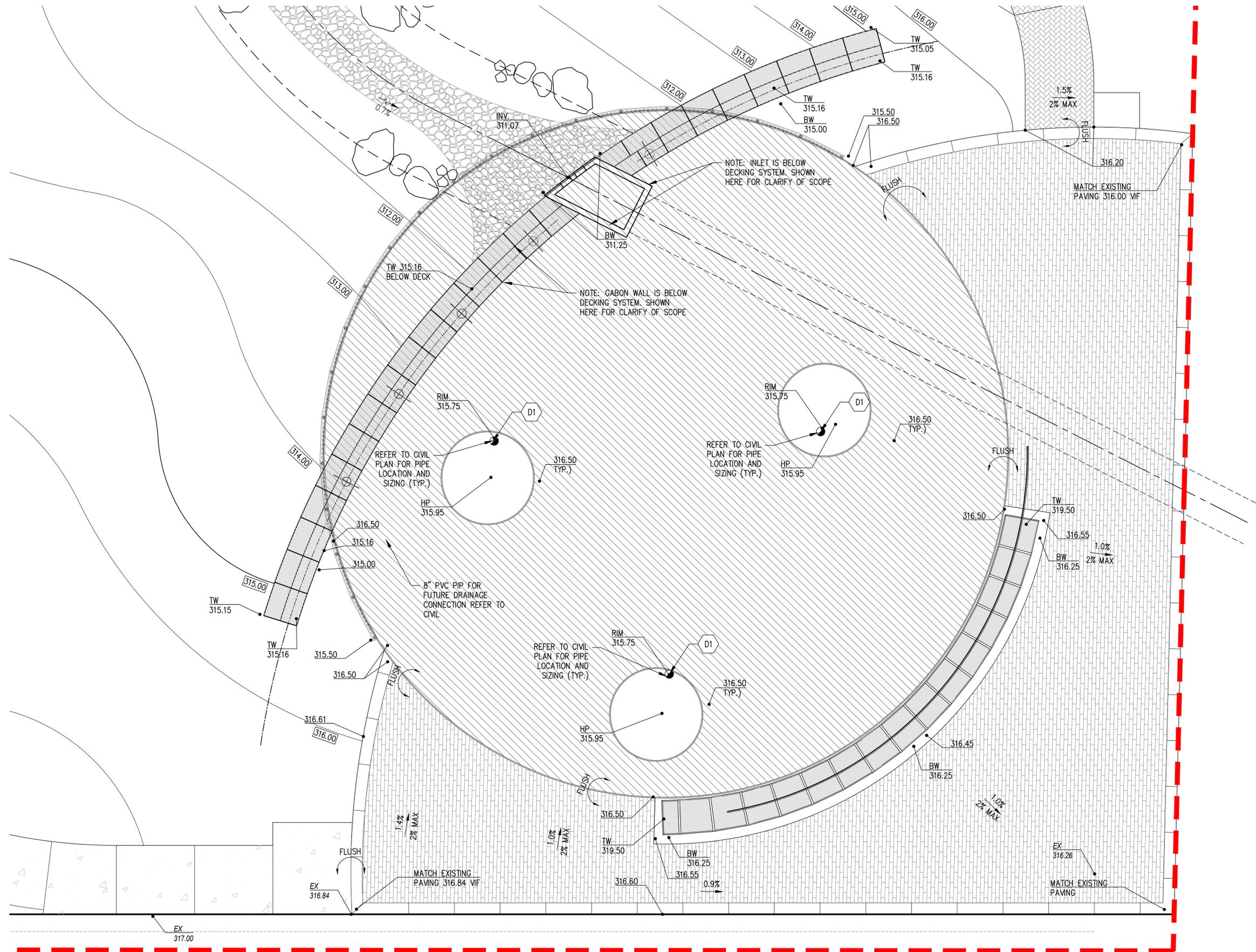
GRADING AND DRAINAGE
ENLARGEMENT PLAN

Drawing Number

FOR BID

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LIMIT OF WORK

1 PLAZA ENLARGEMENT
1/4" = 1'-0"

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LIGHTING SCHEDULE								
KEY	DESCRIPTION	MODEL	MATERIAL	VOLTAGE	INSTALLATION	BALLAST/DRIVER	REMARKS	SYMBOL
L1	ACORN POLE LIGHT	N/A	-	220/240	DRILLED CONCRETE FOOTING	-	ACORN POLE TO MATCH CITY STANDARDS	
L2	TREE UPLIGHT	N/A	14W 3000K LED INTEGRAL	120-277/24V	EARTH SPIKE	REMOTE POWER SUPPLY WITH PHASE DIMMING	CONTACT: ALA PHONE: 214-658-9000 SUPPLIER: ALA BRAND: B-K LIGHTING	
SCHEDULE TITLE								
KEY	DESCRIPTION	SUPPLIER	MATERIAL	SIZE	FINISH	COLOR	REMARKS	DETAIL
A1	ARKANSAS HACKETT STONE BENCHES	N/A	ARKANSAS HACKETT STONE BEAMS	MINIMUM 18"HT x 18"-24"W x 4"-8"L	NATURAL	NATIVE BROWN AND RUST ORANGE	NATURAL ARKANSAS HACKETT BEAMS, MIN 18"HT x 18"-30"W x 4"-8"L, MORTAR COLOR TO MATCH BLOCK, REFER TO CIVIL FOR SUB-BASE DESIGN. SUPPLIER: SLIM'S STONE WWW.SLIMSSTONE.COM OR APPROVED EQUAL	
A2	TRASH BIN	LAKESIDE LITTER - GRASS SIDE OPENING	STEEL	21" DIA x 36" HT	POWDERCOAT	GRASS	30" GAL WITH LINER MANUFACTURER: LANDSCAPE FORMS WWW.LANDSCAPEFORMS.COM CONTACT: LARA MOFFAT, PH: 972-740-3373	
A3	BIKE RACK	LP-0300/FW BR-3 WITH LP=SMBC	METAL	34" HT x 30" WIDE	HOT DIP GALVANIZED	PER MANUFACTURER	34" SINGLE-LOOP BIKE RACK, SURFACE-MOUNTED, WITH BASE COVERS, INSTALL PER MANUFACTURER INSTRUCTIONS SUPPLIER: TOURNESOL	
A4	CHAIR	CHIPMAN ARMLESS CHAIR	ALUMINUM	22"x20"x33"	POWDERCOAT	OCEAN	LANDSCAPE FORMS CHIPMAN CHAIR - FREESTANDING, DINING WWW.LANDSCAPEFORMS.COM CONTACT: LARA MOFFETT, PH: 972-740-3373	
A5	TABLE	CHIPMAN ROUND DINING TABLE	ALUMINUM/STEEL	31' x 29.25"	POWDERCOAT	OCEAN	LANDSCAPE FORMS CHIPMAN TABLE WITH NO UMBRELLA WWW.LANDSCAPEFORMS.COM CONTACT: LARA MOFFETT, PH: 972-740-3373	
A6	DOG WASTE BAG DISPENSER	MINI-STATION #1003	ALUMINUM	REF. MANUFACTURER	REF. MANUFACTURER	WHITE	SYSTEM INCLUDES, POST, DISPENSER, SIGN AND HARDWARE, 400 SINGLE BAGS INSTALL PER MANUFACTURER. WWW.MUTMITT.COM	

PAVING SCHEDULE							
KEY	DESCRIPTION	MODEL	MATERIAL	SIZE	FINISH	COLOR	REMARKS
P1	STANDARD CONCRETE SIDEWALK	3000 PSI MIN	CONCRETE	PER PLAN/DETAILS	MEDIUM BROOM FINISH	NATURAL GRAY	STANDARD CONCRETE PAVEMENT THICKNESS PER DETAILS, BROOM FINISHED DIRECTION PER PLANS, STANDARD #57 AGGREGATE SIZING, SINGLE COLOR. MOCK-UP FOR APPROVAL. EXPANSION JOINT SEALANT COLOR TO MATCH CONCRETE COLOR
P2	RECYCLED CONCRETE AND DECOMPOSED GRANITE TERRACE	N/A	RECYCLED CONCRETE	MIN 3' IN ANY DIRECTION MAX 5' IN ANY DIRECTION	EXISTING (NO HEAVY SCARING OR ABRASIONS)	SINGLE COLOR	RECYCLED CONCRETE PAVING LARGE PANELS SAWCUT EDGES RANDOM SHAPES (MORE TRAPEZOIDAL THAN SQUARE). MATERIAL RECYCLED FROM SITE DEMOLITION SCOPE
	RECYCLED CONCRETE AND DECOMPOSED GRANITE TERRACE	N/A	DECOMPOSED GRANITE	3/8"-FINES	-	NATURAL TAN	2" THICK LAYER WITH GEOTEXTILE FABRIC BELOW, ATOP ROADBASE INFILL COMPACTED IN 1" LIFTS, REFER TO CIVIL FOR PREPARATIONS OF SUB-BASE PROVIDE STABILIZED ADD MIXTURE PER SPECIFICATION
P3	TREX DECKING	TRANSCEND 1" GROOVED EDGE	COMPOSITE DECKING	1"x6" WIDE 12' LENGTHS	TRANSCEND	SPICED RUM (PREMIUM TROPICALS)	WOOD TEXTURE WITH BLACK HIDDEN FASTENERS, STAGGERED RANDOM JOINTS, MATERIAL TO BE ALLOWED TO ACCLIMATE NATURALIZED BEFORE INSTALLED MIN 36" SEPARATION FROM NEXT BOARD OVER BUTT JOINT
	WOOD DECKING	N/A	PRESSURE TREATED DR OR SUP P	PER DETAIL	SMOOTH	TOP EDGES PAINTED BLACK	SMOOTH TEXTURE, TOP OF JOINT TO BE PAINTED BLACK, WOOD TO BE ALLOWED TO ACCLIMATE BEFORE INSTALLATION.
P4	PERMEABLE PAVERS	NO.312	PERMEABLE CONCRETE PAVER	ECO-CITYLOCK 4" x 16" 100MM	SMOOTH (RUNNING BOND PATTERN)	TAN	PRECAST CONCRETE UNIT PAVERS SAND SET ON COMPACTED BASE. PER DETAILS PROVIDE 1" SAND SETTING/LEVELING BED. PAVES COLOR, FINISH TO BE APPROVED THROUGH MOCK-UP SUBMISSION CONCRETE UNIT PAVER BY KEYSTONE HARDSCAPE
P5	PERMEABLE PAVERS	NO.314	PERMEABLE CONCRETE PAVERS	ECO-CITYLOCK 4" x 8" 60MM	SMOOTH (RUNNING BOND PATTERN)	TAN	PRECAST CONCRETE UNIT PAVERS SAND SET ON COMPACTED BASE. PER DETAILS PROVIDE 1" SAND SETTING/LEVELING BED. PAVES COLOR, FINISH TO BE APPROVED THROUGH MOCK-UP SUBMISSION CONCRETE UNIT PAVERS BY KEYSTONE HARDSCAPE
P6	SAND BLASTED LETTER WITH CONCRETE STAIN	N/A	LITHACHROME PAINT	PER PLAN	SMOOTH 1/8" DEPTH	BLACK	MEDIA BLASTED LETTERING IN CONCRETE PAVEMENT, PROVIDE TEMPLATES, APPROVED VIA SHOP DRAWINGS FOR MEDIA BLASTING/ REFER TO PLANS FOR LAYOUT, SIZE, AND FONT. PAINT LETTER INTERIOR WITH APPROVED U/V STABLE, MASONRY PAINT LITHACHROME OR APPROVED EQUAL;
P7	CONCRETE BAND	N/A	CONCRETE	PER PLAN/DETAILS	MEDIUM BROOM FINISH	NATURAL GRAY	STANDARD CONCRETE PAVEMENT THICKNESS PER DETAILS, BROOM FINISHED DIRECTION PER PLANS, STANDARD #57 AGGREGATE SIZING, SINGLE COLOR MOCK-UP FOR APPROVAL. EXPANSION JOINT SEALANT COLOR TO MATCH CONCRETE COLOR
P8	DECOMPOSED GRANITE	N/A	DECOMPOSED GRANITE	3/8"-FINES	-	NATURAL TAN	2" THICK LAYER WITH GEOTEXTILE FABRIC BELOW, ATOP ROADBASE INFILL COMPACTED IN 1" LIFTS, REFER TO CIVIL FOR PREPARATIONS OF SUB-BASE PROVIDE STABILIZED ADD MIXTURE PER SPECIFICATION

STONE SCHEDULE							
KEY	DESCRIPTION	SUPPLIER	MATERIAL	SIZE	FINISH	COLOR	REMARKS
S1	NATIVE STONE BOULDERS	N/A	ARKANSAS FIELD STONE	MIN 3'HT x 3'W x 3'L MAX 6'HT x 6'W x 6'L	NATURAL	NATURAL	NATURAL ARKANSAS FIELD STONE BOULDERS, MINIMUM 3'HT x 3'W x 3'L COVERED WITH LICHEN AND MOSS. BURIED 1/3 THE HEIGHT DEEP. CARE IN HANDLING TO NOT DISTURB WEATHERED SURFACE
S2	GRAVEL	N/A	RIVER GRAVEL	2"-4" DIA	NATURAL	NATURAL BROWNS	PRE WASHED, LOCAL RIVER ROCK

WALL SCHEDULE							
KEY	DESCRIPTION	MODEL	MATERIAL	SIZE	FINISH	COLOR	REMARKS
W1	GABION WALL	N/A	4 GAUGE WELDED WIRE MESH 3"x3" GRID - ARKANSAS NATIVE STONE	1.5' HT x 1.5 Wx3' L 9 (UNIT SIZE)	GALFAN COATED		1.5'x1.5'x3'L MODULAR GABION WALL UNITS, WITH DRY STACKED ARKANSAS NATIVE FIELD STONE. WALLS TO BE INSTALLED PER CIVIL DRAWINGS. SUPPLIER GABION SUPPLY WWW.GABIONSUPPLY.COM OR APPROVED EQUAL
	GABION WALL (STONE)	N/A	ARKANSAS NATIVE STONE	EXPOSED STONE FACE SIZE: MINIMUM 2'HTx 8"L	NA	NATIVE BROWN	DRY STACKED ARKANSAS NATIVE FIELDS STONE ON THE FACE. FACE STONE TO BE A MINIMUM OF 2"THICK AND 8" LENGTH.
W2	ARKANSAS HACKETT STONE WALLS	N/A	ARKANSAS HACKETT STONE BEAMS	MINIMUM 18"HT x 18"-30" W x 4"-8" L	NATURAL	NATIVE BROWN AND RUST COLOR NO UNWEATHERED EXPOSED FACES	NATURAL ARKANSAS HACKETT BEAMS, DRYSTACK PER DETAILS, REFER TO CIVIL FOR SUB-BASE DESIGN. SUPPLIER: SLIM'S STONE WWW.SLIMSSTONE.COM OR APPROVED EQUAL

METAL SCHEDULE							
KEY	DESCRIPTION	SUPPLIER	MATERIAL	SIZE	FINISH	COLOR	REMARKS
M1	OVERLOOK GUARD RAIL	-	STEEL	REFER TO DETAILS	POWDERCOATED	BLACK	METAL POST MOUNTED TO FACE OF OVERLOOK, 2"x2" WIRE MESH WITH TUBULAR STEEL TOPRAIL. REFER TO DETAILS
M2	MONUMENT SIGNAGE	N/A	STEEL	PER PLANS AND DETAILS	SMOOTH AND WATERJET	BLACKENED	PLATE STEEL, ROLLED AND WATERJET LETTERING SET ATOP NOTED MOUNTING POST. FIELD ADJUST TO ALIGN PLATES

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11 JANUARY 2021
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ISSUE FOR BID
Job Number
CAK7001

Drawing Title

MATERIAL SCHEDULES

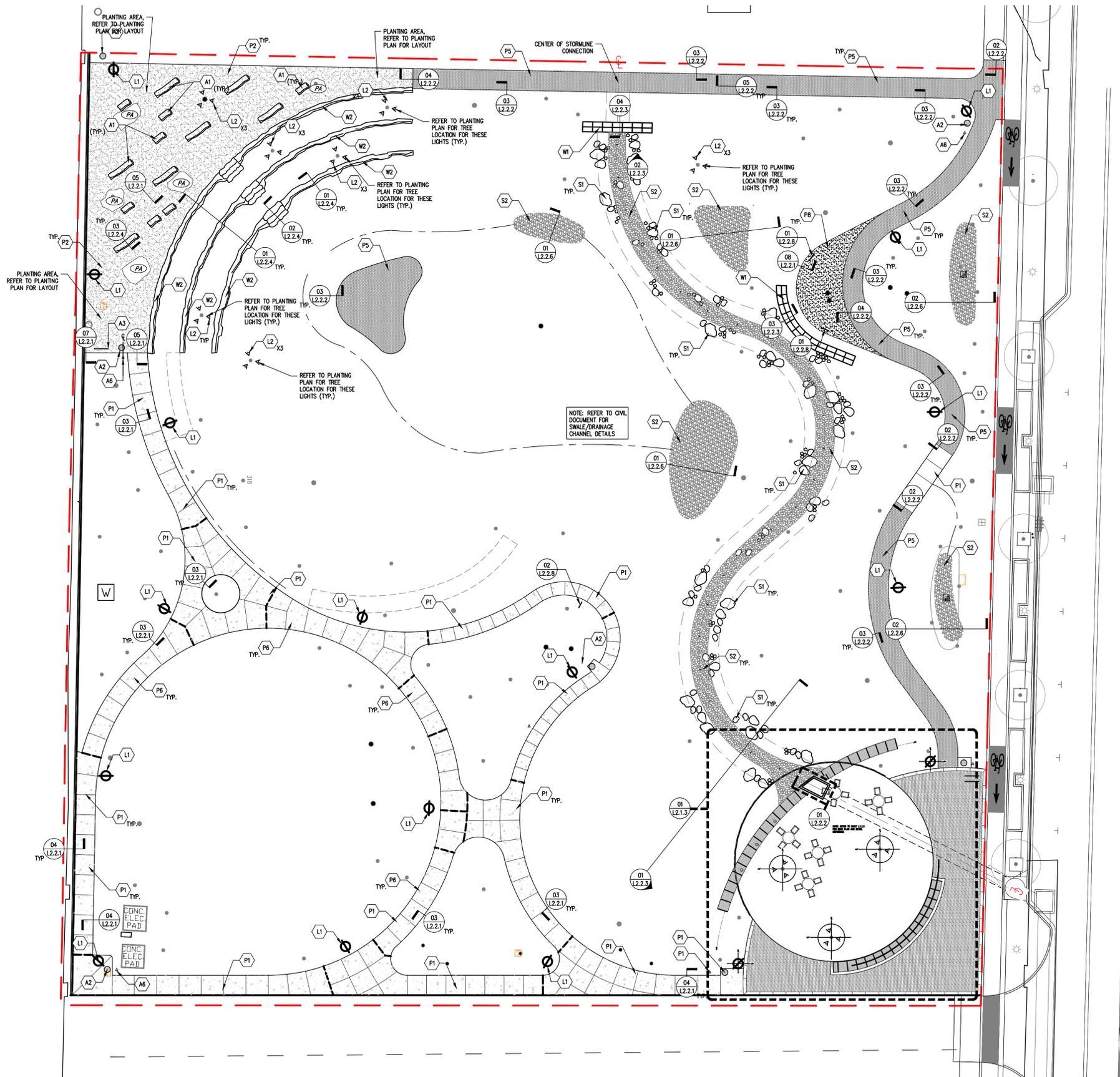
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MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUND BY MARKHAM,
SPENCER STREET
CONWAY, ARKANSAS 72032

Client
CITY OF CONWAY ARKANSAS
1201 OAK STREET
CONWAY, ARKANSAS 72032

Landscape Architect

swa

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Consultant

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www.grsmithcivilengineering.com

Stamp



01/11/2021

Revisions

- 1
- 2
- 3
- 4
- 5

Date

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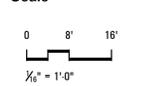
Phase

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Job Number

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North



Drawing Title

OVERALL LAYOUT AND
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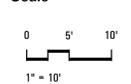
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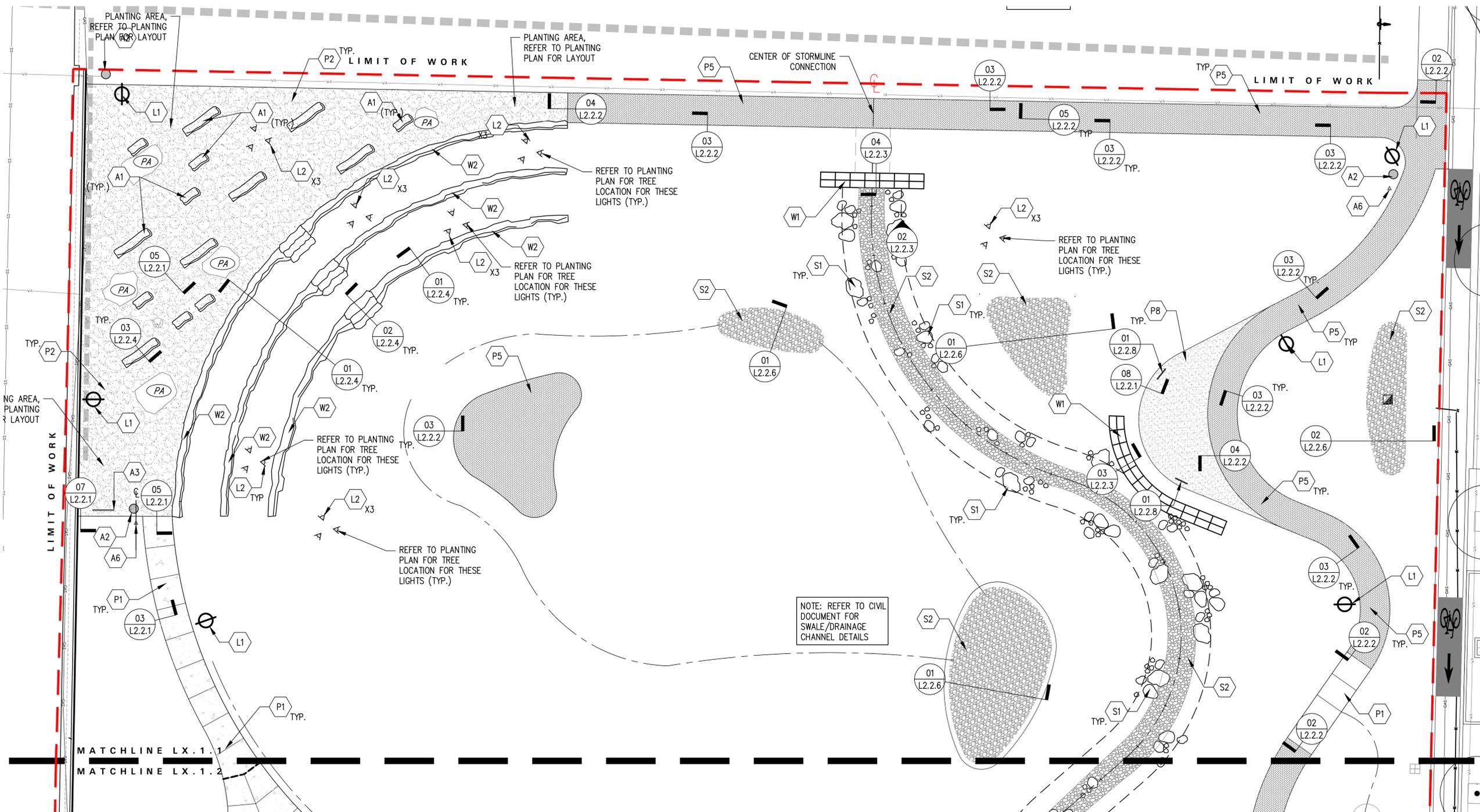
MATERIAL PLAN

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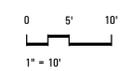
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Drawing Title

LAYOUT PLAN

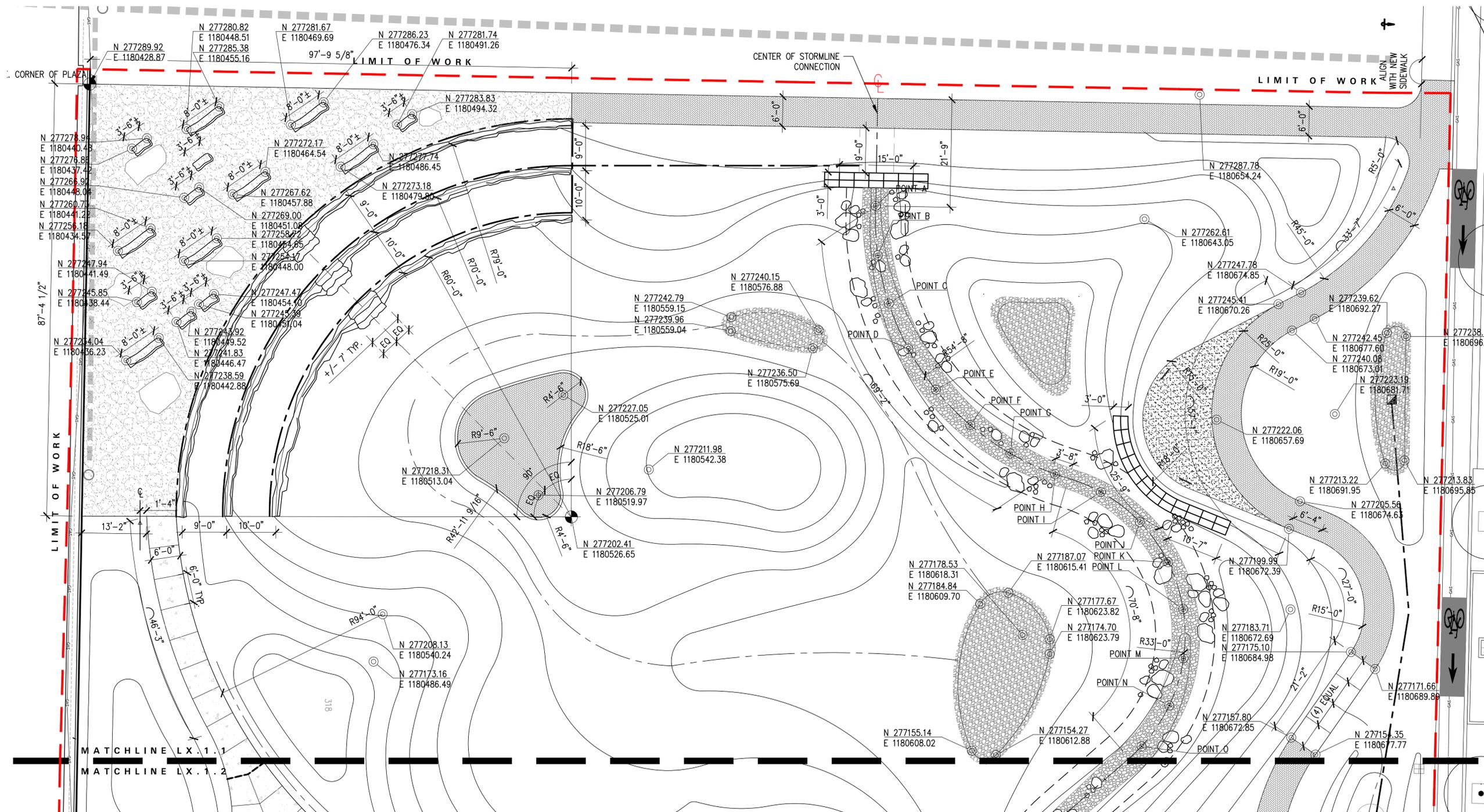
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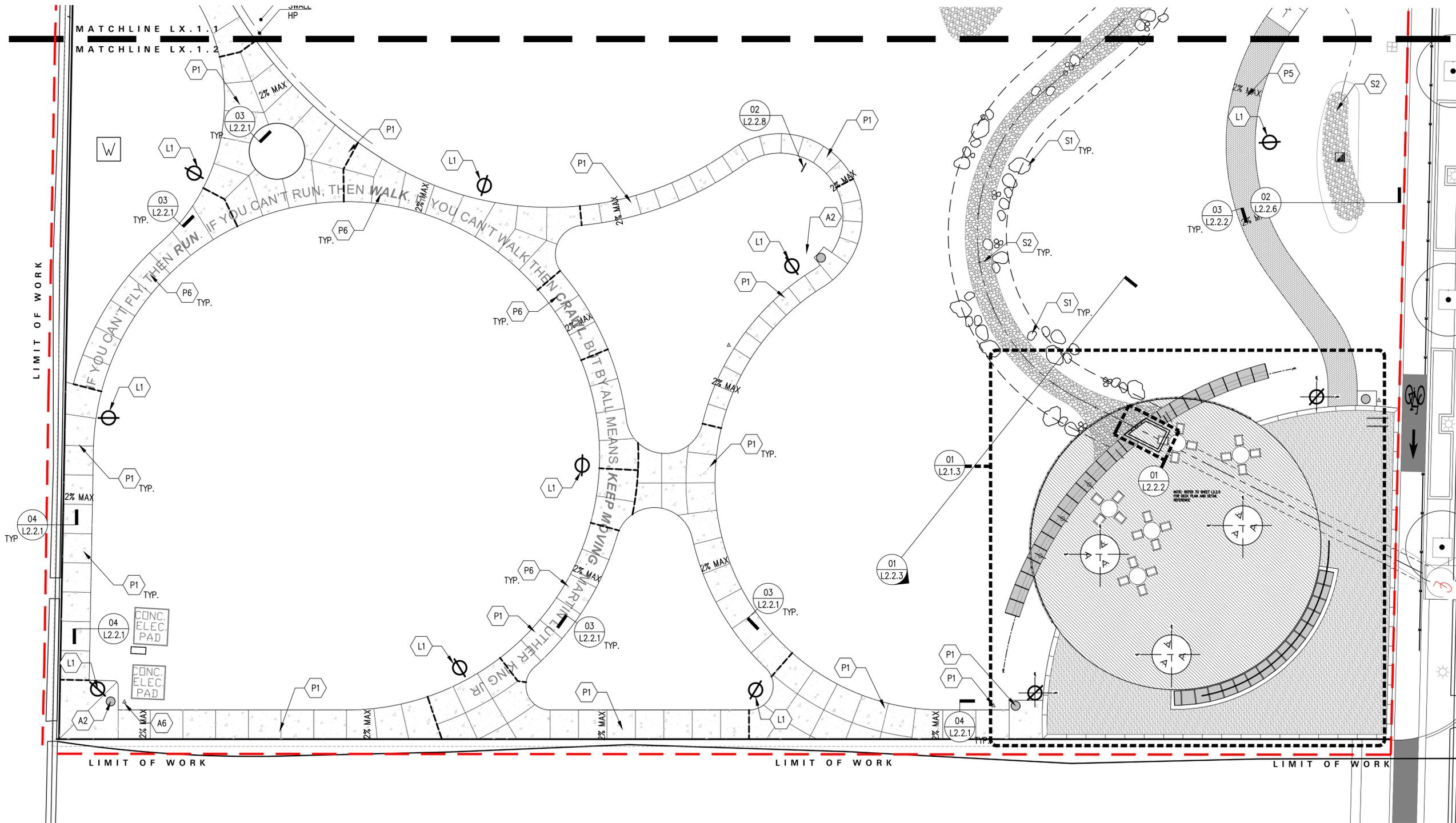
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POINT LAYOUT CHART			
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B	277255.30	1180588.90	
C	277245.57	1180591.14	
D	277236.40	1180595.10	
E	277228.11	1180600.67	
F	277220.98	1180607.66	
G	277215.23	1180615.83	
H	277211.07	1180624.91	
I	277207.45	1180634.21	
J	277201.39	1180642.11	
K	277193.24	1180647.85	
L	277183.76	1180650.89	
M	277173.80	1180650.96	
N	277164.27	1180648.06	
O	277156.04	1180642.45	
P	277149.35	1180635.02	
Q	277142.81	1180627.46	
R	277135.59	1180620.57	
S	277126.86	1180615.76	
T	277117.17	1180613.40	
U	277107.70	1180613.64	
V	277097.64	1180616.46	
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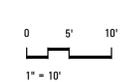
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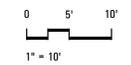
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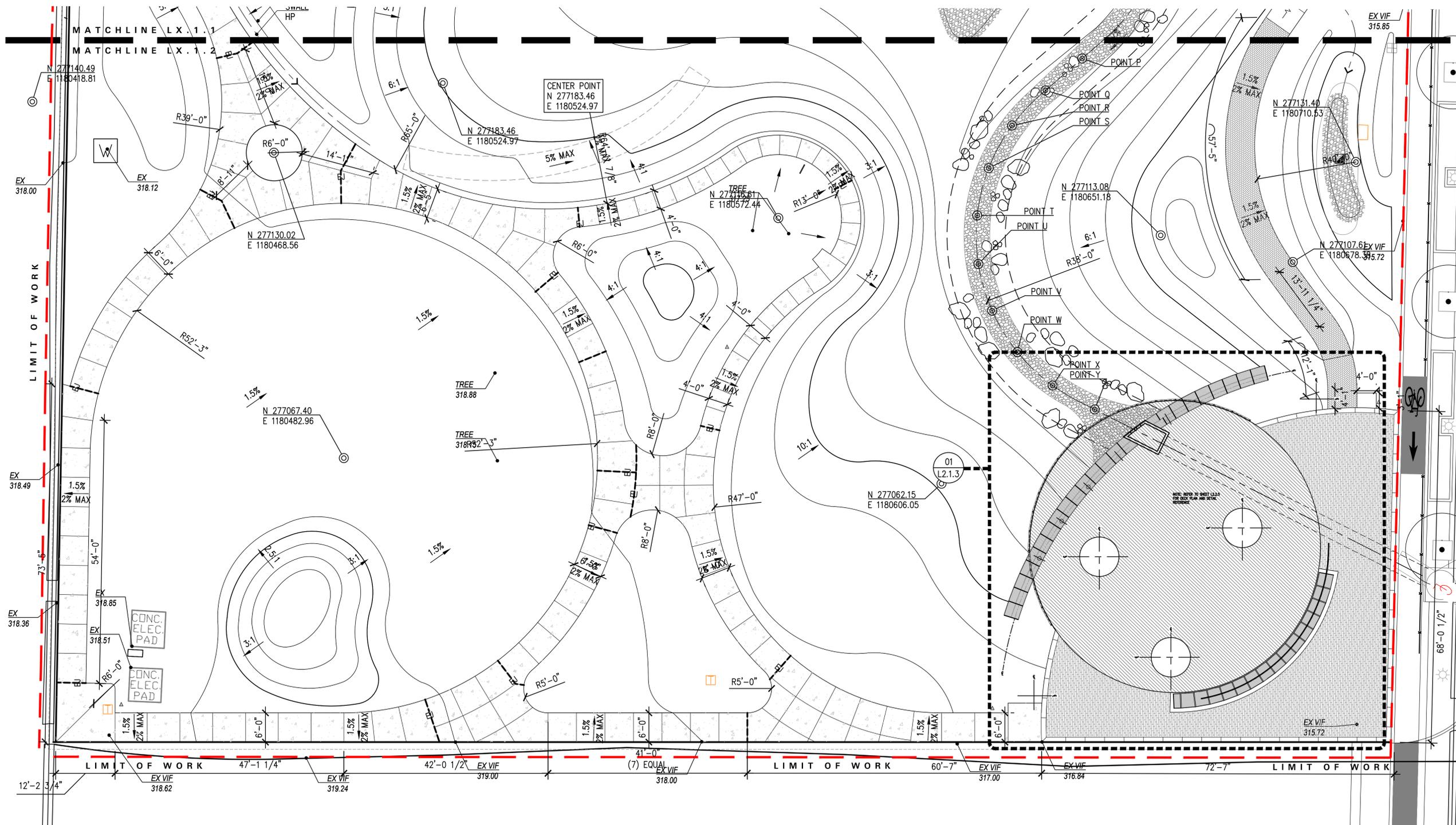
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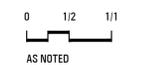
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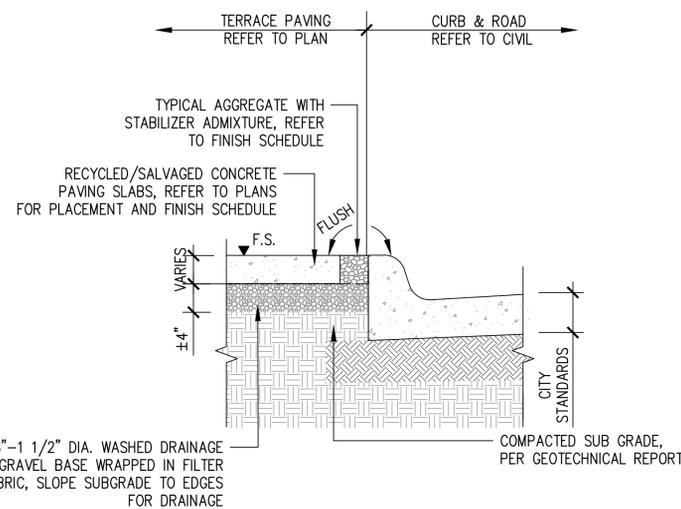
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Drawing Number

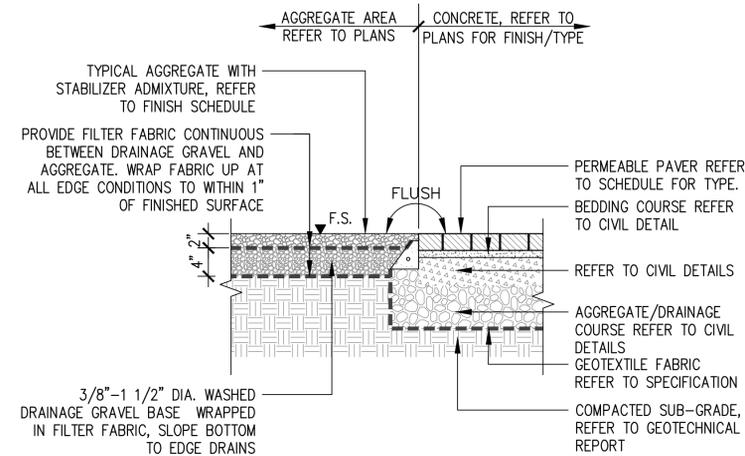
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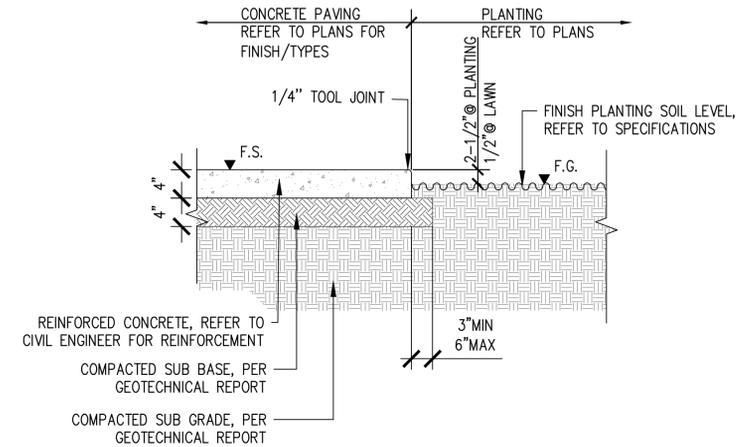
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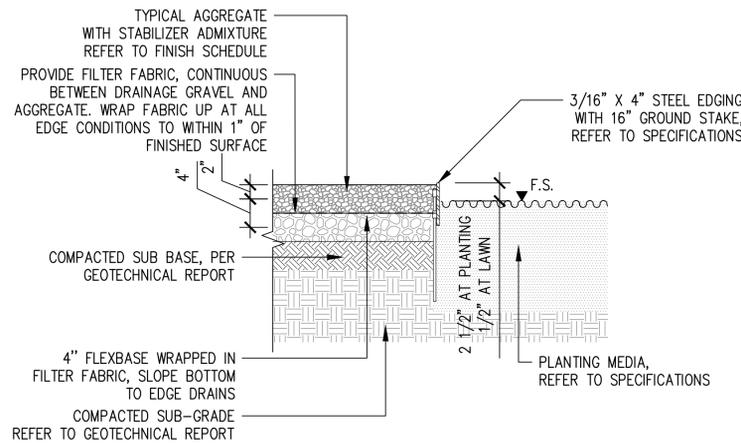
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1" = 1'-0"



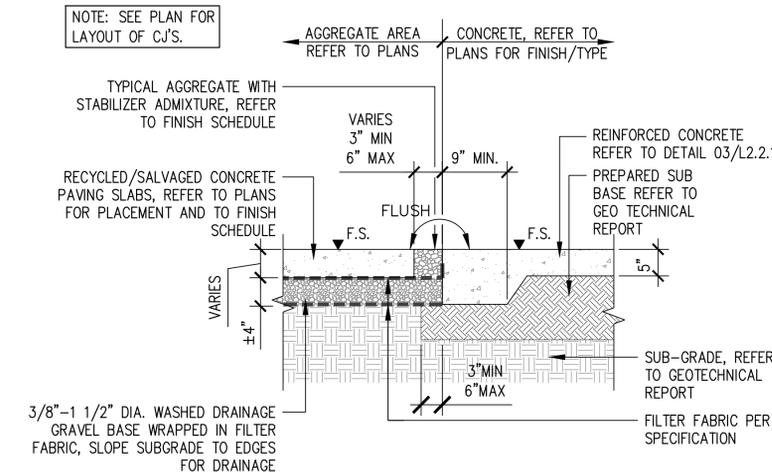
06 TYPICAL CONCRETE CURB AT AGGREGATE TERRACE
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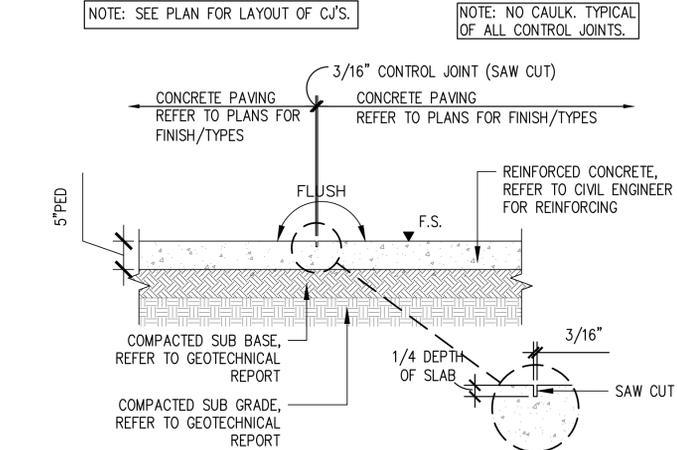
03 TYPICAL CONCRETE AT PLANTING
1" = 1'-0"



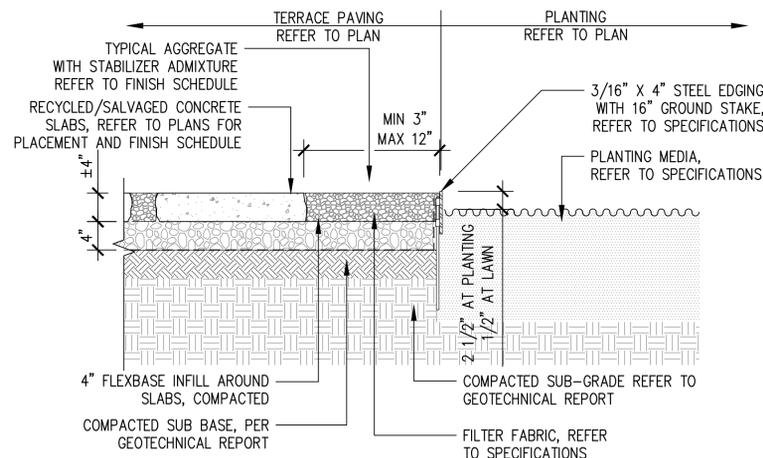
08 AGGREGATE AT PLANTING
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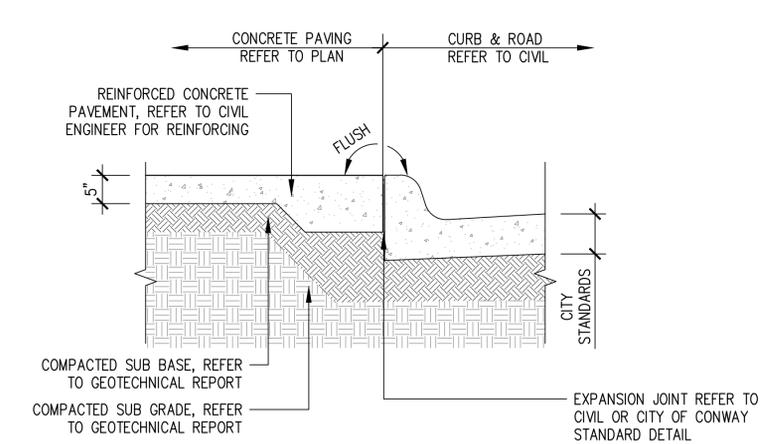
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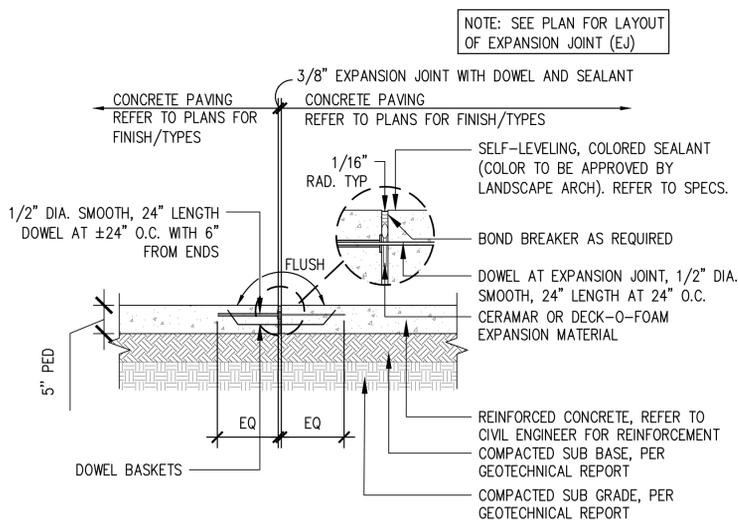
02 TYPICAL CONCRETE CONTROL JOINT
1" = 1'-0"



07 AGGREGATE - CONCRETE TERRACE AT PLANTING
1" = 1'-0"



04 TYPICAL CONCRETE CURB AT CONCRETE PAVEMENT
1" = 1'-0"



01 TYPICAL CONCRETE EXPANSION JOINT
1" = 1'-0"

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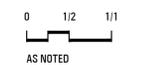
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Revisions

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Date
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Phase
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Drawing Title

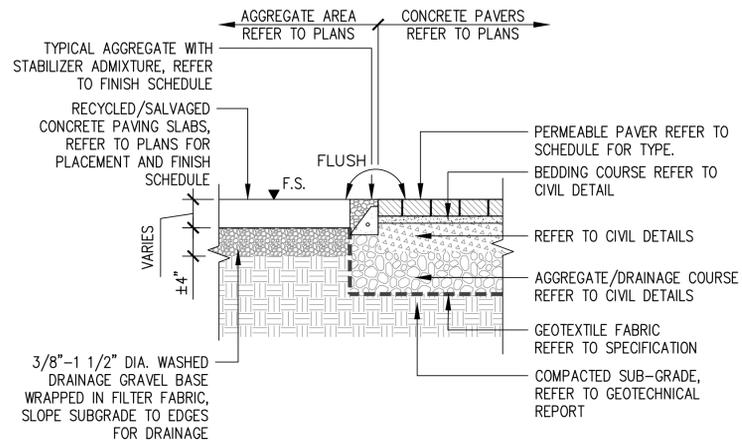
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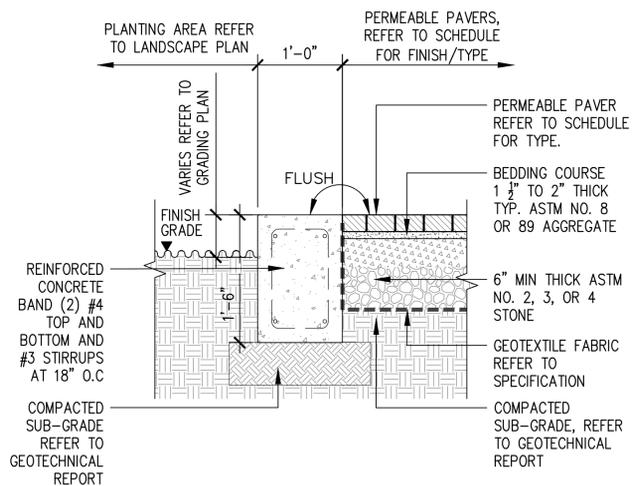
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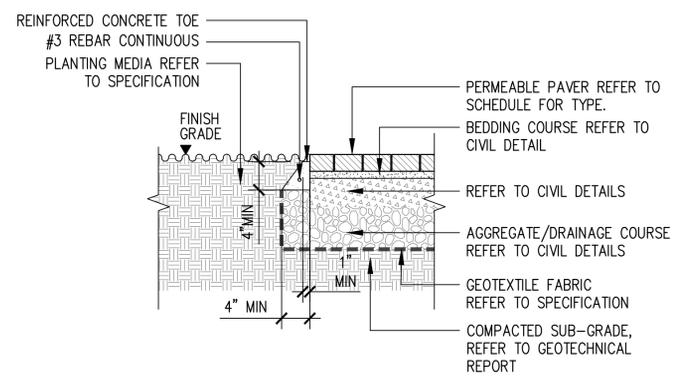
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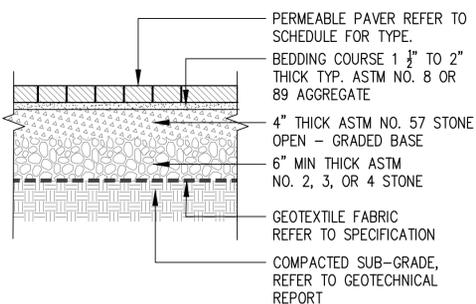
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1" = 1'-0"



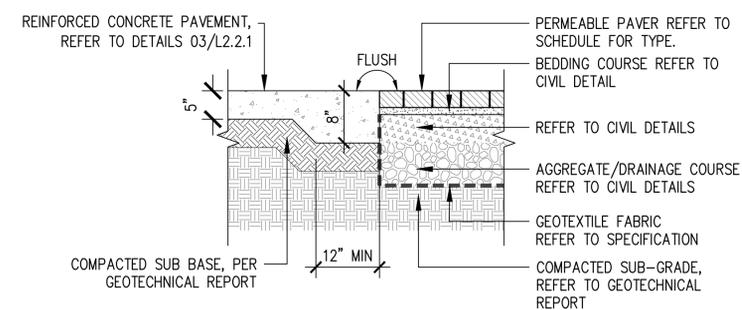
06 CONCRETE PAVER BAND
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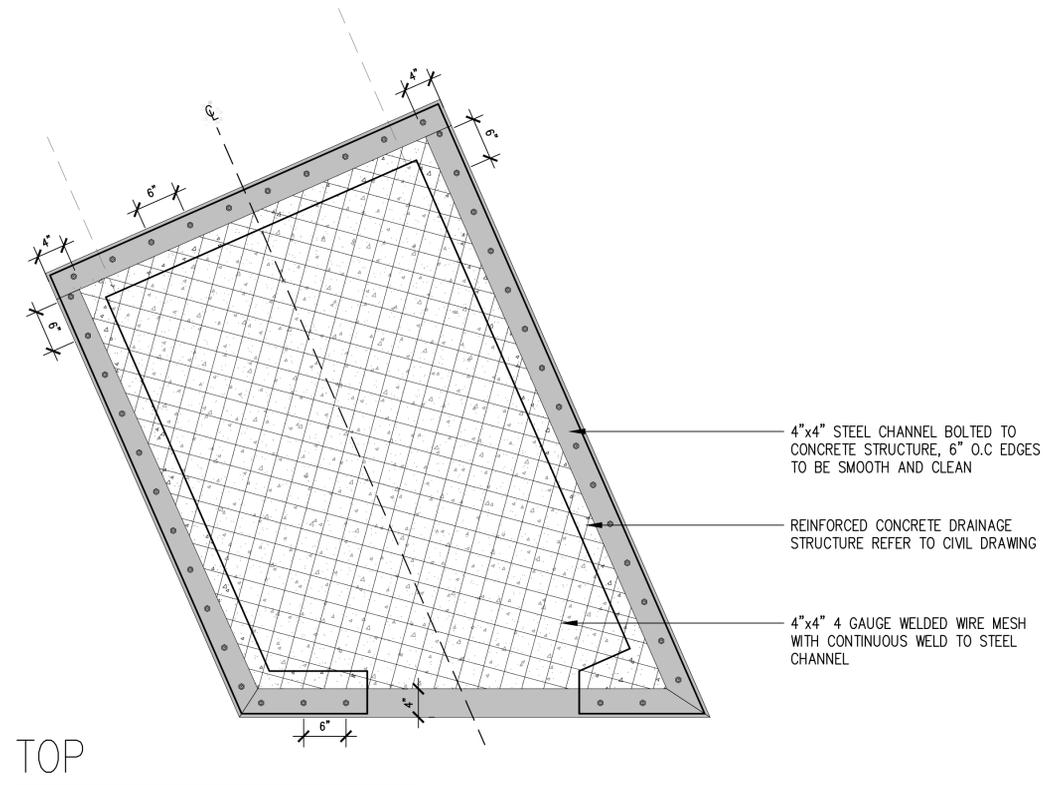
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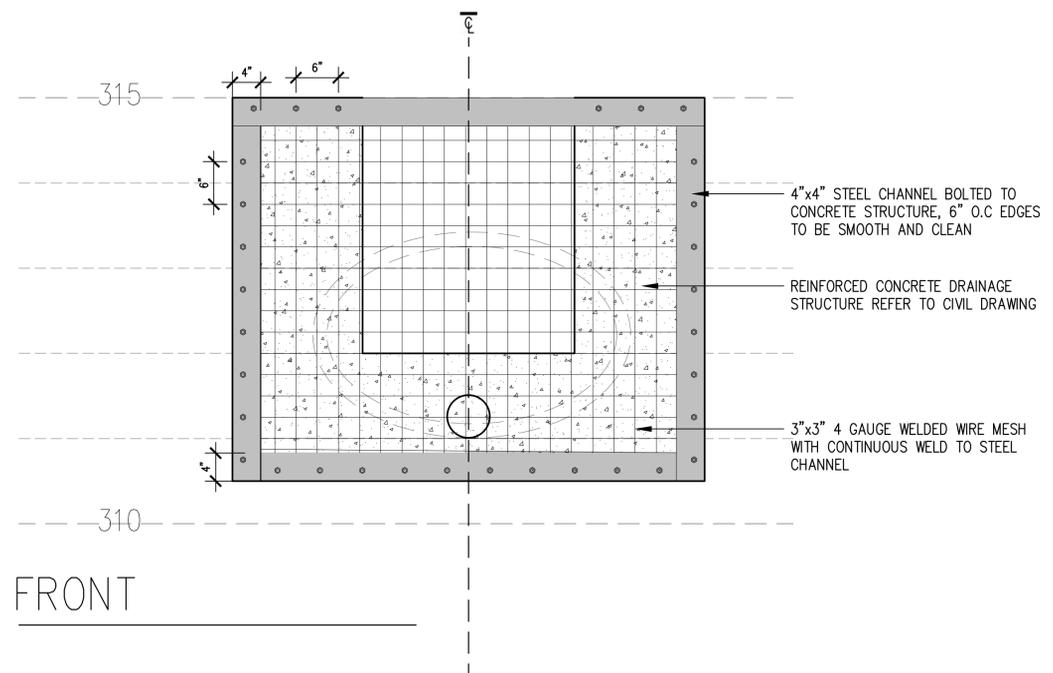
05 UNIT PAVER DETAIL
1" = 1'-0"



02 UNIT PAVER AT CONCRETE PAVEMENT
1" = 1'-0"



TOP



FRONT

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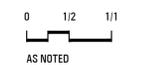
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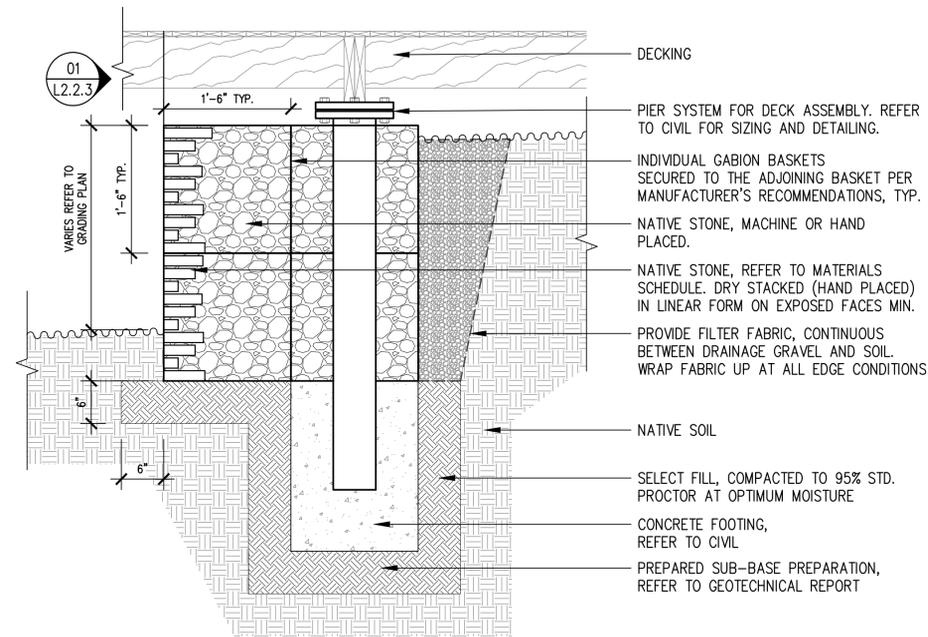
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Drawing Number

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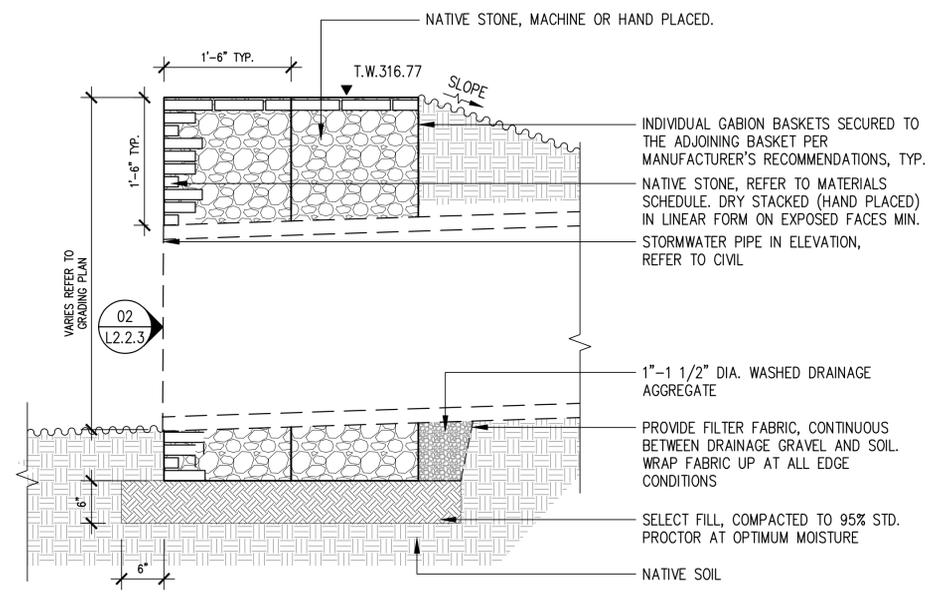
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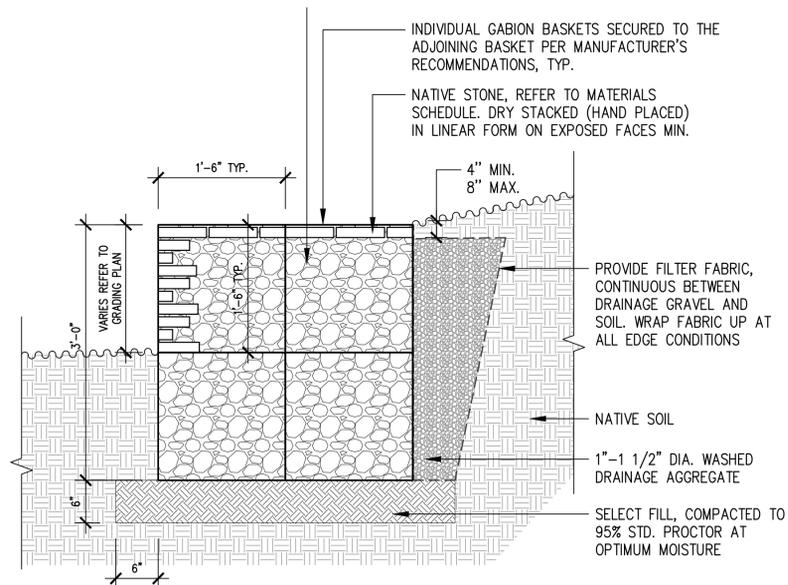
01 SOUTH GABION WALL SECTION

1" = 1'-0"



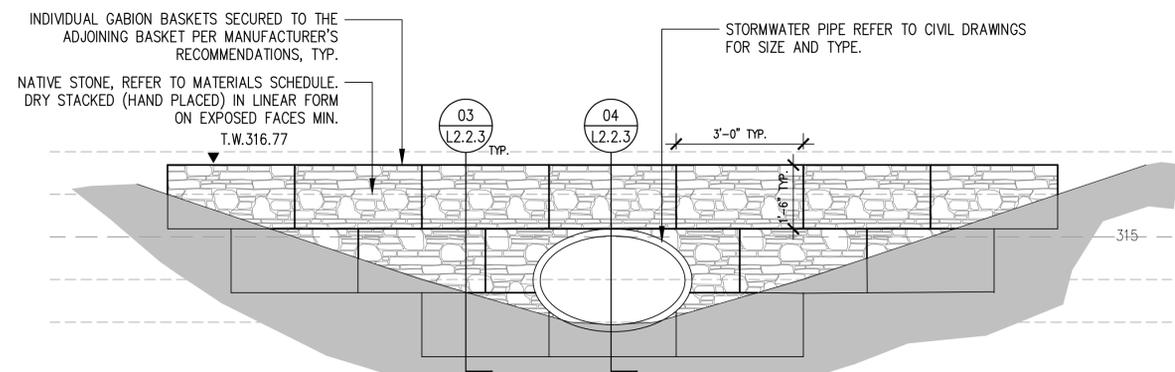
02 NORTH GABION WALL SECTION

1" = 1'-0"



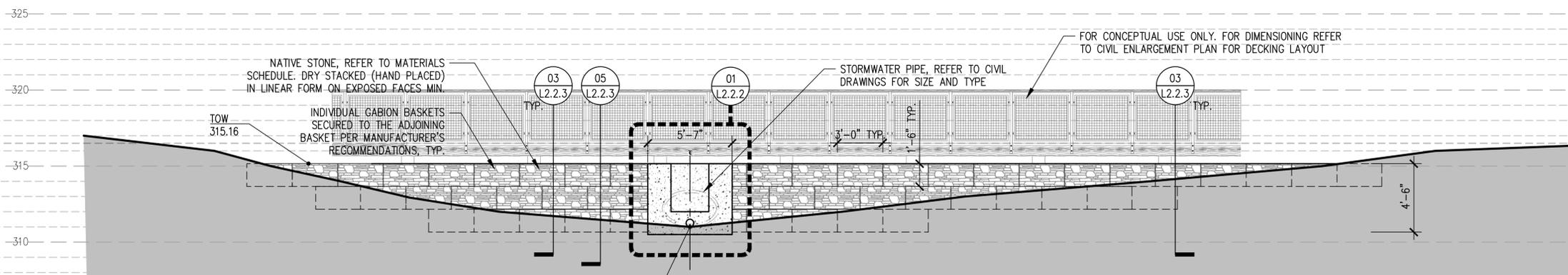
03 TYPICAL GABION WALL

1" = 1'-0"



04 NORTH WALL ELEVATION

1/2" = 1'-0"



05 SOUTH GABION WALL ELEVATION

1/4" = 1'-0"

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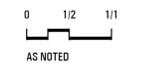
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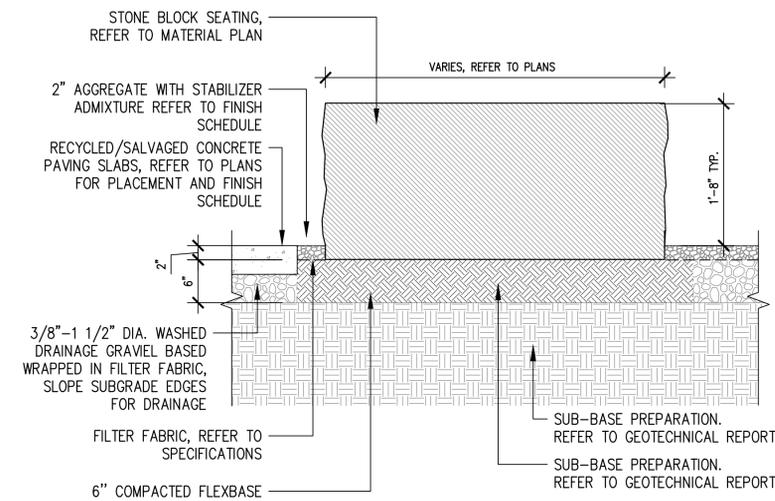
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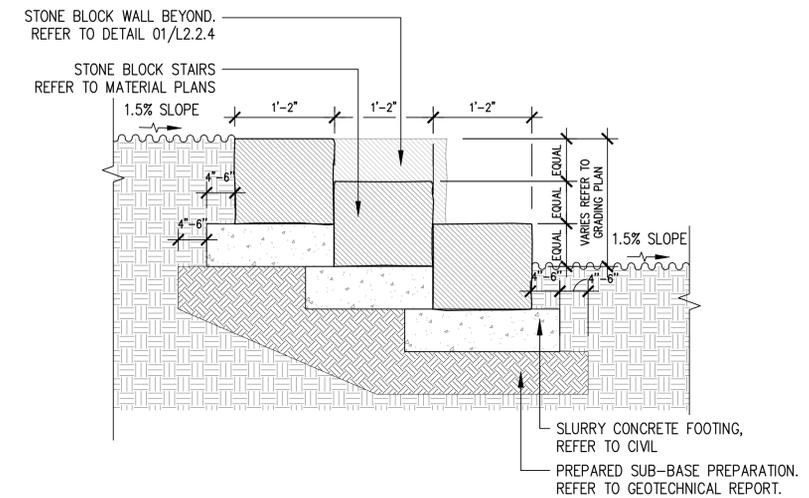
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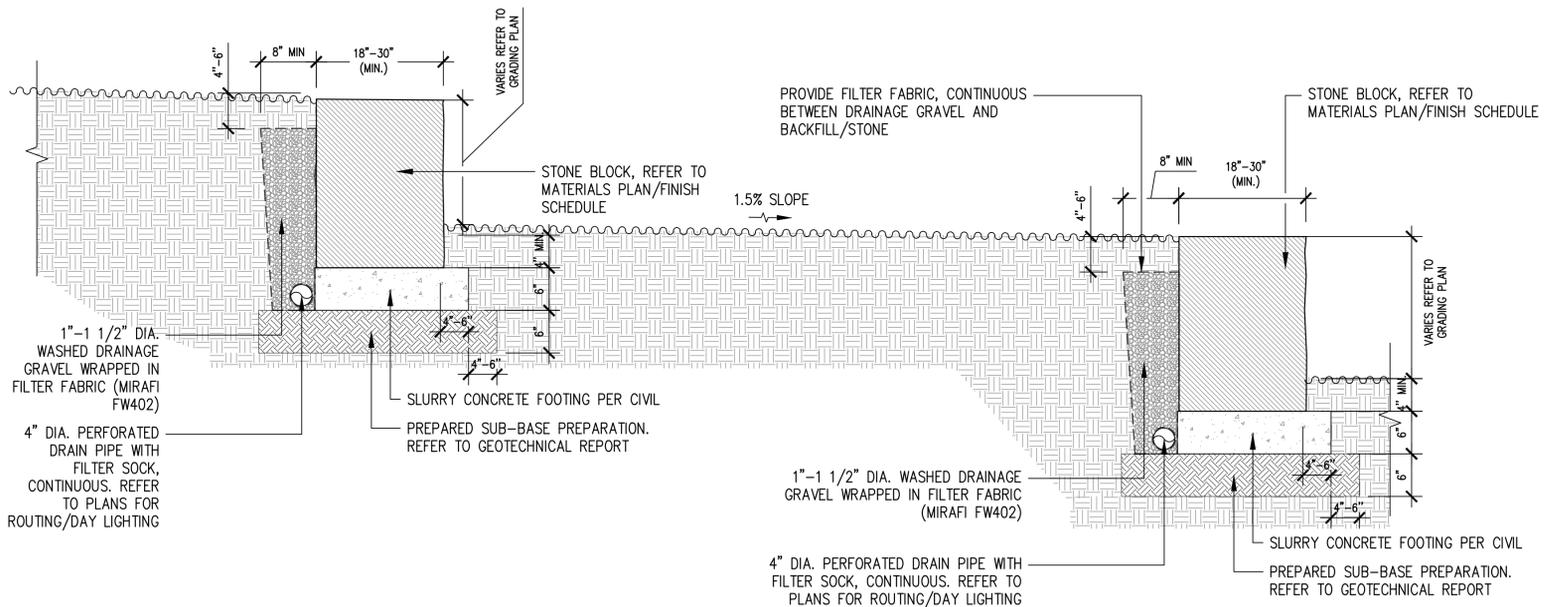
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03 ARKANSAS STONE BENCH AT TERRACE
1" = 1'-0"



02 STONE BLOCK STAIRS
1" = 1'-0"



01 STONE BLOCK RETAINING WALL SECTION
1" = 1'-0"

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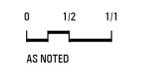
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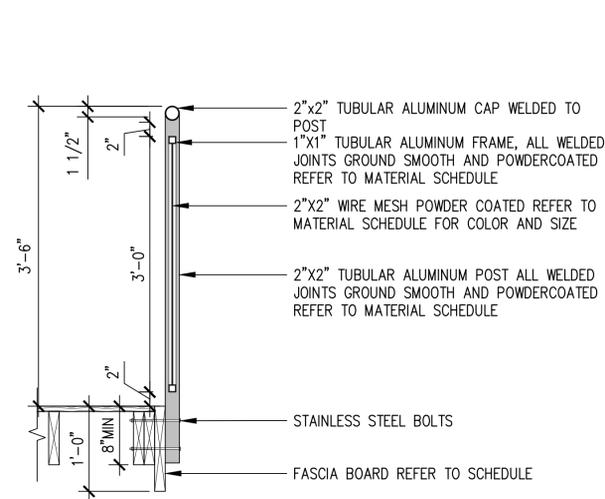
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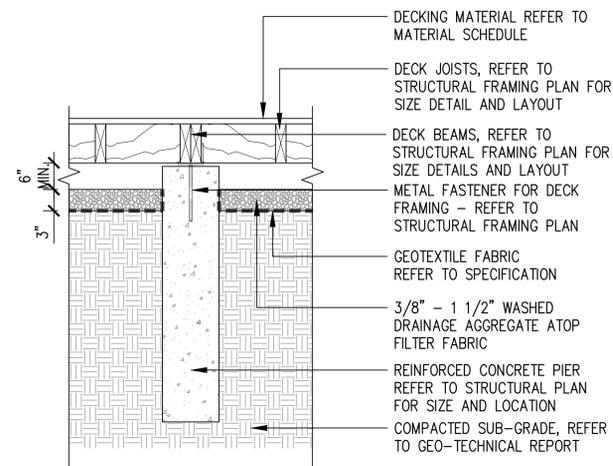
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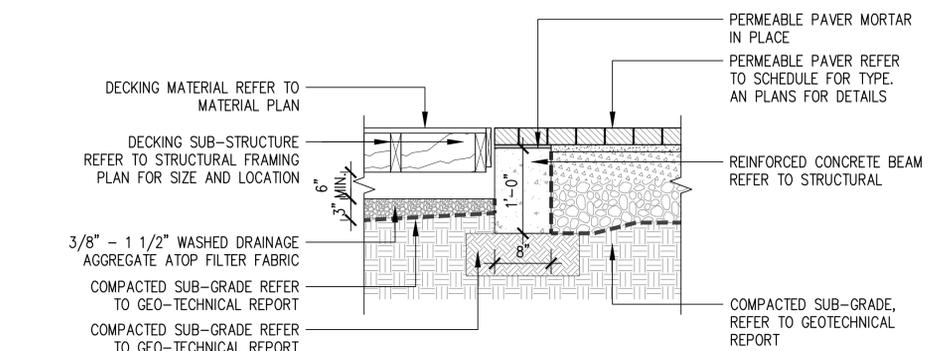
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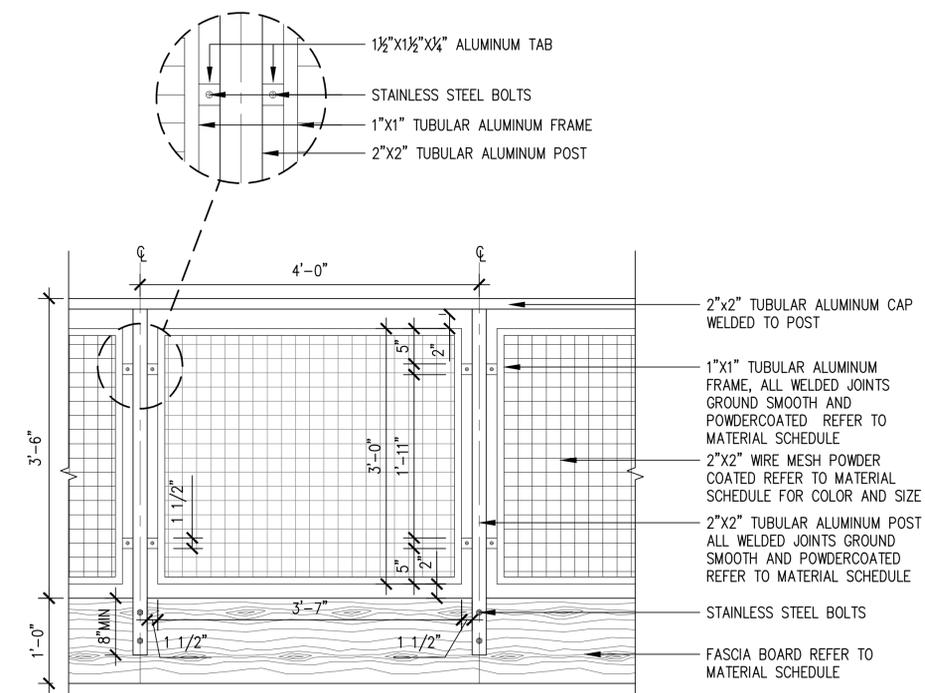
05 RAIL SECTION
1" = 1'-0"



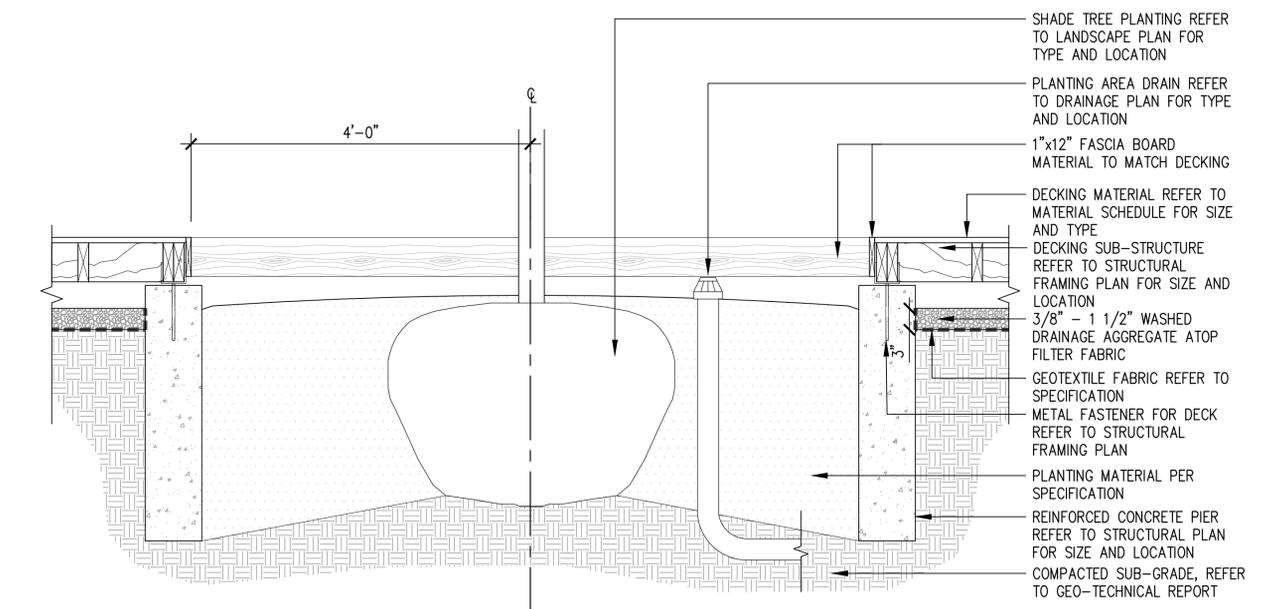
03 TYPICAL DECK PIER
1" = 1'-0"



02 DECK AT PAVER
1" = 1'-0"



04 RAIL ELEVATION
1" = 1'-0"



01 DECK AT TREE WELL
1" = 1'-0"

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM,
SPENCER STREET
CONWAY, ARKANSAS 72032

Client
CITY OF CONWAY ARKANSAS
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Landscape Architect

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11 JANUARY 2021

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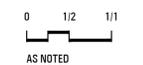
ISSUE FOR BID

Job Number

CAKT001

Scale

North



Drawing Title

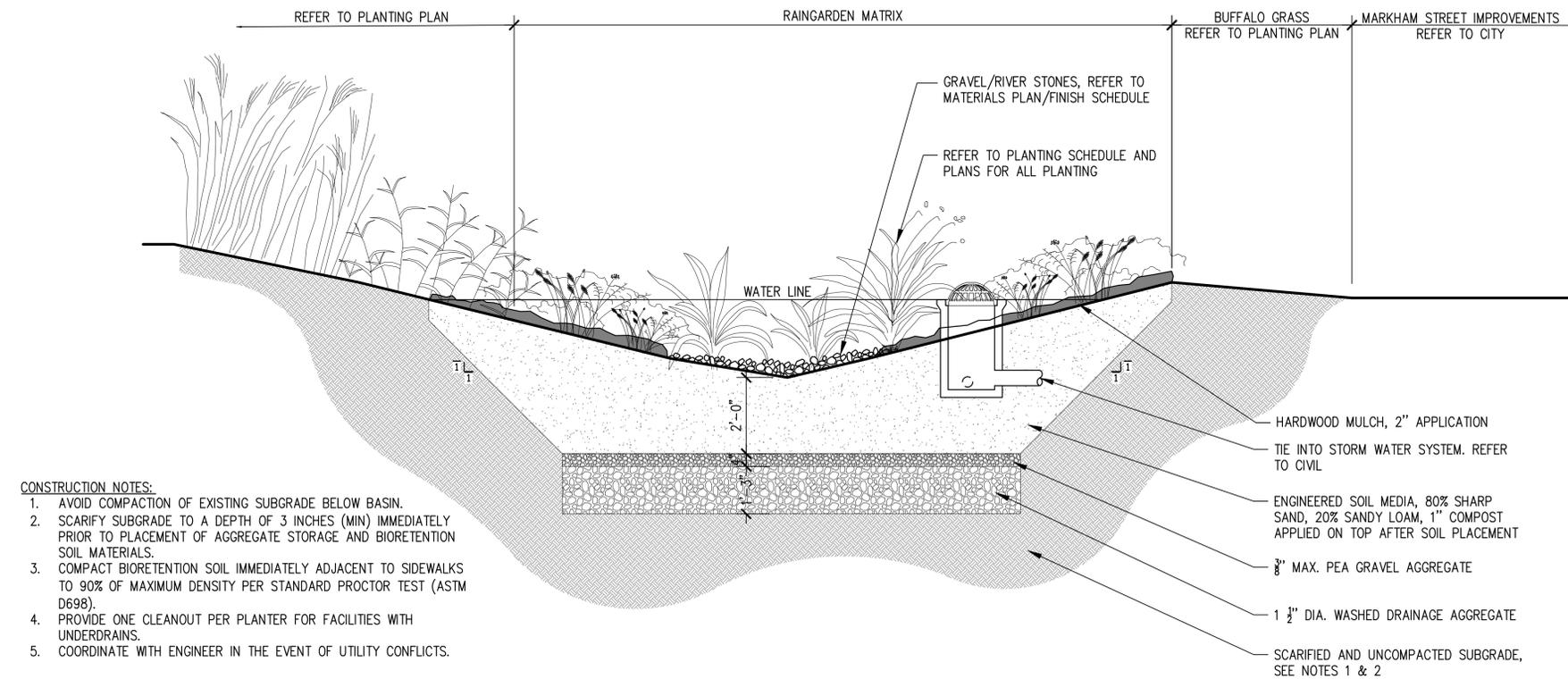
SITE SECTIONS

Drawing Number

FOR BID

L2.2.6

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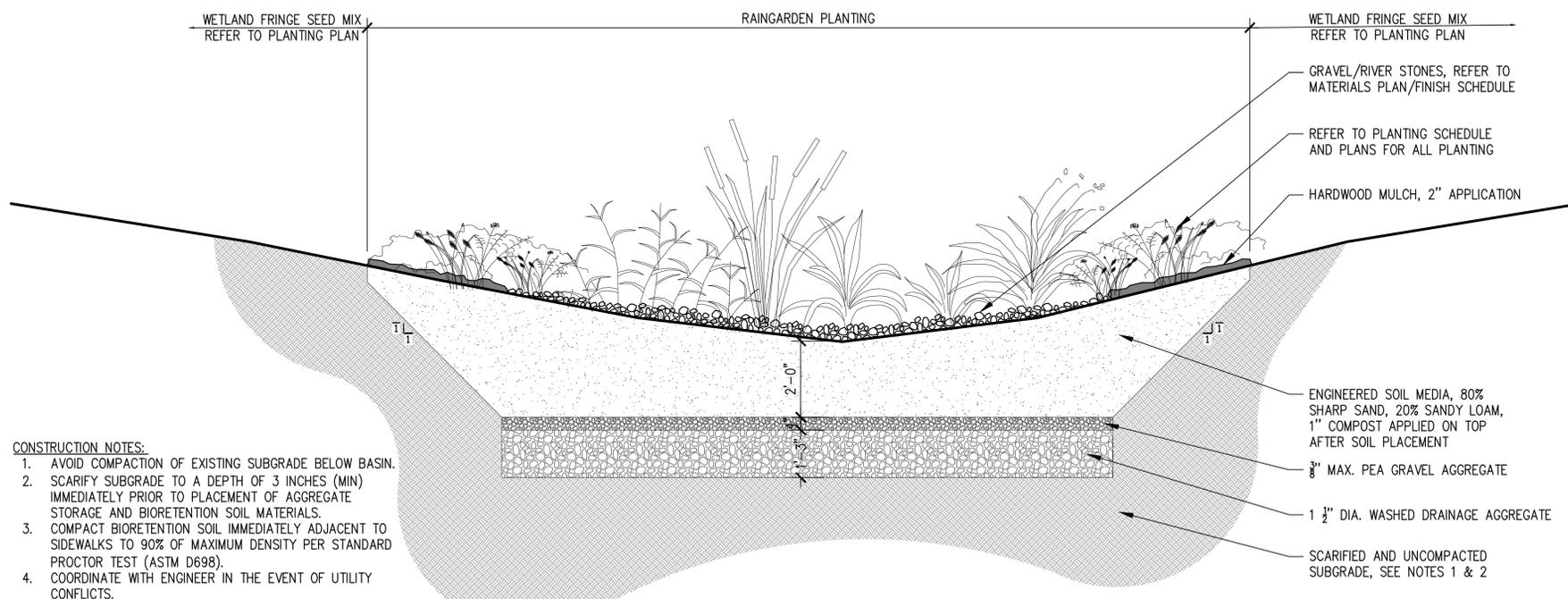


CONSTRUCTION NOTES:

1. AVOID COMPACTION OF EXISTING SUBGRADE BELOW BASIN.
2. SCARIFY SUBGRADE TO A DEPTH OF 3 INCHES (MIN) IMMEDIATELY PRIOR TO PLACEMENT OF AGGREGATE STORAGE AND BIORETENTION SOIL MATERIALS.
3. COMPACT BIORETENTION SOIL IMMEDIATELY ADJACENT TO SIDEWALKS TO 90% OF MAXIMUM DENSITY PER STANDARD PROCTOR TEST (ASTM D698).
4. PROVIDE ONE CLEANOUT PER PLANTER FOR FACILITIES WITH UNDERDRAINS.
5. COORDINATE WITH ENGINEER IN THE EVENT OF UTILITY CONFLICTS.

02 TYPICAL EAST RAIN GARDENS SECTION

1/2" = 1'-0"



CONSTRUCTION NOTES:

1. AVOID COMPACTION OF EXISTING SUBGRADE BELOW BASIN.
2. SCARIFY SUBGRADE TO A DEPTH OF 3 INCHES (MIN) IMMEDIATELY PRIOR TO PLACEMENT OF AGGREGATE STORAGE AND BIORETENTION SOIL MATERIALS.
3. COMPACT BIORETENTION SOIL IMMEDIATELY ADJACENT TO SIDEWALKS TO 90% OF MAXIMUM DENSITY PER STANDARD PROCTOR TEST (ASTM D698).
4. COORDINATE WITH ENGINEER IN THE EVENT OF UTILITY CONFLICTS.

01 NORTH RAIN GARDEN SECTION

1/2" = 1'-0"

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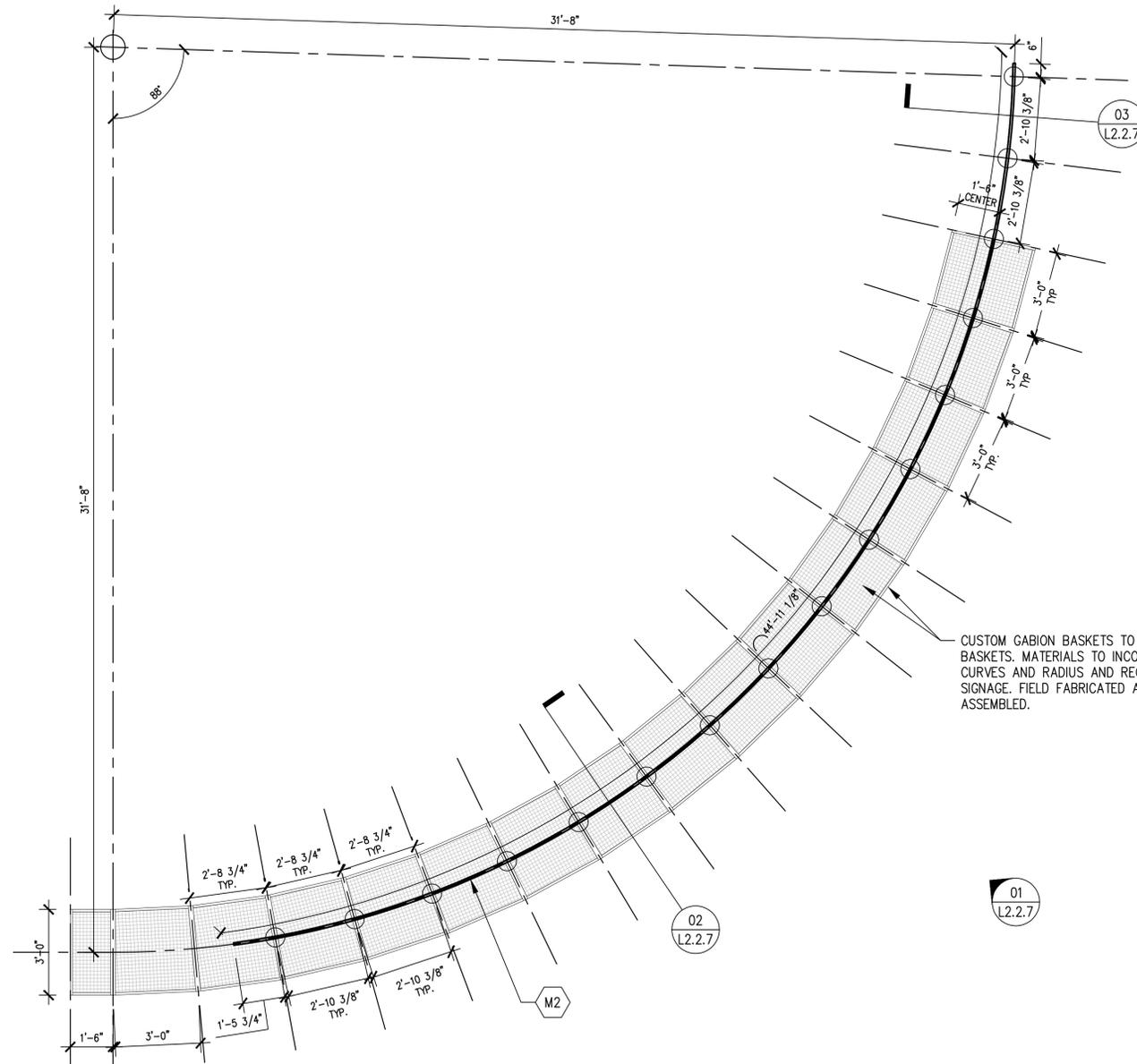
SITE SIGNAGE DETAILS

Drawing Number

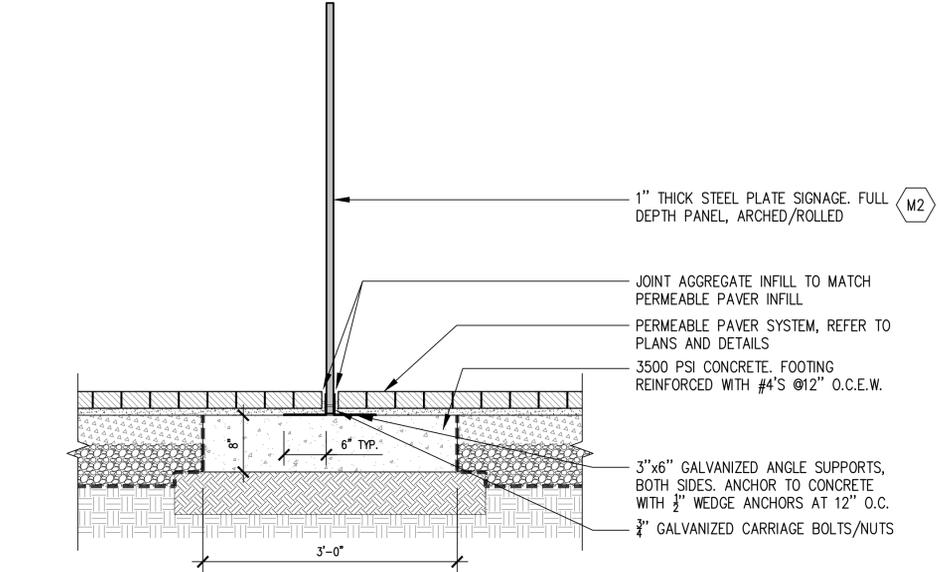
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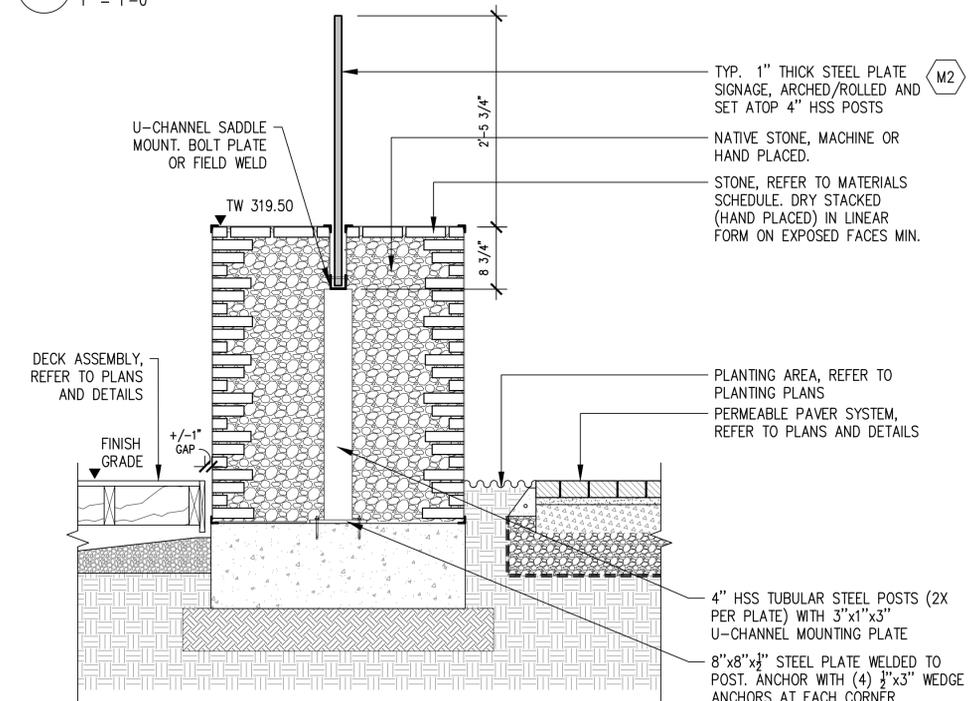
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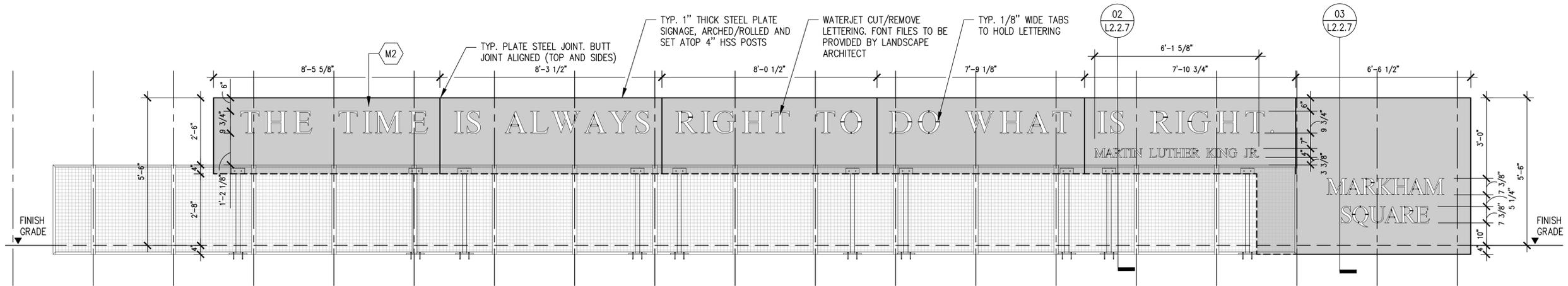
04 PLAZA SIGN PLAN
3/8" = 1'-0"



03 PLAZA SIGN SECTION
1" = 1'-0"



02 PLAZA SIGN THROUGH GABION SECTION
1" = 1'-0"



01 PLAZA SIGN ELEVATION
1/2" = 1'-0"

NOTE: ELEVATION IS
FLATTENED FOR THIS VIEW.

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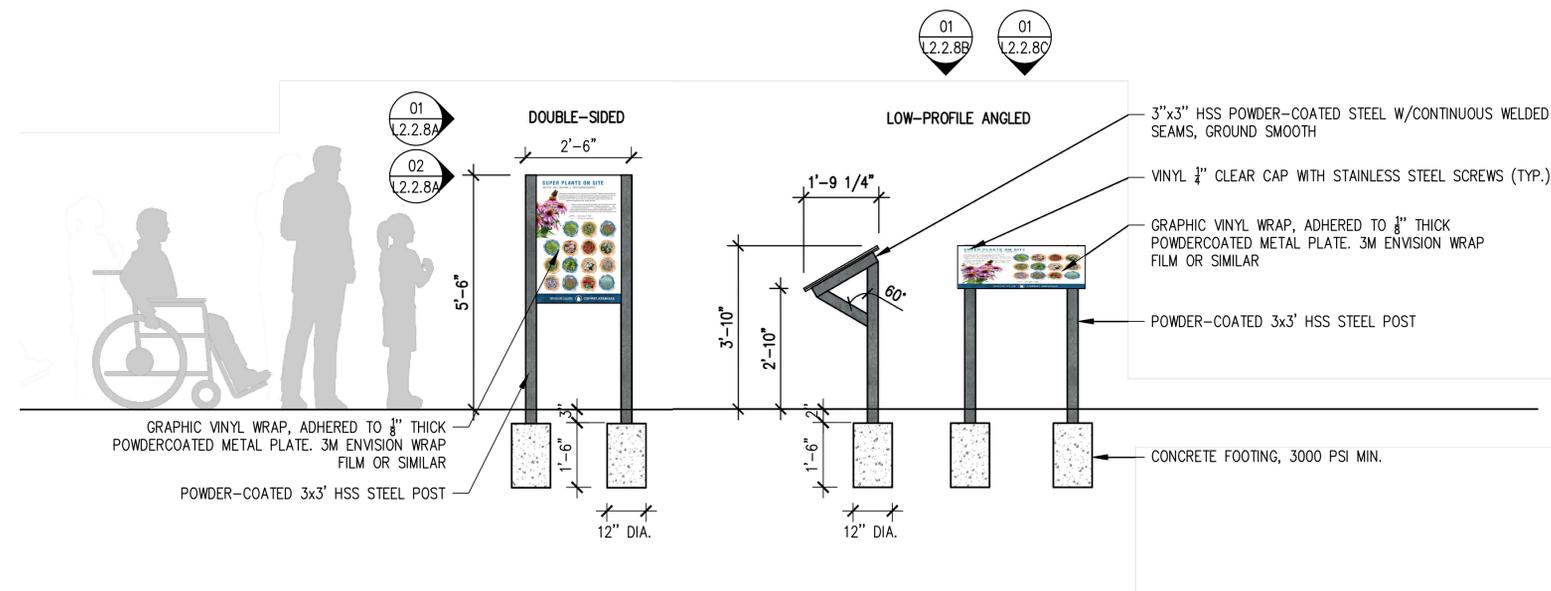
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02 VERTICAL SIGN
1/2" = 1'-0"

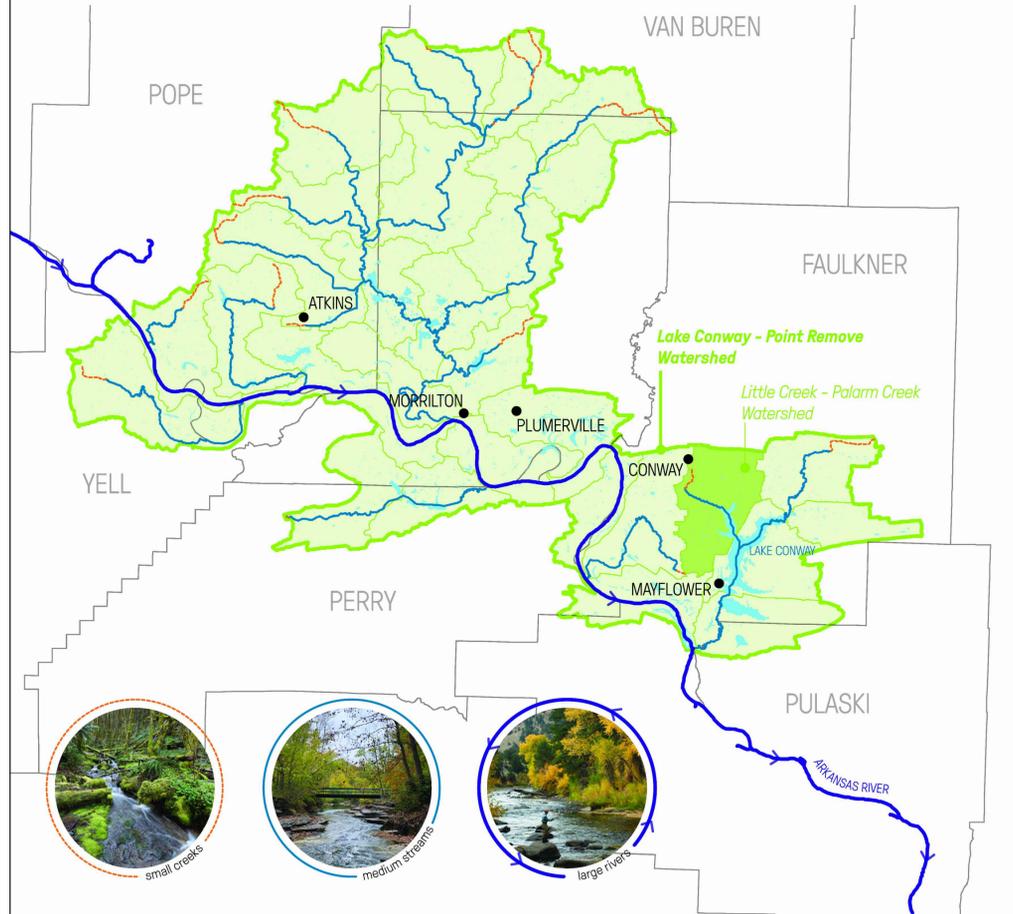
01 HORIZONTAL SIGN
1/2" = 1'-0"

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OUR WATERSHED

LAKE CONWAY - POINT REMOVE

A watershed is like an ecological zip-code, outlining the area that drains to a waterbody. Markham square drains to Stone Dam Creek, a waterway that suffers from overloading of nitrogen and phosphorus from industrial pollutants, agricultural fertilizers, and pesticides. The creek is channelized and piped underneath industrial structures, inhibiting its natural abilities to clean and slow floodwaters.



Watersheds exist at nested scales: by taking care of our local waterways, we not only make our own communities cleaner and safer, but we also improve water quality for our downstream neighbors. Stone Dam Creek Tributary affects the water quality of Little Creek-Palarm Creek watershed (HUC-12 111102030403) and Lake Conway, which is part of the greater Lake Conway-Point Remove Watershed (HUC-8 11110203). Lake Conway flows to the Arkansas River, which joins the mighty Mississippi River near Rosedale, Mississippi.

MARKHAM SQUARE  CONWAY, ARKANSAS

NOTE:

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02 VERTICAL SIGN IMAGE B
1' = 1'-0"

SUPER PLANTS ON SITE

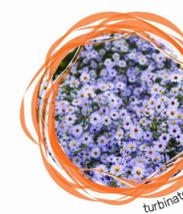
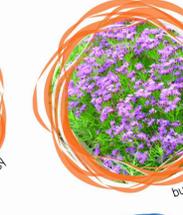
NATIVE POLLINATORS & PHYTOREMIATORS



Plants possess amazing abilities that clean the air, soil, and water. The plants chosen for Markham Square help trap pollutants in their roots (phytostabilization), break down pollutants into less toxic components (phytodegradation), and filter water through plant tissues (phytohydraulics). By cleaning stormwater runoff, plants protect our drinking water supply and enhance habitat for downstream neighbors like fish, turtles, and birds.

In addition to their phytoremediation powers, many of the plants here provide food and habitat to crucial pollinators. Arkansas pollinators like _____, the brown belted bumble bee, and _____ ensure that agricultural crops produce healthy yields and strengthen genetic diversity amongs flowering plants. Globally, pollinator populations are in decline due to decreased habitat, but plant

 WATER QUALITY HERO
 POLLINATOR POWERHOUSE

MARKHAM SQUARE  CONWAY, ARKANSAS

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01 VERTICAL SIGN IMAGE A
1' = 1'-0"

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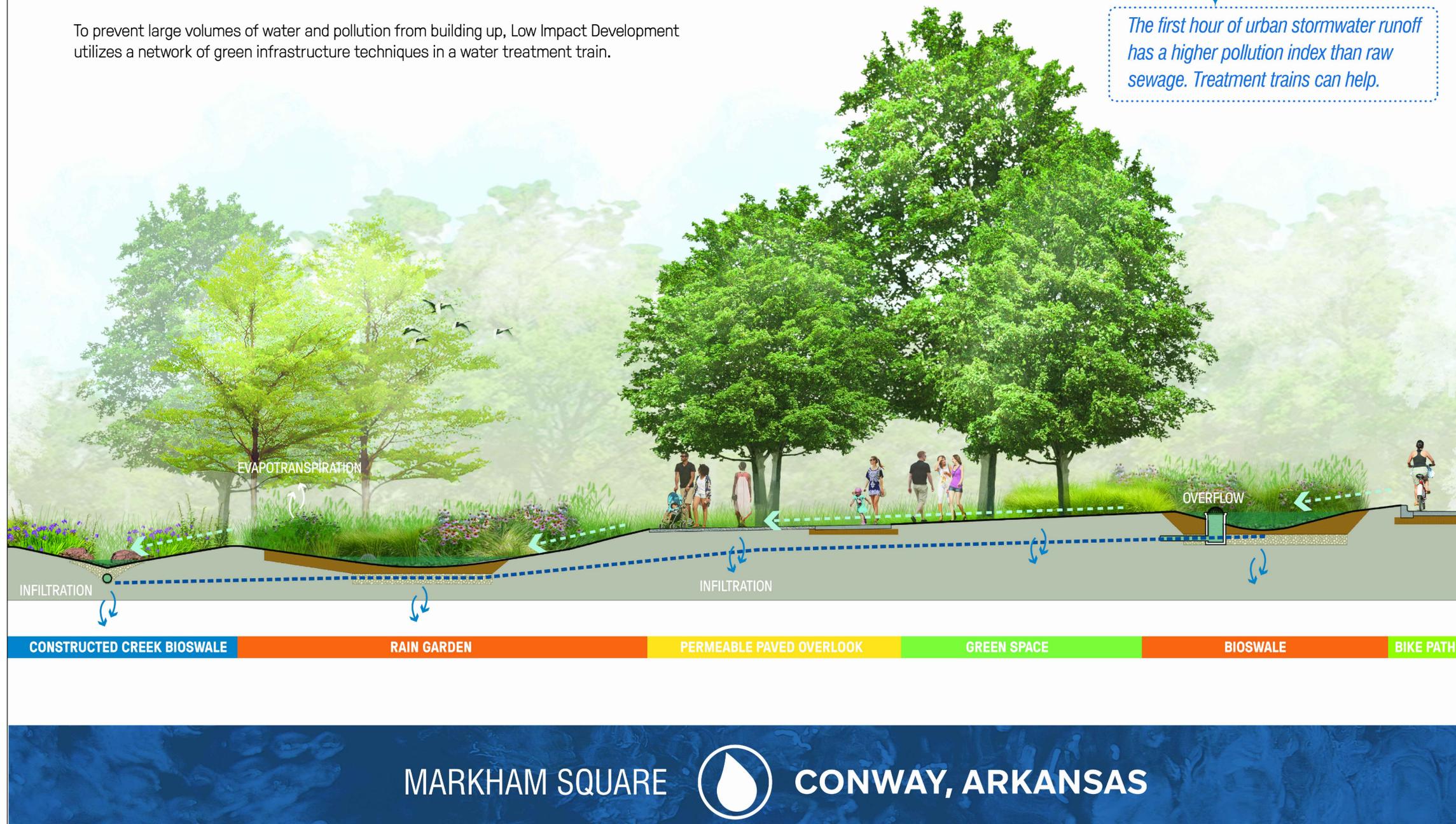
IMPROVING WATER QUALITY

TREATMENT TRAINS

To prevent large volumes of water and pollution from building up, Low Impact Development utilizes a network of green infrastructure techniques in a water treatment train.

DID YOU KNOW

The first hour of urban stormwater runoff has a higher pollution index than raw sewage. Treatment trains can help.



MARKHAM SQUARE  CONWAY, ARKANSAS

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01 HORIZONTAL SIGN IMAGE A
NOT TO SCALE

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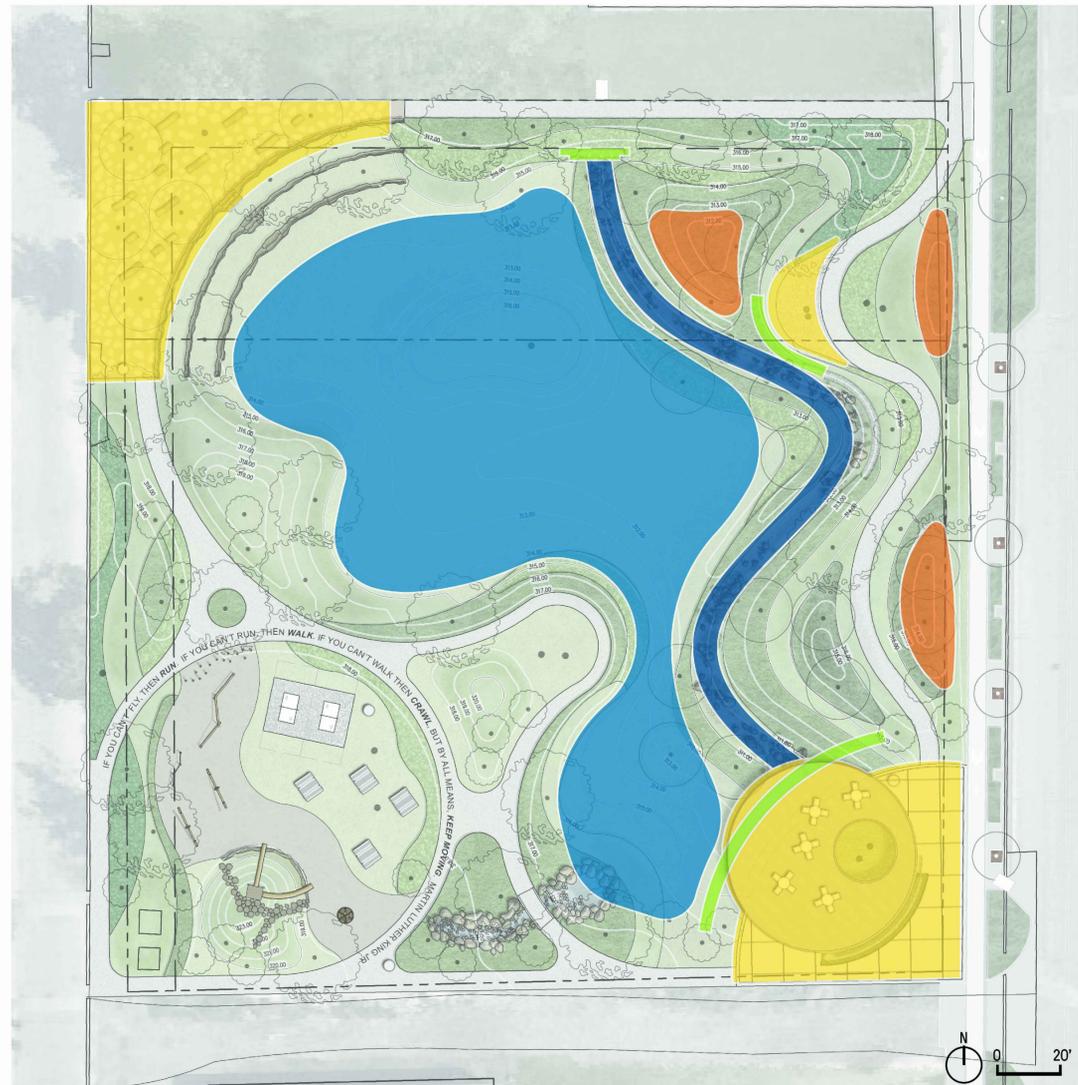
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LOW IMPACT DEVELOPMENT

SOFT ENGINEERING FOR HEALTHIER ECOSYSTEMS



What if stormwater infrastructure could enhance urban ecosystems and provide beautiful civic spaces for recreation and play? By replacing pipes and concrete with living biological systems, parks like Markham Square are setting an example of how we can use 'soft engineering' to better manage stormwater. Known as Low Impact Development (LID) or Green Infrastructure (GI), this approach aims to slow, spread, and infiltrate water, thereby mitigating flooding while also allowing living systems to treat and clean stormwater runoff.

Visit the park after a rain even to see these LID techniques in action!

- 1 PERMEABLE PAVING**
allows water to flow through hardscape and infiltrate into the ground, removing sediment and trapping pollution
- 2 INFILTRATION BASIN (BIO-MATS)**
large, shallow areas with permeable soils designed to temporarily detain and infiltrate stormwater runoff
- 3 RAIN GARDEN**
vegetated depression designed to treat water as it passes through roots and soil and infiltrates into the ground
- 4 BIOSWALES**
planted depression designed to treat water through phytoremediation as it is conveyed further downstream
- 5 VEGETATED WALLS**
utilize vertical water harvesting to treat water and reduce stormwater runoff loads



Scan me for more information on LID

MARKHAM SQUARE



CONWAY, ARKANSAS

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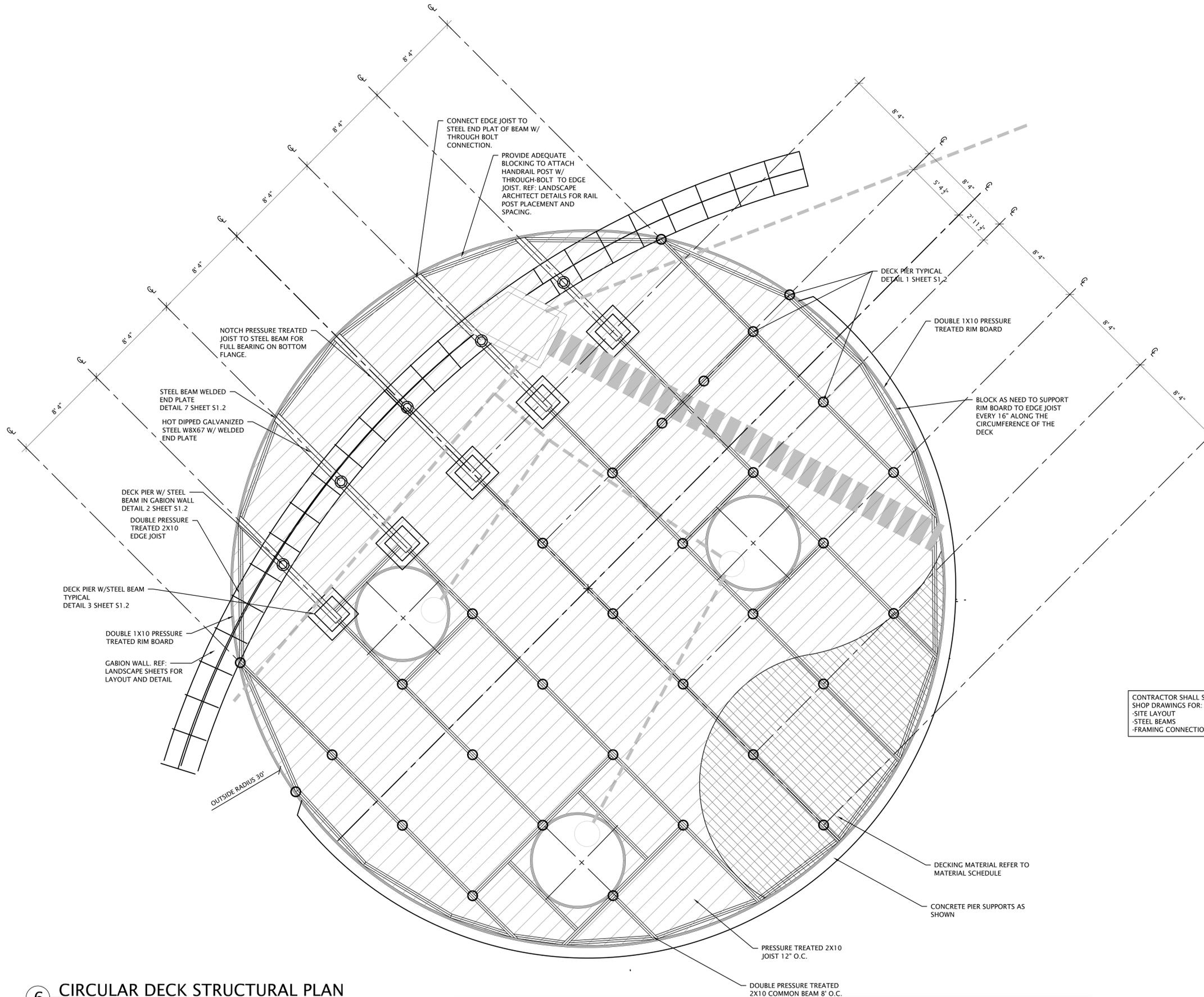
SITE STRUCTURAL

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CONTRACTOR SHALL SUBMIT
SHOP DRAWINGS FOR:
-SITE LAYOUT
-STEEL BEAMS
-FRAMING CONNECTIONS

6 CIRCULAR DECK STRUCTURAL PLAN

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Scale

North



Drawing Title

SITE STRUCTURAL DETAILS

Drawing Number

FOR BID

S1.0.1

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FOUNDATION GENERAL NOTES:

- THESE FOUNDATION GENERAL NOTES REPRESENT THE CONCRETE FOUNDATION STRUCTURE ONLY.
- ALL WORK SHALL CONFORM WITH THE FOLLOWING CODES AND STANDARDS AT A MINIMUM: INTERNATIONAL BUILDING CODE 2012 (IBC 2012); AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-05) FOR WIND LOADS; INTERNATIONAL FIRE CODE (IFC); NFPA LIFE & SAFETY CODE; FEMA CODE OF FEDERAL REGULATIONS 2006.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A SAFE WORKING ENVIRONMENT THROUGHOUT THE PROJECT. ALL OF THE SURROUNDING AREAS AROUND THE CONSTRUCTION ZONE SHALL BE PROTECTED FROM DAMAGE, CLEANED, AND RESTORED TO THE ORIGINAL CONDITION, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS FOR THIS PROJECT PRIOR TO CONSTRUCTION.
- THESE FOUNDATION DRAWINGS DO NOT SHOW ANY UNDERGROUND UTILITIES OR STRUCTURES. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE EXISTENCE OR LOCATION OF ANY SURFACE OR SUBSURFACE UTILITIES OR STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY OWNERS AND FIELD LOCATING EXISTING UNDERGROUND, SURFACE AND OVERHEAD UTILITIES PRIOR TO COMMENCING ANY WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO COMMENCING ANY WORK OF ANY OBSERVED CONFLICTS OR DISCREPANCIES WITH THE PLANS.
- THE CONTRACTOR AND FABRICATORS SHALL VERIFY ALL QUANTITIES, DIMENSIONS, AND CONDITIONS AND NOTIFY THE ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES IN THE DRAWINGS AND/OR SPECIFICATIONS BEFORE PROCEEDING WITH THE WORK.
- ANY CHANGES TO THE DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE OWNER AND THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL REVIEW SHOP DRAWINGS BEFORE SUBMITTING TO THE ENGINEER. THE ENGINEER WILL NOT REVISE ANY SHOP DRAWINGS THAT HAVE NOT BEEN PREVIOUSLY REVIEWED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A COPY OF EACH APPROVED SEALED SHOP DRAWING TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR HAULING OFF AND DISPOSING OF ANY MATERIAL THAT IS NOT TO BE SALVAGED OR REINSTALLED.
- IT IS FORBIDDEN TO REPRODUCE ANY PART OF THESE CONTRACT DRAWINGS AND USE IT IN THE PREPARATION OF THE SHOP DRAWINGS. ANY SHOP DRAWING RECEIVED HAVING THE ENGINEER'S TITLE AND SEAL SHALL BE REJECTED.
- IF A DISCREPANCY ARISES BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR WHERE A DETAIL IS DOUBTFUL OF INTERPRETATION OR AN UNANTICIPATED FIELD CONDITION IS ENCOUNTERED, THE ENGINEER SHALL BE IMMEDIATELY CONTACTED FOR PROCEDURE TO BE FOLLOWED. SUCH INSTRUCTIONS SHALL BE CONFIRMED IN WRITING AND DISTRIBUTED TO ALL EFFECTED PARTIES.

REINFORCED CONCRETE NOTES:

- CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, LATEST EDITION. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO ENGINEER PRIOR TO CONSTRUCTION.
- ALL CONCRETE SHALL BE NORMAL WEIGHT AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- PORTLAND CEMENT CONFORMING TO ASTM C 150 TYPE I.
- MINIMUM CEMENT CONTENT SHALL BE 412 SACKS PER CUBIC YARD AND MAXIMUM WATER CEMENT RATIO SHALL BE 0.50.
- MAXIMUM SLUMP SHALL BE 5 INCHES.
- MAXIMUM AGGREGATE SIZE SHALL BE 1 1/2 INCHES. PROVIDE 4 TO 6 PERCENT AIR-ENTRAINMENT, CONFORMING TO ASTM C 260.
- CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C 494, TYPE A, D, OR E.
- FLY ASH SHALL BE ASTM C618, TYPE C OR F. SHALL NOT BE GREATER THAN 20% BY WEIGHT OF THE CEMENT CONTENT. IN NO CASE SHALL THE PORTLAND CEMENT CONTENT OF THE MIX BE LESS THAN 412 SACKS PER CUBIC YARD.
- FORMWORK SHALL COMPLY WITH THE REQUIREMENTS OF ACI 347.
- REINFORCING STEEL SHALL BE NEW DEFORMED BILLET STEEL, ASTM A615, GRADE 60. TIES AND #3 BARS AND SMALLER SHALL BE ASTM A615, GRADE 40. WELDED FABRIC (FLAT ONLY) SHALL CONFORM TO ASTM A185, GRADE 60.
- DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL COMPLY WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL REINFORCING BAR SPLICES SHALL BE 44 BAR DIAMETERS FOR #6 AND SMALLER DIAMETERS BARS. SPLICES FOR NUMBER #7 AND LARGER DIAMETER BAR SHALL BE 48 BAR DIAMETERS.
- PROVIDE TWO #4 X 4'0" LONG DIAGONAL BARS IN TOP FACE AT ALL RE-ENTRANT CORNERS IN SLAB.
- PROVIDE CORNER BARS TURN-DOWN SLAB SAME SIZE AND SPACING AS LONGITUDINAL REINFORCING.
- PROVIDE ONE #4 HOOP WITH 8" LAP IN SLAB-ON-GRADE AROUND FLOOR DRAINS AND ALL SLAB PENETRATIONS 3" IN DIAMETER OR GREATER. ALSO INSTALL AROUND ELECTRICAL CONDUITS GROUPINGS 3" IN DIAMETER OR GREATER.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. PROVIDE MESH IN FLAT SHEETS.
- WIRE FABRIC REINFORCING SHALL LAP 6" AND BE SECURELY WIRED AT EACH SIDE AND END.
- BAR SUPPORTS AT FOOTINGS AND SLAB-ON-GRADE SHALL BE FACTORY MADE WIRE BAR SUPPORTS.
- SMOOTH DOWELS SHALL BE STEEL CONFORMING TO ASTM A36.
- PROVIDE A MINIMUM OF 2" OF CONCRETE COVER FOR REINFORCING STEEL FOR STRUCTURAL CONCRETE MEMBERS IN CONTACT WITH NATURAL GROUND. PROVIDE A MINIMUM OF 2" OF CONCRETE COVER FOR REINFORCING STEEL FOR STRUCTURAL CONCRETE MEMBERS EXPOSED TO WEATHER AND GROUND. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR REINFORCING STEEL WHERE CONCRETE SURFACES ARE NOT IN CONTACT TO WEATHER OR NATURAL GROUND.
- FIELD CUTTING OF REINFORCING BARS SHALL BE BY SHEARING OR SAWING. FIELD CUTTING BY CUTTING TORCH IS NOT ALLOWED. HEATING OR WELDING REINFORCING BARS IS PROHIBITED.
- ALL REINFORCING BAR HOOK SHALL BE ACI STANDARD 90-DEGREE HOOK UNLESS OTHERWISE NOTED.
- ALL SLOTS, SLEEVES, AND OTHER EMBEDDED ITEMS SHALL BE SET BEFORE CONCRETE IS PLACED SEE ARCHITECTURAL ELECTRICAL MECHANICAL AND VENDORS DRAWINGS FOR SIZES AND LOCATIONS.
- EPOXY GROUT FOR DOWELING REINFORCEMENT SHALL BE HY-200 BY HILTI.
- CONCRETE CURING SHALL BE BY WET-CURING METHODS ONLY (CONTINUOUS SPRINKLING OR MEMBRANE COVER) FOR A MINIMUM PERIOD OF 7 DAYS AFTER CONCRETE PLACEMENT. ADDITIONAL CURING MAY BE ACCOMPLISHED BY WET-CURING METHODS OR BY A LIQUID MEMBRANE CURING COMPOUND CONFORMING TO ASTM C309.
- COMPLY WITH RECOMMENDATIONS IN ACI 302.1R FOR SCREEDING, RE-STRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES. DO NOT WET CONCRETE SURFACES. FLOAT FINISH: CONSOLIDATE SURFACE WITH POWER-DRIVEN FLOATS OR BY HAND FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER DRIVEN FLOATS. RE-STRAIGHTEN, CUT DOWN HIGH SPOTS, AND FILL LOW SPOTS. REPEAT FLOAT PASSES AND RE-STRAIGHTENING UNTIL SURFACE IS LEFT WITH A UNIFORM, SMOOTH, GRANULAR TEXTURE. TROWEL FINISH: AFTER APPLYING FLOAT FINISH, APPLY FIRST TROWEL FINISH AND CONSOLIDATE CONCRETE BY HAND OR POWER-DRIVEN TROWEL. CONTINUE TROWELING PASSES AND RE-STRAIGHTEN UNTIL SURFACE IS FREE OF TROWEL MARKS AND UNIFORM IN TEXTURE AND APPEARANCE. GRIND SMOOTH ANY SURFACE DEFECTS THAT WOULD TELEGRAPH THROUGH APPLIED COATINGS OR FLOOR COVERINGS. FINISH AND MEASURE SURFACE SO GAP AT ANY POINT BETWEEN CONCRETE SURFACE AND AN UNLEVELLED FREESTANDING 10-FOOT LONG STRAIGHTEDGE, RESTING ON TWO HIGH SPOTS AND PLACED ANYWHERE ON THE SURFACE, DOES NOT EXCEED 1/4 INCH. FILLING IN: FILL IN HOLES AND OPENINGS LEFT IN CONCRETE STRUCTURES, UNLESS OTHERWISE INDICATED. AFTER WORK OF OTHER TRADES IS IN PLACE, MIX, PLACE, AND CURE CONCRETE, AS SPECIFIED, TO BLEND WITH IN-PLACE CONSTRUCTION. PROVIDE OTHER MISCELLANEOUS CONCRETE FILLING INDICATED OR REQUIRED TO COMPLETE WORK.

- CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 4000 PSI MINIMUM
- ALL REINFORCING STEEL SHALL HAVE 2" MINIMUM CONCRETE COVER IN ALL DIRECTIONS IN ALL LOCATIONS.

REFERENCE LANDSCAPE SHEETS FOR SIGN DETAILS

REFERENCE LANDSCAPE SHEETS FOR PAVEN DETAILS

FOOTING REINFORCEMENT
LONGITUDINAL: (3) CONTINUOUS #4 BARS SUPPORTED 3" ABOVE BOTTOM OF FOOTING.
CROSS-TIES: #4 BAR @ 24" O.C.

CLEAN COMPACTED FREE DRAINING GRAVEL

3 SIGN WITHOUT GABION

- CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 4000 PSI MINIMUM
- ALL REINFORCING STEEL SHALL HAVE 2" MINIMUM CONCRETE COVER IN ALL DIRECTIONS IN ALL LOCATIONS.

REFERENCE LANDSCAPE SHEETS FOR SIGN DETAILS

REFERENCE LANDSCAPE SHEETS FOR GABION DETAILS

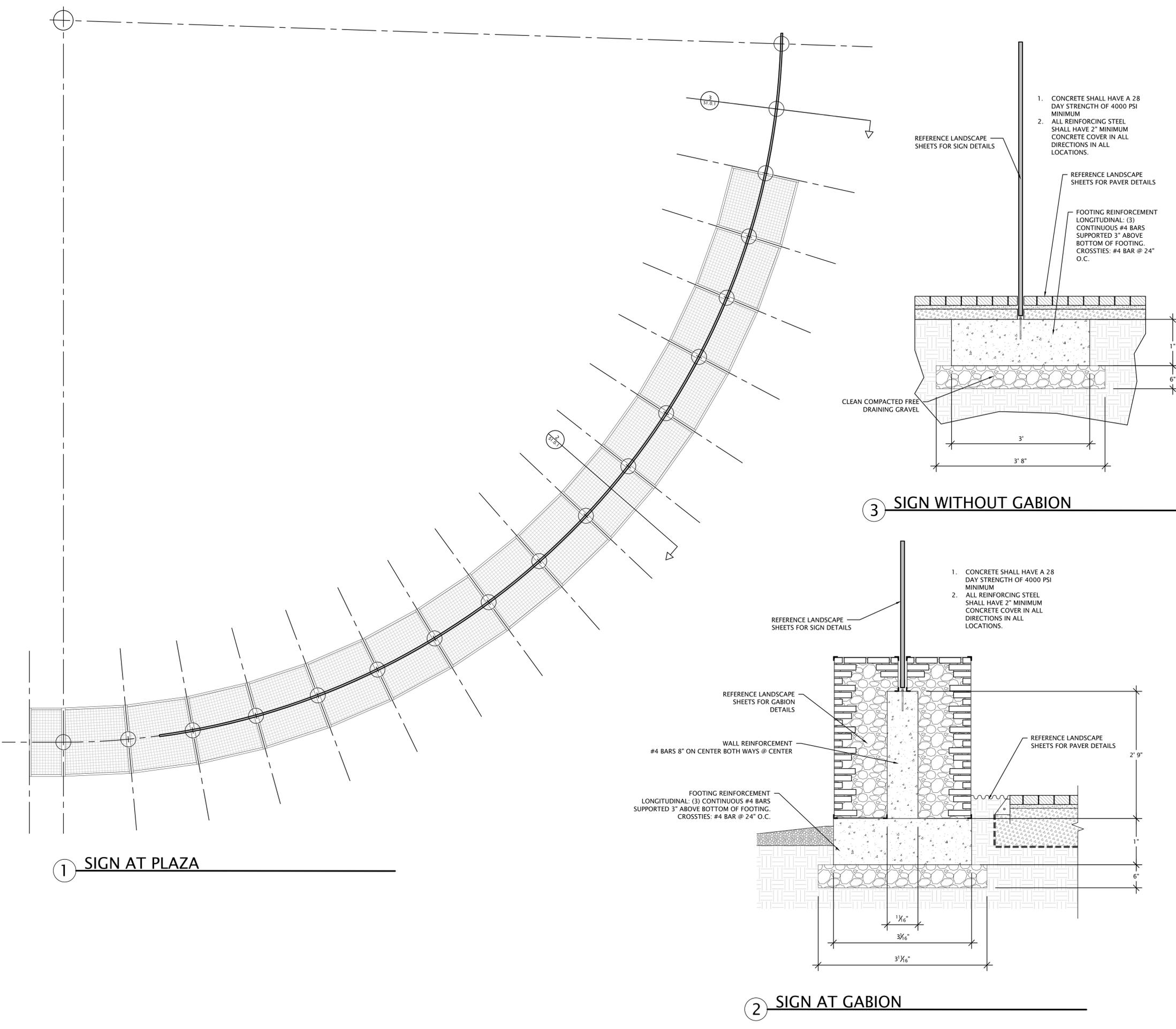
WALL REINFORCEMENT
#4 BARS 8" ON CENTER BOTH WAYS @ CENTER

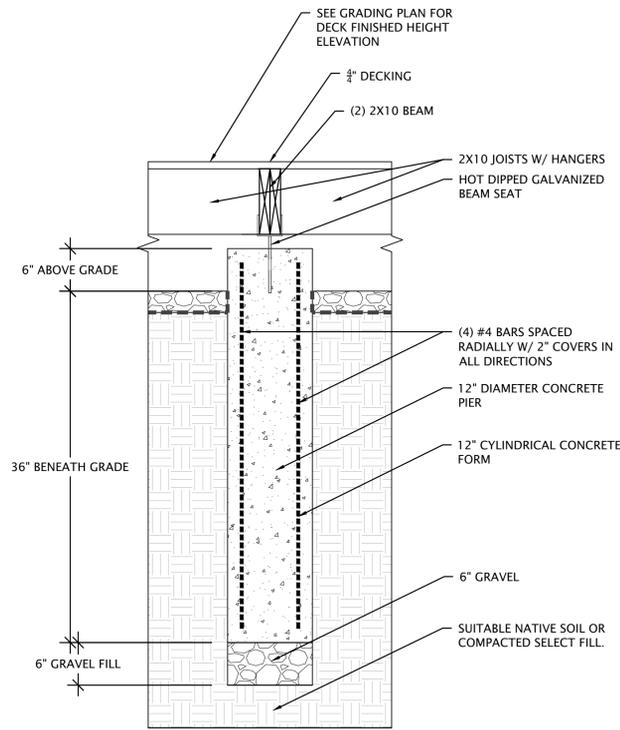
REFERENCE LANDSCAPE SHEETS FOR PAVEN DETAILS

FOOTING REINFORCEMENT
LONGITUDINAL: (3) CONTINUOUS #4 BARS SUPPORTED 3" ABOVE BOTTOM OF FOOTING.
CROSS-TIES: #4 BAR @ 24" O.C.

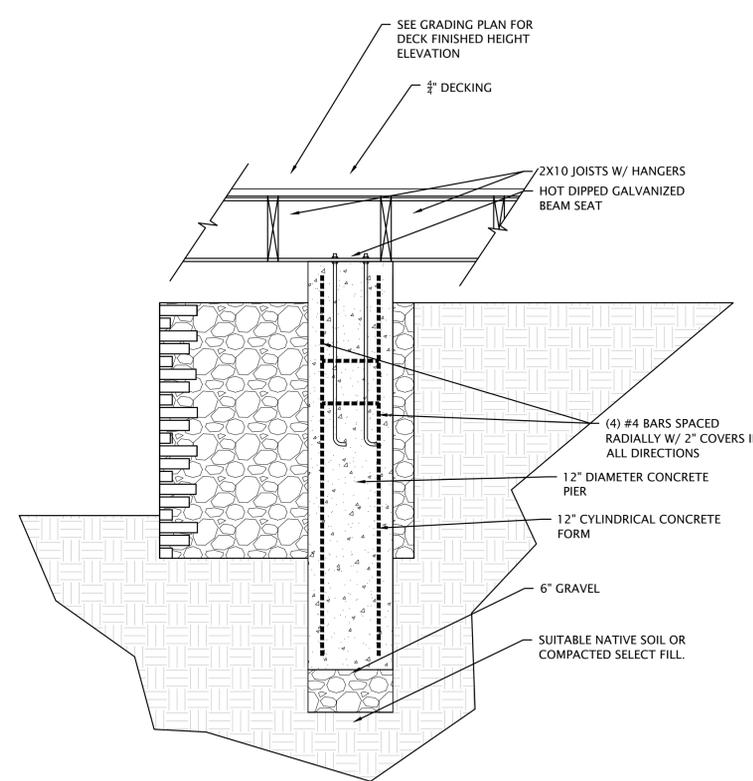
2 SIGN AT GABION

1 SIGN AT PLAZA

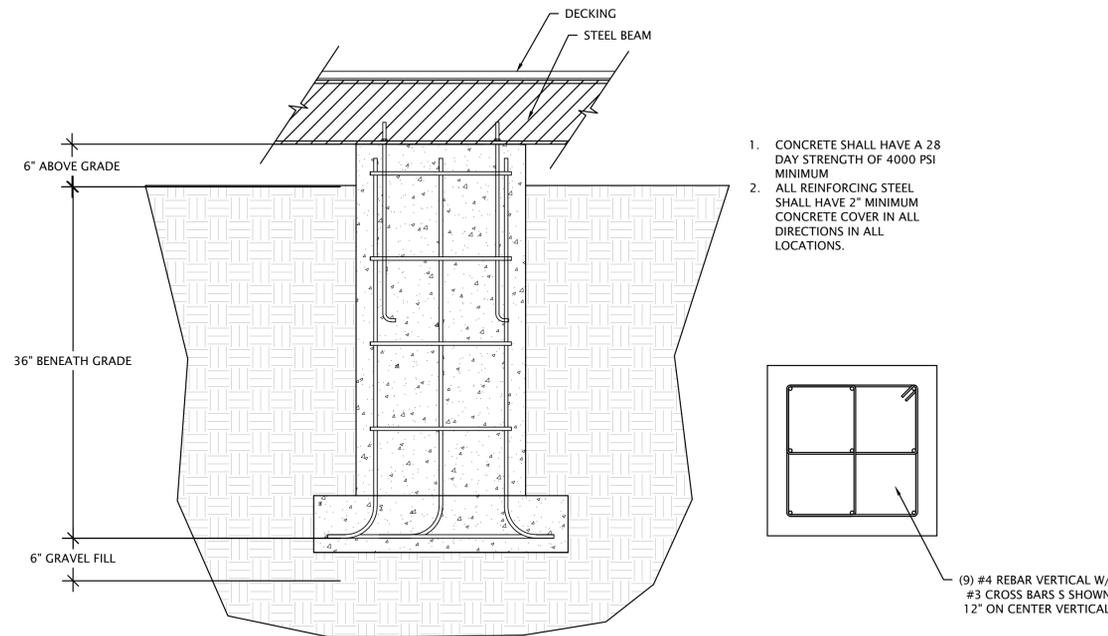




1 DECK PIER TYPICAL



3 DECK PIER W/ STEEL BEAM IN GABION WALL



2 DECK PIER W/ STEEL BEAM

FOUNDATION GENERAL NOTES:

- THESE FOUNDATION GENERAL NOTES REPRESENT THE CONCRETE FOUNDATION STRUCTURE ONLY.
- ALL WORK SHALL CONFORM WITH THE FOLLOWING CODES AND STANDARDS AT A MINIMUM: INTERNATIONAL BUILDING CODE 2012 (IBC 2012); AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-05) FOR WIND LOADS; INTERNATIONAL FIRE CODE (IFC); NFPA LIFE & SAFETY CODE; FEMA CODE OF FEDERAL REGULATIONS 2006.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A SAFE WORKING ENVIRONMENT THROUGHOUT THE PROJECT. ALL OF THE SURROUNDING AREAS AROUND THE CONSTRUCTION ZONE SHALL BE PROTECTED FROM DAMAGE, CLEANED, AND RESTORED TO THE ORIGINAL CONDITION, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS FOR THIS PROJECT PRIOR TO CONSTRUCTION.
- THESE FOUNDATION DRAWINGS DO NOT SHOW ANY UNDERGROUND UTILITIES OR STRUCTURES. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE EXISTENCE OR LOCATION OF ANY SURFACE OR SUBSURFACE UTILITIES OR STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTRACTING THE APPROPRIATE UTILITY OWNERS AND FIELD LOCATING EXISTING UNDERGROUND, SURFACE AND OVERHEAD UTILITIES PRIOR TO COMMENCING ANY WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO COMMENCING ANY WORK OF ANY OBSERVED CONFLICTS OR DISCREPANCIES WITH THE PLANS.
- THE CONTRACTOR AND FABRICATORS SHALL VERIFY ALL QUANTITIES, DIMENSIONS, AND CONDITIONS AND NOTIFY THE ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES IN THE DRAWINGS AND/OR SPECIFICATIONS BEFORE PROCEEDING WITH THE WORK.
- ANY CHANGES TO THE DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE OWNER AND THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL REVIEW SHOP DRAWINGS BEFORE SUBMITTING TO THE ENGINEER. THE ENGINEER WILL NOT REVISE ANY SHOP DRAWINGS THAT HAVE NOT BEEN PREVIOUSLY REVIEWED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A COPY OF EACH APPROVED SEALED SHOP DRAWING TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR HAULING OFF AND DISPOSING OF ANY MATERIAL THAT IS NOT TO BE SALVAGED OR REINSTALLED.
- IT IS FORBIDDEN TO REPRODUCE ANY PART OF THESE CONTRACT DRAWINGS AND USE IT IN THE PREPARATION OF THE SHOP DRAWINGS. ANY SHOP DRAWING RECEIVED HAVING THE ENGINEER'S TITLE AND SEAL SHALL BE REJECTED.
- IF A DISCREPANCY ARISES BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR WHERE A DETAIL IS DOUBTFUL OF INTERPRETATION OR AN UNANTICIPATED FIELD CONDITION IS ENCOUNTERED, THE ENGINEER SHALL BE IMMEDIATELY CONTACTED FOR PROCEDURE TO BE FOLLOWED. SUCH INSTRUCTIONS SHALL BE CONFIRMED IN WRITING AND DISTRIBUTED TO ALL EFFECTED PARTIES.

REINFORCED CONCRETE NOTES:

- CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, LATEST EDITION. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO ENGINEER PRIOR TO CONSTRUCTION.
- ALL CONCRETE SHALL BE NORMAL WEIGHT AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- PORTLAND CEMENT CONFORMING TO ASTM C 150 TYPE I.
- MINIMUM CEMENT CONTENT SHALL BE 412 SACKS PER CUBIC YARD AND MAXIMUM WATER CEMENT RATIO SHALL BE 0.50.
- MAXIMUM SLUMP SHALL BE 5 INCHES.
- MAXIMUM AGGREGATE SIZE SHALL BE 1 1/2 INCHES. PROVIDE 4 TO 6 PERCENT AIR-ENTRAIMENT, CONFORMING TO ASTM C 260.
- CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C 494, TYPE A, D, OR E.
- FLY ASH SHALL BE ASTM C618, TYPE C OR F. SHALL NOT BE GREATER THAN 20% BY WEIGHT OF THE CEMENT CONTENT. IN NO CASE SHALL THE PORTLAND CEMENT CONTENT OF THE MIX BE LESS THAN 412 SACKS PER CUBIC YARD.
- FORMWORK SHALL COMPLY WITH THE REQUIREMENTS OF ACI 347.
- REINFORCING STEEL SHALL BE NEW DEFORMED BILLET STEEL, ASTM A615, GRADE 60. TIES AND #3 BARS AND SMALLER SHALL BE ASTM A615, GRADE 40. WELDED FABRIC (FLAT ONLY) SHALL CONFORM TO ASTM A185, GRADE 60.
- DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL COMPLY WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL REINFORCING BAR SPLICES SHALL BE 44 BAR DIAMETERS FOR #6 AND SMALLER DIAMETERS BARS. SPLICES FOR NUMBER #7 AND LARGER DIAMETER BAR SHALL BE 48 BAR DIAMETERS.
- PROVIDE TWO #4 X 4'0" LONG DIAGONAL BARS IN TOP FACE AT ALL RE-ENTRANT CORNERS IN SLAB.
- PROVIDE CORNER BARS TURN-DOWN SLAB SAME SIZE AND SPACING AS LONGITUDINAL REINFORCING.
- PROVIDE ONE #4 HOOP WITH 8" LAP IN SLAB-ON-GRADE AROUND FLOOR DRAINS AND ALL SLAB PENETRATIONS 3" IN DIAMETER OR GREATER.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. PROVIDE MESH IN FLAT SHEETS.
- WIRE FABRIC REINFORCING SHALL LAP 6" AND BE SECURELY WIRED AT EACH SIDE AND END.
- BAR SUPPORTS AT FOOTINGS AND SLAB-ON-GRADE SHALL BE FACTORY MADE WIRE BAR SUPPORTS.
- SMOOTH DOWELS SHALL BE STEEL CONFORMING TO ASTM A36.
- PROVIDE A MINIMUM OF 2" OF CONCRETE COVER FOR REINFORCING STEEL FOR STRUCTURAL CONCRETE MEMBERS IN CONTACT WITH NATURAL GROUND. PROVIDE A MINIMUM OF 2" OF CONCRETE COVER FOR REINFORCING STEEL FOR STRUCTURAL CONCRETE MEMBERS EXPOSED TO WEATHER AND GROUND. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR REINFORCING STEEL WHERE CONCRETE SURFACES ARE NOT IN CONTACT TO WEATHER OR NATURAL GROUND.
- FIELD CUTTING OF REINFORCING BARS SHALL BE BY SHEARING OR SAWING. FIELD CUTTING BY CUTTING TORCH IS NOT ALLOWED. HEATING OR WELDING REINFORCING BARS IS PROHIBITED.
- ALL REINFORCING BAR HOOK SHALL BE ACI STANDARD 90-DEGREE HOOK UNLESS OTHERWISE NOTED.
- ALL SLOTS, SLEEVES, AND OTHER EMBEDDED ITEMS SHALL BE SET BEFORE CONCRETE IS PLACED SEE ARCHITECTURAL ELECTRICAL MECHANICAL AND VENDORS DRAWINGS FOR SIZES AND LOCATIONS.
- EPOXY GROUT FOR DOWELING REINFORCEMENT SHALL BE HY-200 BY HILTI.
- CONCRETE CURING SHALL BE BY WET-CURING METHODS ONLY (CONTINUOUS SPRINKLING OR MEMBRANE COVER) FOR A MINIMUM PERIOD OF 7 DAYS AFTER CONCRETE PLACEMENT. ADDITIONAL CURING MAY BE ACCOMPLISHED BY WET-CURING METHODS OR BY A LIQUID MEMBRANE CURING COMPOUND CONFORMING TO ASTM C309.
- COMPLY WITH RECOMMENDATIONS IN ACI 302.1R FOR SCREEDING, RE-STRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES. DO NOT WET CONCRETE SURFACES. FLOAT FINISH: CONSOLIDATE SURFACE WITH POWER-DRIVEN FLOATS OR BY HAND FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER DRIVEN FLOATS. RE-STRAIGHTEN, COME DOWN HIGH SPOTS, AND FILL LOW SPOTS. REPEAT FLOAT PASSES AND RE-STRAIGHTENING UNTIL SURFACE IS LEFT WITH A UNIFORM, SMOOTH, GRANULAR TEXTURE. TROWEL FINISH: AFTER APPLYING FLOAT FINISH, APPLY FIRST TROWEL FINISH AND CONSOLIDATE CONCRETE BY HAND OR POWER-DRIVEN TROWEL. CONTINUE TROWELING PASSES AND RE-STRAIGHTEN UNTIL SURFACE IS FREE OF TROWEL MARKS AND UNIFORM IN TEXTURE AND APPEARANCE. GRIND SMOOTH ANY SURFACE DEFECTS THAT WOULD TELEGRAPH THROUGH APPLIED COATINGS OR FLOOR COVERINGS. FINISH AND MEASURE SURFACE SO GAP AT ANY POINT BETWEEN CONCRETE SURFACE AND AN UNLEVELED FREESTANDING 10-FOOT LONG STRAIGHTEDGE, RESTING ON TWO HIGH SPOTS AND PLACED ANYWHERE ON THE SURFACE, DOES NOT EXCEED 1/4 INCH. FILLING IN: FILL IN HOLES AND OPENINGS LEFT IN CONCRETE STRUCTURES, UNLESS OTHERWISE INDICATED. AFTER WORK OF OTHER TRADES IS IN PLACE, MIX, PLACE, AND CURE CONCRETE, AS SPECIFIED, TO BLEND WITH IN-PLACE CONSTRUCTION. PROVIDE OTHER MISCELLANEOUS CONCRETE FILLING INDICATED OR REQUIRED TO COMPLETE WORK.

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM, SPENCER STREET CONWAY, ARKANSAS 72032

Client

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Stamp



Revisions

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| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

Date

11 DECEMBER 2021

Phase

ISSUE FOR BID

Job Number

CAKT001

Scale

North



Drawing Title

SITE STRUCTURAL DETAILS

Drawing Number

FOR BID

S5.0.2

IRRIGATION GENERAL NOTES:

1. ALL STATE OF ARKANSAS LAWS/RULES AND ALL LOCAL CODES/ORDINANCES ARE MADE PART OF THESE PLANS AND SPECIFICATIONS WHETHER SHOWN OR NOT. THESE LAWS AND ORDINANCES WILL SUPERCEDE THE PLANS, DETAILS, AND/OR SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS CAUTIONED THAT THEY ARE TO INCLUDE ANY AND ALL COST NECESSARY TO MEET OR EXCEED THE LAWS OF THE STATE OF ARKANSAS OR LOCAL CODES CONCERNING LANDSCAPE IRRIGATION. A LICENSED IRRIGATOR OR LICENSED IRRIGATION TECHNICIAN SHALL BE ON-SITE AT ALL TIMES WHILE THE LANDSCAPE IRRIGATION SYSTEM IS BEING INSTALLED PER CITY OF CONWAY REQUIREMENTS.
2. IT IS THE INTENT OF THE PLANS TO PROVIDE THE OWNER WITH A FULLY AUTOMATED AND OPERATIONAL IRRIGATION SYSTEM UPON COMPLETION OF THE PROJECT
3. ALL 24 VOLT LEAD AND COMMON VALVE WIRING SHALL BE A MINIMUM OF UF-14 GA. SINGLE CONDUCTOR. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR PROPER WIRE SIZE BASED ON WIRE LENGTHS. WIRE SPLICES SHALL BE 3M-DBY PERMANENT AND WATERPROOF PER THE SPECIFICATIONS.
4. COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LANDSCAPE CONTRACTOR TO ENSURE ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
5. PIPING AND VALVES IN PAVING SHOWN FOR CLARITY ONLY, INSTALL IN ADJACENT PLANTING BED OR LAWN AREA. REFERENCE NOTE FOR EQUIPMENT LOCATIONS.
6. ALL VALVES, QUICK COUPLERS, AND OTHER RELATED COMPONENTS TO BE LOCATED IN PLANTING AREAS ONLY, NOT IN LAWN AREAS. COORDINATE THE INSTALLATION OF THESE ITEMS PRIOR TO INSTALLING.
7. LATERAL PIPING SHALL HAVE A MINIMUM OF 12" OF COVER. MAINLINE AND PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18" OF COVER. ALL FITTINGS TO BE SCHEDULE 40 PVC. USE WELD-ON #705 SOLVENT AND #P-68 PRIMER FOR PVC CONNECTIONS PER THE SPECIFICATIONS.
8. ALL MAINLINE TO BE 1-1/2" CLASS 200 PVC. SIZE ALL LATERAL PIPING PER MANUFACTURER'S RECOMMENDATIONS OF NOT EXCEEDING 5 FPS. REFERENCE PIPE SIZE CHART.
9. CONNECT DRIP INDICATOR HEADS TO LATERAL PIPING WITH 1/2" FLEXIBLE PVC AND 1/2" SCHEDULE 40 PVC FITTINGS AS REQUIRED. USE WELD-ON #795 SOLVENT AND #P-68 PRIMER ON THESE CONNECTIONS PER THE SPECIFICATIONS.
10. INSTALL QUICK COUPLING VALVES IN TWELVE BY SEVENTEEN (12"x17") INCH HIGHLINE VALVE BOX. CONNECT QUICK COUPLING VALVES TO MAINLINE PIPE WITH LASCO #1722-212 "UNITIZED", O-RING SWING JOINTS. SUPPLY OWNER WITH THREE (3) COUPLER KEYS WITH SWIVEL HOSE BIBB EACH, #33DK-10 AND #SH-0 RESPECTIVELY. VALVES TO BE INSTALLED SO THAT TOP OF QUICK COUPLER IS 2" BELOW BOTTOM OF VALVE BOX TOP. PURPLE VALVE BOX LID READS "NON-POTABLE, NOT SAFE FOR DRINKING" IN ENGLISH AND SPANISH. INSTALL APPROXIMATELY 150'-0" ON CENTER ALONG ENTIRE LENGTH OF MAINLINE
11. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO CONNECT NEW UF-14GA VALVE WIRES TO THE CONTROLLER LOCATED PER PLANS. VERIFY THE EXACT SIZE AND LOCATION OF THE CONTROLLER PRIOR TO BIDDING AND INSTALLING. CONTROLLER 01 WILL BE NEW CONTROLLER THAT WILL REQUIRE 110VOLT SERVICE (PROVIDED BY THE GENERAL CONTRACTOR) AND INSTALLING ANY REQUIRED CONDUITS AND WIRE RUNS. CONTRACTOR MUST COORDINATE THIS WORK WITH ALL DISCIPLINES PRIOR TO BEGINNING OF THE PROJECT.
12. INSTALL REMOTE CONTROL VALVES AND WIRE SPLICES IN TEN (10") INCH ROUND HIGHLINE VALVE BOXES WITH BLACK LIDS.
13. INSTALL ANY REQUIRED SLEEVES AND/OR BORES REQUIRED FOR THIS PROJECT. COORDINATE THIS WORK WITH ALL DISCIPLINES PRIOR TO INSTALLATION
14. DESIGN PRESSURE IS 60.0 PSI. STATIC PRESSURE IS 65 PSI. TEN DAYS PRIOR TO START OF CONSTRUCTION, VERIFY STATIC PRESSURE. IF STATIC PRESSURE IS LESS THAN STATED DO NOT START WORK UNTIL NOTIFIED TO PROCEED BY OWNER.
15. MINIMUM DISTANCE BETWEEN MAIN LINE AND LATERAL LINE FITTINGS (EXCEPT FOR REDUCER BUSHINGS) TO BE EIGHTEEN (18") INCHES AND MINIMUM HORIZONTAL DISTANCE OF TWENTY-FOUR (24") INCHES BETWEEN ANY VALVES THAT ARE INSTALLED SIDE BY SIDE.
16. STAKE TREE BUBBLER LOCATIONS AND RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. PROVIDE THE FOLLOWING QUANTITIES OF BUBBLERS PER NEW TREE:
 17. 0.5" - 2" CAL. = ONE BUBBLER HEAD
 18. 2.5" - 6" CAL. = TWO BUBBLER HEADS
 19. 6.6" - 9" CAL. = THREE BUBBLER HEADS
 20. 9.5" - 12" CAL. = FOUR BUBBLER HEADS
21. INSTALL REMOTE CONTROL DRIP ZONE KIT VALVES IN TWELVE BY SEVENTEEN (12"x17") INCH HIGHLINE VALVE BOX WITH BLACK LID.
22. INSTALL DRIPLINE MINIMUM OF 2" AND A MAXIMUM OF 4" FROM HARDSCAPE SURFACES. STAKE DRIPLINE AND RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT BEFORE INSTALLATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDATIONS OF 5'-0" PER SECOND IN DRIPLINE.
23. PROVIDE AND INSTALL DISTRIBUTION TUBING, STAKES, EMITTERS, TRANSFER FITTINGS, DIFFUSER BUG CAP, CONTROL ZONE KITS, ETC. NECESSARY FOR PROPER INSTALLATION OF THE BEDS. ALL PVC HEADER PIPING TO BE CLASS 200 PVC SOLVENT WELD PIPE. INSERT ALL RAINBIRD XF DRIPLINE INSERT FITTINGS PER MANUFACTURER'S RECOMMENDATIONS. INSTALL ONE RAINBIRD OPERATION INDICATOR HEAD FOR EACH DRIP ZONE.
24. AIR RELIEF VALVE TO BE RAINBIRD AR VALVE KIT INSTALLED IN A SIX-INCH (6") HIGHLINE ROUND VALVE BOX WITH BLACK LID AND 6" OF GRAVEL SUMP. FLUSH VALVES TO BE 1/2" LASCO BALL VALVE ON IPS FLEXIBLE PIPE AND 1/2" SCHEDULE 40 FITTINGS INSTALLED IN A SIX-INCH (6") HIGHLINE ROUND VALVE BOX WITH BLACK LID AND 6" OF GRAVEL SUMP.
25. ALL XFS CV DRIPLINE AND DISTRIBUTION TUBING TO BE INSTALLED BELOW FINISH GRADE APPROXIMATELY 4" TO 6" PER MANUFACTURER'S RECOMMENDATIONS. ALL DRIPLINE TO BE INSTALLED MINIMUM OF 1'-4" AND MAXIMUM OF 1'-8" ROW SPACING UNLESS INSTRUCTED OTHERWISE. I.L.C. IS RESPONSIBLE TO VERIFY THE EXACT EMITTER FLOW, EMITTER SPACING, AND ROW SPACING WITH MANUFACTURER PRIOR TO INSTALLING TO PROVIDE PROPER PRECIPITATION RATE BASED ON PLANT MATERIAL AND SOIL TYPE. TUBING TO BE STAKED WITH RAINBIRD 12 GA. GALVANIZED TIE DOWNS. STAKE EVERY 3'-0" ALONG ENTIRE LENGTH OF TUBING AND A MINIMUM OF 24" FROM ANY FITTINGS.
26. INCLUDE THE FOLLOWING ALLOWANCES FOR PROVIDING AND INSTALLING AIR RELIEF VALVES AND FLUSH VALVES FOR THE DRIP SYSTEM. EXACT QUANTITY AND LOCATION OF THESE DEVICES WILL BE DETERMINED AT THE TIME OF INSTALLATION. IN GENERAL, ALL AIR RELIEF VALVES WILL BE INSTALLED AT THE HIGH POINTS AND FLUSH VALVES WILL BE INSTALLED AT THE LOW POINTS OF EXHAUST HEADER. ALLOW FOR APPROXIMATELY ONE (1) AIR RELIEF VALVE AND APPROXIMATELY ONE (1) FLUSH VALVE FOR EACH ZONE.
27. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO HAND DIG WITHIN ALL EXISTING TREE ROOT ZONES. CONTRACTOR MUST STAKE DITCHES AND RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO ANY TRENCHING OR DIGGING.
28. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO CONNECT PROPOSED 1-1/2" CLASS 200 PVC MAINLINE TO EXISTING METER AT THIS APPROXIMATE LOCATION (SEE PLANS). VERIFY EXACT SIZE AND LOCATION OF EXISTING MAINLINE BEFORE INSTALLING. CONTRACTOR MUST COORDINATE THIS WORK WITH ALL DISCIPLINES PRIOR TO BEGINNING OF THE PROJECT.

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.
	BUBBLER HEAD TWO PER TREE	RAINBIRD (30 PSI)	#1402 NOZZLES ON 1/2" FLEX PVC UNLESS OTHERWISE NOTED
	QUICK COUPLING VALVE	RAINBIRD	#33-DNP WITH LASCO BALL VALVE, PURPLE LID READS "RECLAIMED WATER, DO NOT DRINK" IN ENGLISH AND "NO TOME" IN SPANISH.
	REMOTE CONTROL VALVE	RAINBIRD	PEB SERIES WITH PRS-D PRESSURE REGULATOR, REFER TO PLANS FOR SIZE
	NEW CONTROLLER	WEATHERMATIC	SL1600 WALLMOUNT CONTROLLER WITH SLW5 WEATHER MONITOR
	EXISTING MAINLINE	REFER TO SPEC.	VERIFY EXACT SIZE AND LOCATION
	NEW MAINLINE	REFER TO SPEC.	1-1/2" CLASS 200 PVC
	LATERAL PIPING	REFER TO SPEC.	3/4" & LARGER - CLASS 200 PVC 1/2" - CLASS 315 PVC
	REMOTE CONTROL DRIP VALVE	RAINBIRD	XCZ-100-PRB-COM CONTROL ZONE KIT VALVE, REFER TO PLAN FOR SIZE
	DRIP HEADER PIPING	REFER TO SPEC.	CLASS 200 PVC UNLESS OTHERWISE NOTED
	PLANTING BED DRIPLINE TUBING	RAINBIRD	XFS-06-18 WITH XF INSERT FITTINGS, TDS-050 GALVANIZED TUBING STAKES, AND DRIP INDICATOR HEAD
	WATER METER	REFER TO SPEC.	PER LOCAL BUILDING CODE
	ISOLATION VALVE	NIBCO	#T-29, REFER TO PLAN FOR SIZE
	WYE STRAINER	FEBCO	#650, REFER TO PLAN FOR SIZE
	BACKFLOW PREVENTER	FEBCO	#850BV, REFER TO PLAN FOR SIZE
	MASTER VALVE	RAINBIRD	PEB, REFER TO PLAN FOR SIZE
	STATION NUMBER VALVE SIZE GPM (APPROX.)		

PIPE SIZE CHART

FLOW/GPM:	PIPE SIZE:
0 - 4.0	1/2"
4.1 - 9.5	3/4"
9.6 - 14.5	1"
14.6 - 27.0	1-1/4"
27.1 - 35.0	1-1/2"
35.1 - 55.0	2"
55.1 - 70.0	2-1/2"

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM,
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CONWAY, ARKANSAS 72032

Client

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Stamp



01/11/2021

Revisions

- 1
- 2
- 3
- 4
- 5

Date

11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAKTO01

Drawing Title

IRRIGATION NOTES AND LEGEND

Drawing Number

FOR BID

L3.0.1

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

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Date

11 JANUARY 2021

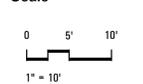
Phase

ISSUE FOR BID

Job Number

CAKT001

Scale



North



Drawing Title

IRRIGATION PLAN

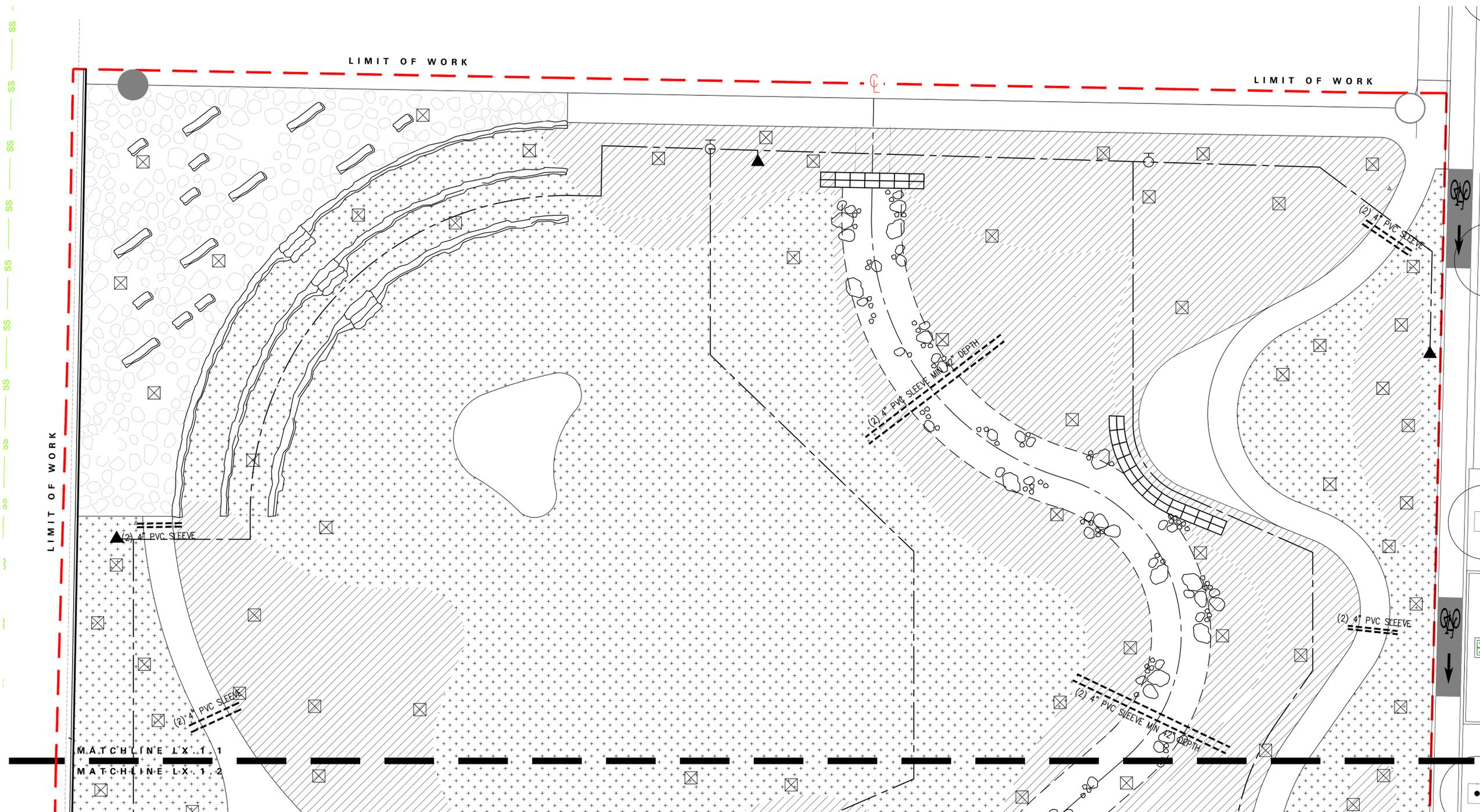
Drawing Number

FOR BID

L3.1.1

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P:\CAK\CAKT001 Markham Square\4 Drawings\Graphics\AutoCAD\Sheets\IRRIGATION\L3.1.1 IRRIGATION PLAN.dwg | SFITZGERALD | PREVIOUS PAPER SIZE (24.00 X 36.00 INCHES) | 1/11/2021



IRRIGATION LEGEND:

	BUBBLER HEAD TWO PER TREE	RAINBIRD (30 PSI)	#1402 NOZZLES ON 1/2" FLEX PVC UNLESS OTHERWISE NOTED
	QUICK COUPLING VALVE	RAINBIRD	#33-DNP WITH LASCO BALL VALVE, PURPLE LID READS "RECLAIMED WATER, DO NOT DRINK" IN ENGLISH AND "NO TOME" IN SPANISH.
	REMOTE CONTROL VALVE	RAINBIRD	PEB SERIES WITH PRS-D PRESSURE REGULATOR, REFER TO PLANS FOR SIZE
	NEW CONTROLLER	WEATHERMATIC	SL1600 WALLMOUNT CONTROLLER WITH SLW5 WEATHER MONITOR
	EXISTING MAINLINE	REFER TO SPEC.	VERIFY EXACT SIZE AND LOCATION
	NEW MAINLINE	REFER TO SPEC.	1-1/2" CLASS 200 PVC
	LATERAL PIPING	REFER TO SPEC.	3/4" & LARGER - CLASS 200 PVC 1/2" - CLASS 315 PVC
	REMOTE CONTROL DRIP VALVE	RAINBIRD	XCZ-100-PRB-COM CONTROL ZONE KIT VALVE, REFER TO PLAN FOR SIZE

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.
	DRIP HEADER PIPING	REFER TO SPEC.	CLASS 200 PVC UNLESS OTHERWISE NOTED
	PLANTING BED DRIPLINE TUBING	RAINBIRD	XFS-06-18 WITH XF INSERT FITTINGS TDS-050 GALVANIZED TUBING STAKES, AND DRIP INDICATOR HEAD
	WATER METER	REFER TO SPEC.	PER LOCAL BUILDING CODE
	ISOLATION VALVE	NIBCO	#T-29, REFER TO PLAN FOR SIZE
	WYE STRAINER	FEBCO	#650, REFER TO PLAN FOR SIZE
	BACKFLOW PREVENTER	FEBCO	#850BV, REFER TO PLAN FOR SIZE
	MASTER VALVE	RAINBIRD	PEB, REFER TO PLAN FOR SIZE
	STATION NUMBER VALVE SIZE GPM (APPROX.)	PIPE SIZE CHART	

FLOW/GPM:	PIPE SIZE:
0 - 4.0	1/2"
4.1 - 9.5	3/4"
9.6 - 14.5	1"
14.6 - 27.0	1-1/4"
27.1 - 35.0	1-1/2"
35.1 - 55.0	2"
55.1 - 70.0	2-1/2"

IRRIGATION LEGEND:

	AREA TO BE IRRIGATED BY DRIP
	AREA TO BE IRRIGATED BY ROTOR OR SPRAY
	SCHEDULE 40 PVC SLEEVING (SIZE PER NOTES)

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUND BY MARKHAM,
SPENCER STREET
CONWAY, ARKANSAS 72032

Client
CITY OF CONWAY ARKANSAS
1201 OAK STREET
CONWAY, ARKANSAS 72032

Landscape Architect

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CIVIL ENGINEERING:
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Stamp



01/11/2021

Revisions

- 1
- 2
- 3
- 4
- 5

Date

11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAKT001

Scale

0 6" 12"

1" = 1'-0"

North

Drawing Title

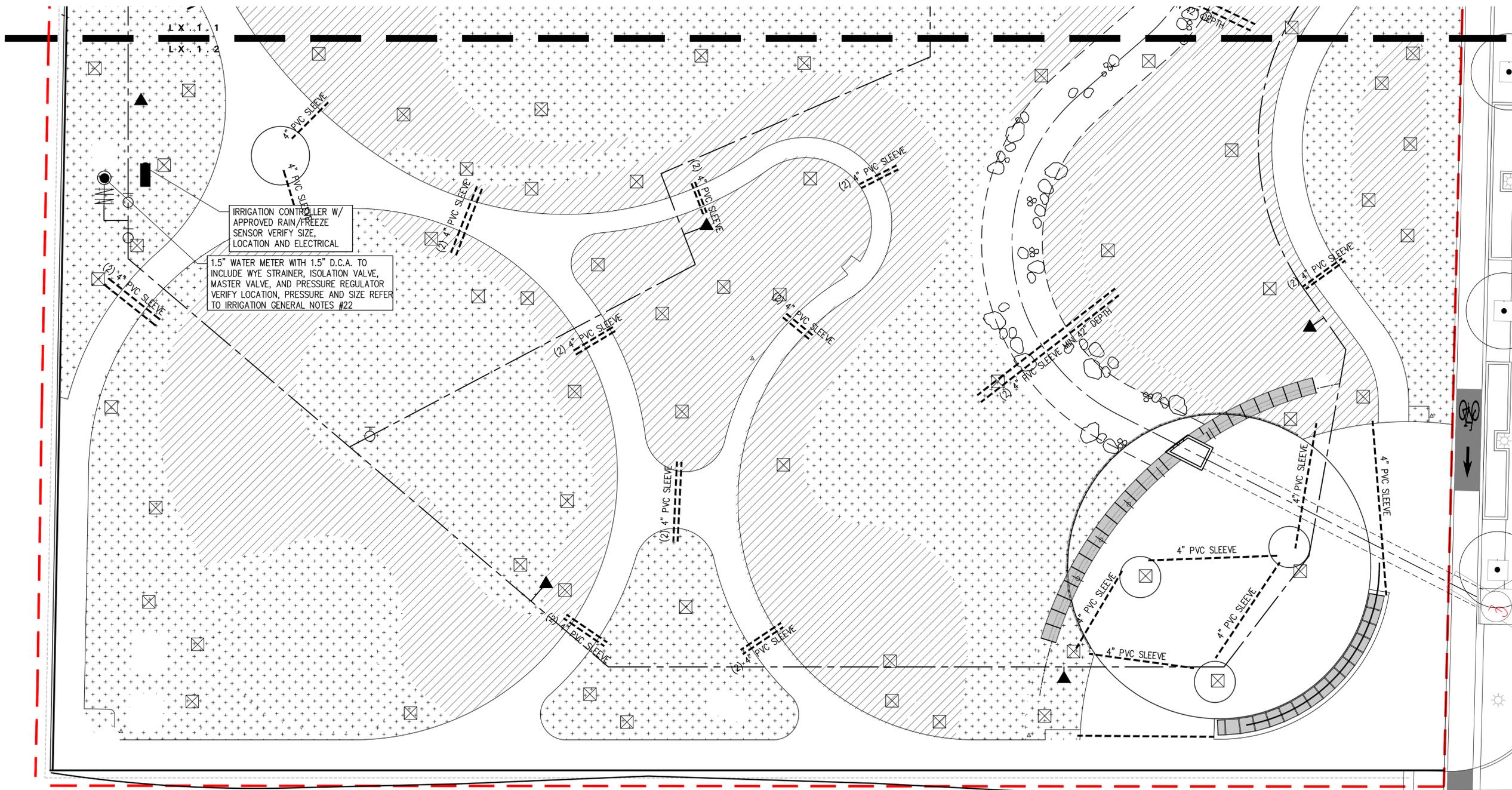
IRRIGATION PLAN

Drawing Number

FOR BID

L3.1.2

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IRRIGATION LEGEND:

	BUBBLER HEAD TWO PER TREE	RAINBIRD (30 PSI)	#1402 NOZZLES ON 1/2" FLEX PVC UNLESS OTHERWISE NOTED
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	REMOTE CONTROL VALVE	RAINBIRD	PEB SERIES WITH PRS-D PRESSURE REGULATOR, REFER TO PLANS FOR SIZE
	NEW CONTROLLER	WEATHERMATIC	SL1600 WALLMOUNT CONTROLLER WITH SLW5 WEATHER MONITOR
	EXISTING MAINLINE	REFER TO SPEC.	VERIFY EXACT SIZE AND LOCATION
	NEW MAINLINE	REFER TO SPEC.	1-1/2" CLASS 200 PVC
	LATERAL PIPING	REFER TO SPEC.	3/4" & LARGER - CLASS 200 PVC 1/2" - CLASS 315 PVC
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	ISOLATION VALVE	NIBCO	#T-29, REFER TO PLAN FOR SIZE
	WYE STRAINER	FEBCO	#650, REFER TO PLAN FOR SIZE
	BACKFLOW PREVENTER	FEBCO	#850BV, REFER TO PLAN FOR SIZE
	MASTER VALVE	RAINBIRD	PEB, REFER TO PLAN FOR SIZE
	STATION NUMBER VALVE SIZE GPM (APPROX.)		

PIPE SIZE CHART

FLOW/GPM:	PIPE SIZE:
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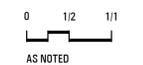
Phase

ISSUE FOR BID

Job Number

CAKTO01

Scale



Drawing Title

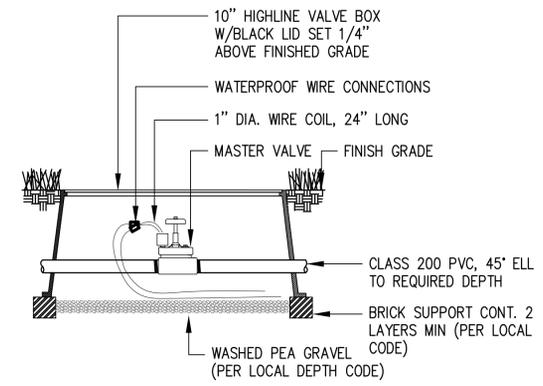
IRRIGATION DETAILS

Drawing Number

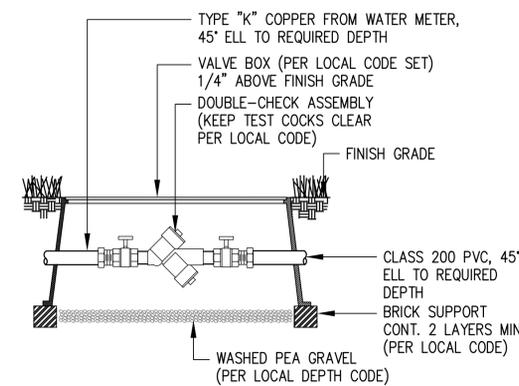
FOR BID

L3.2.1

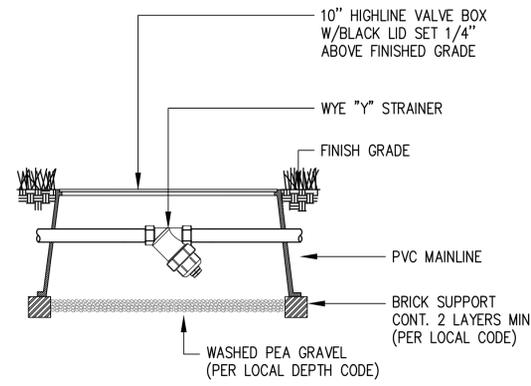
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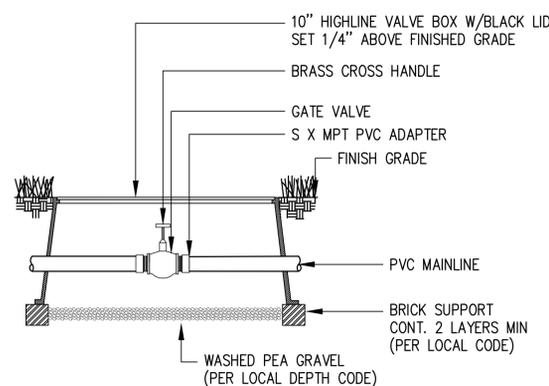
04 MASTER VALVE
1" = 1'-0"



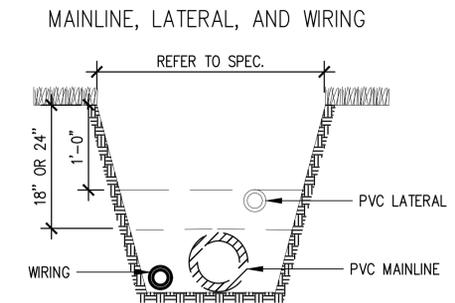
08 DOUBLE CHECK ASSEMBLY
1" = 1'-0"



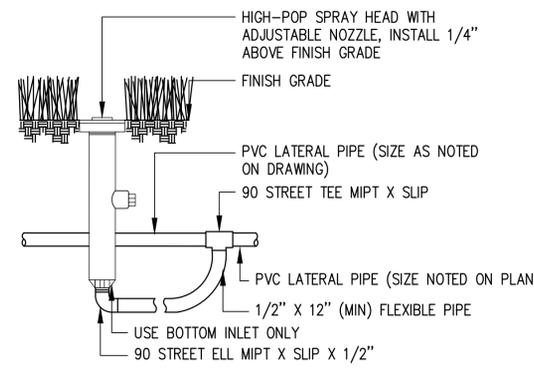
12 WYE STRAINER
1" = 1'-0"



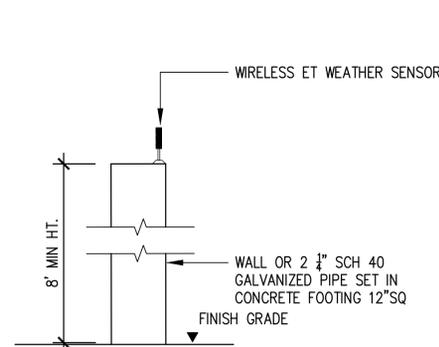
16 ISOLATION VALVE
1" = 1'-0"



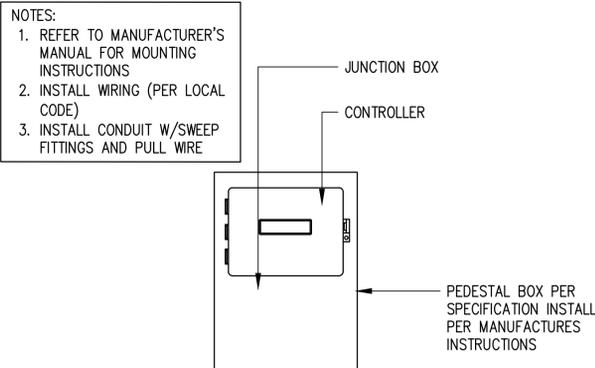
03 TRENCHING DETAIL
1" = 1'-0"



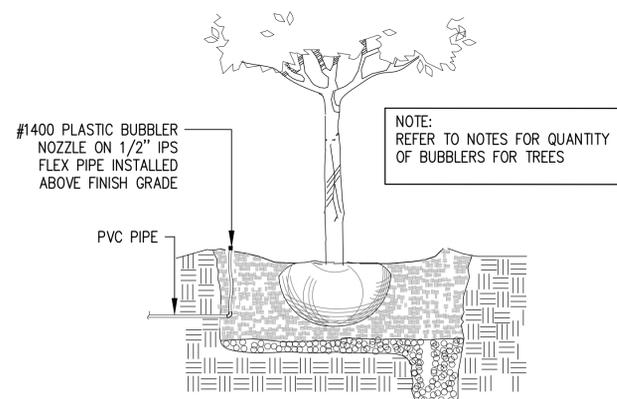
07 DRIP INDICATOR HEAD
1" = 1'-0"



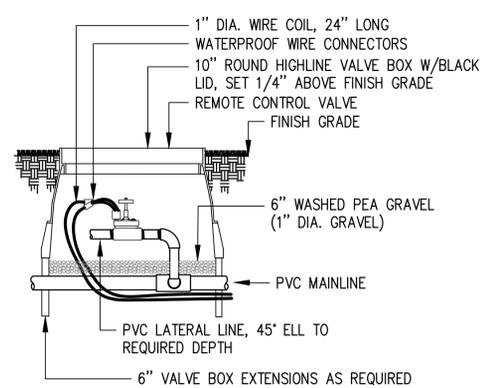
11 WALLMOUNT SENSOR
1" = 1'-0"



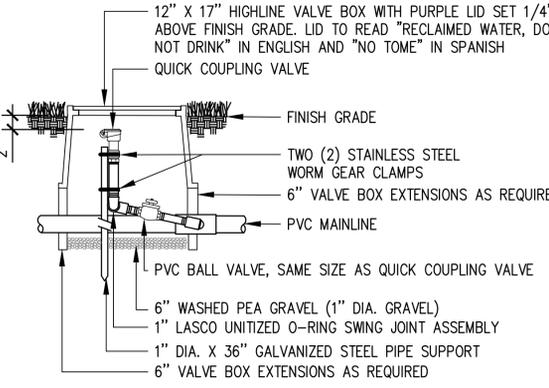
15 PEDESTAL MOUNTED CONTROLLER
1" = 1'-0"



06 TREE BUBBLER
1" = 1'-0"



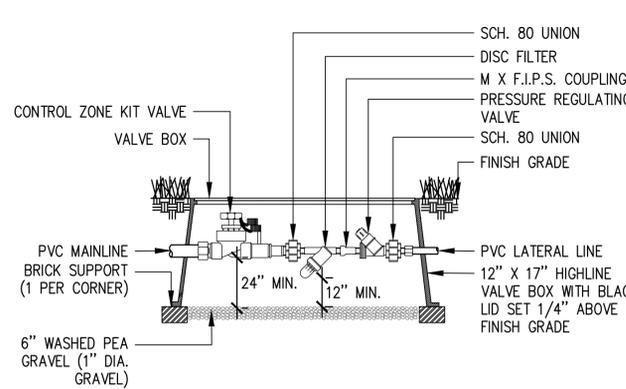
10 REMOTE CONTROL VALVE
1" = 1'-0"



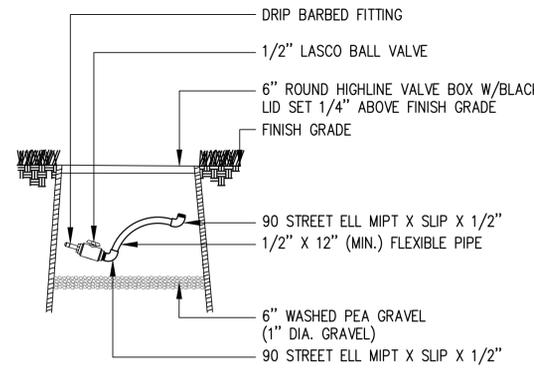
14 QUICK COUPLING VALVE WITH BALL VALVE
1" = 1'-0"

02 PVC PIPE SIZE CHART
1" = 1'-0"

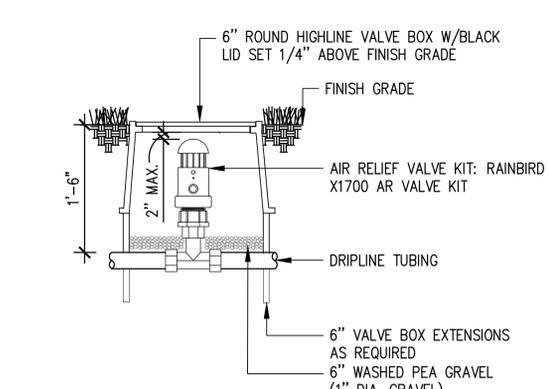
FLOW/GPM:	PIPE SIZE:
0 - 4.0	1/2"
4.1 - 9.5	3/4"
9.6 - 14.5	1"
14.6 - 27.0	1-1/4"
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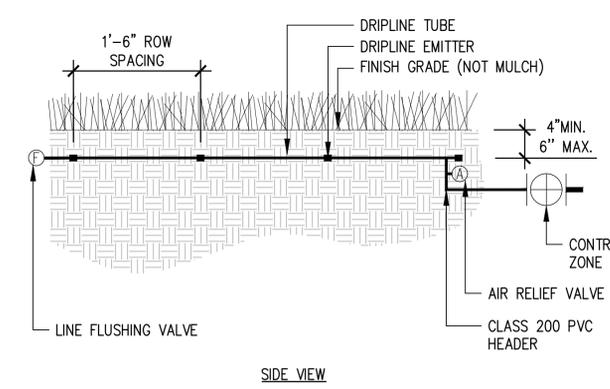
05 REMOTE CONTROL DRIP ZONE KIT
1" = 1'-0"



09 FLUSH VALVE
1" = 1'-0"



13 AIR RELIEF VALVE
1" = 1'-0"



01 SUBSURFACE DRIP LAYOUT
1" = 1'-0"

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North

AS INDICATED

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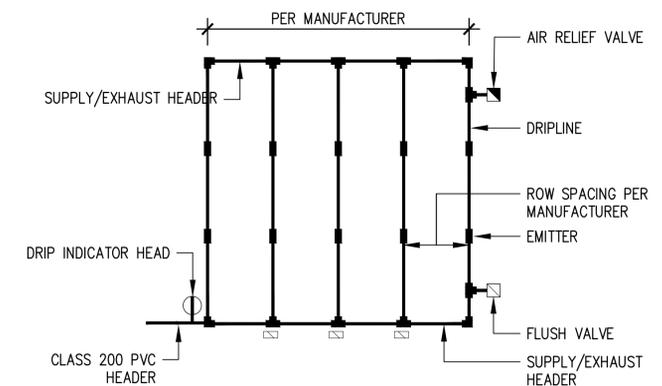
IRRIGATION DETAILS

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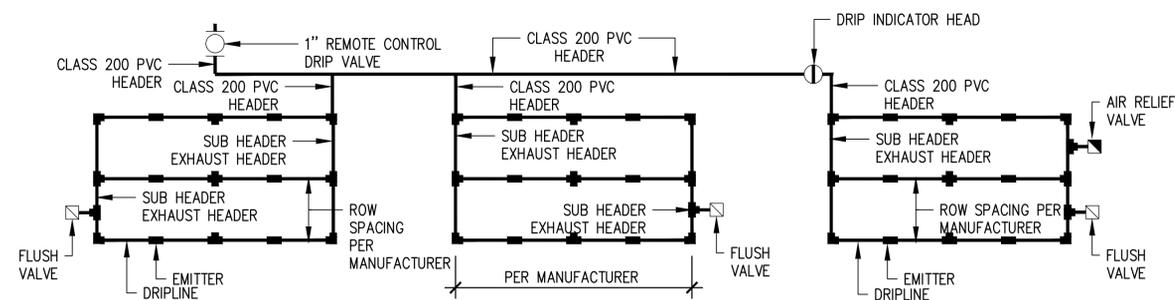
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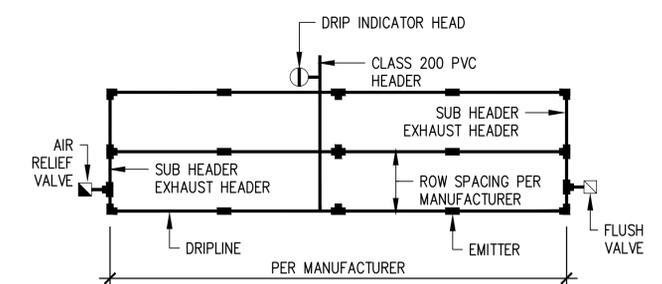
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02 TYPICAL DRIPLINE LAYOUT
1" = 1'-0"



03 TYPICAL DRIPLINE LAYOUT
1" = 1'-0"



01 TYPICAL DRIPLINE LAYOUT
1" = 1'-0"

P:\CAK\CAK001 Markham Square\4 Drawings\Graphics\AutoCAD\Sheets\PLANTING\4.0.1 PLANTING SCHEDULES.dwg | SFITZGERALD | PREVIOUS PAPER SIZE (24.00 X 36.00 INCHES) | 1/11/2021

TREE SCHEDULE							
ABBREVIATION	BOTANICAL NAME	COMMON NAME	CALIPER	HT.	SPD.	COMMENTS/REMARKS	QUANTITY
ACE RUB	ACER RUBRUM 'SUMMER RED'	SUMMER RED RED MAPLE	6"	24'-28'	8'-9'	SPECIMEN, FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER. 6' CLEAR TRUNK.	5
AES PAV	AESCULUS PAVIA	RED BUCKEYE	3" MIN.	10'-12'	5'-6'	FULL, UNIFORM, MATCHING. MULTI-TRUNK SPECIMEN, 3 TRUNK MINIMUM / 7 TRUNK MAXIMUM.	7
AME CAN	AMELANCHIER CANADENSIS 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	3" MIN.	10'-12'	5'-6'	FULL, UNIFORM, MATCHING. MULTI-TRUNK SPECIMEN, 3 TRUNK MINIMUM / 7 TRUNK MAXIMUM.	5
BET NIG	BETULA NIGRA	RIVER BIRCH	6"	18'-20'	8'-9'	SPECIMEN, FULL, UNIFORM, AND MATCHING IN FORM AND CHARACTER. MULTI-TRUNK, 3 TRUNKS.	6
CER CAN	CERCIS CANADENSIS	EASTERN REDBUD	3"	8'-10'	4'-5'	FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER.	6
CHI VIR	CHIONANTHUS VIRGINICUS	FRINGETREE	3"	8'-10'	4'-5'	FULL, UNIFORM, AND MATCHING IN FORM AND CHARACTER. MULTI-TRUNK, 3-5 TRUNKS.	7
COR FLO	CORNUS FLORIDA	DOGWOOD	3"	8'-10'	4'-5'	FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER.	7
ILE DEC	ILEX DECIDUA	POSSUMHAW HOLLY	3"	8'-10'	4'-5'	FULL, UNIFORM, MATCHING. MULTI-TRUNK SPECIMEN, 3 TRUNK MINIMUM / 7 TRUNK MAXIMUM.	7
ILE OPA	ILEX OPACA 'JERSEY DELIGHT'	AMERICAN HOLLY	3"	8'-10'	4'-5'	FULL, UNIFORM, AND MATCHING IN FORM, SIZE, AND CHARACTER. SINGLE, STRAIGHT CENTRAL LEADER. TREE FORM.	10
NYS SYL	NYSSA SYLVATICA	BLACK GUM	6"	20'-24'	10'-12'	SPECIMEN, FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER. 5' CLEAR TRUNK.	10
QUE ALB	QUERCUS ALBA	WHITE OAK	4"	14'-16'	6'-8'	FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER.	9
QUE PHE	QUERCUS PHELLOS	WILLOW OAK	6"	22'-24'	8'-9'	SPECIMEN, FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER. 6' CLEAR TRUNK.	11
QUE NIG	QUERCUS NIGRA	WATER OAK	4"	14'-16'	6'-8'	FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER. 5' CLEAR TRUNK.	3
TAX ASC	TAXODIUM ASCENDENS	POND CYPRESS	5"	16'-18'	4'-5'	SPECIMEN, FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER..	9
TAX DIS	TAXODIUM DISTICHUM	BALD CYPRESS	6"	18'-20'	8'-9'	SPECIMEN, FULL, UNIFORM, SINGLE, STRAIGHT CENTRAL LEADER. 5' CLEAR TRUNK.	6

PLANTING SCHEDULE

GRASSES							
SYMBOL	ABBREVIATION	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS/ COMMENTS	
	BOU DAC	BOUTELOUA DACTYLOIDES '609' OR 'DENSITY'	BUFFALO GRASS	SOD	-	SOLID SOD, TIGHT JOINT, NO DRY EDGES, ROLLED.	
	CAR PEN	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE	PLUGS OR 2 3/4" POTS	8" O.C.	WELL ROOTED.	
	BOU GRA	BOUTELOUA GRACILIS	BLUE GRAMA GRASS	1 GAL.	15" O.C.	12"H X 8"W (LEAF BLADES). FULL, WELL ROOTED. TRIANGULAR SPACED	
	SCH SCO	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUE STEM	1 GAL.	15" O.C.	12"H X 8"W (LEAF BLADES). FULL, WELL ROOTED. TRIANGULAR SPACED	
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY	1 GAL.	30" O.C.	12"H X 8"W (LEAF BLADES). FULL, WELL ROOTED. TRIANGULAR SPACED	
	PAN VIR	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	3 GAL.	36" O.C.	24"H X 12"W (LEAF BLADES). FULL, WELL ROOTED. TRIANGULAR SPACED	
	SOR NUT	SORGHASTRUM NUTANS	INDIAN NUT GRASS	3 GAL.	36" O.C.	24"H X 12"W (LEAF BLADES). FULL, WELL ROOTED. TRIANGULAR SPACED	

GENERAL PLANTING NOTES (1/3):

- VERIFY LOCATIONS OF ALL PERTINENT SITE IMPROVEMENTS INSTALLED UNDER OTHER SCOPES AND UTILITIES. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE LANDSCAPE ARCHITECT FOR INSTRUCTION PRIOR TO COMMENCING WORK.
- AGRONOMIC SOIL TESTING TO OCCUR ON SITE AT DESIGNATED LOCATIONS, PER SPECIFICATION SECTIONS 32 91 13. PROVIDE FOUR (4) TEST SAMPLES BASED ON SOIL TAKEN FROM A MINIMUM OF FOUR AREAS WITHIN SITE AT GENERALLY EQUAL SPACING ON SITE AND IN LOCATIONS APPROVED BY LANDSCAPE ARCHITECT.
- SAMPLES SHALL THEN BE TESTED AND ANALYZED FOR AGRICULTURAL SUITABILITY AND FERTILITY BY ACCREDITED SOIL TESTING LABORATORY PER SPECIFICATIONS. ANALYSIS SHALL INCLUDE REVIEW AND COORDINATION WITH SPECIFICATIONS AND RECOMMENDATIONS FOR SOIL PREPARATION AND BACKFILL MIX. SUBMIT SOILS ANALYSES TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO SOIL PREPARATION. THIS REQUIREMENT APPLIES TO ALL SOILS AND CONDITIONS WITHIN THIS PROJECT.

PERENNIALS/GROUND COVER						
SYMBOL	ABBREVIATION	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS/ COMMENTS
	WETLAND FRINGE MIX	SEE ATTACHED LIST (L4.0.2)	WETLAND FRINGE MIX	PLUGS	8" O.C.	TRIANGULAR SPACED
	WILDFLOWER MIX	VARIOUS. REFER TO NATIVE AMERICAN SEED 'BUTTERFLY RETREAT' MIX.	WILDFLOWER MIX	SEED	15 LBS. PER ACRE	FULL COVERAGE. PRODUCT SOURCE: NATIVE AMERICAN SEED 'BUTTERFLY RETREAT MIX' OR APPROVED EQUAL
	RAIN GARDEN MATRIX	SEE ATTACHED LIST (L4.0.2)	RAIN GARDEN MATRIX	PLUGS	8" O.C.	TRIANGULAR SPACED
	REMEDIATION MIX	SEE ATTACHED LIST (L4.0.2)	REMEDIATION MIX	SEED	15 LBS. PER ACRE	FULL COVERAGE. PRODUCT SOURCE: NATIVE AMERICAN SEED OR APPROVED EQUAL. CUSTOM SEED MIX
	LOB & PHL	LOBELIA CARDINALIS & PHLOX DIVARICATA	CARDINAL FLOWER & SWEET WILLIAM MIX	1 GAL.	12" O.C.	50% LOBELIA, 50% PHLOX. MATCHING IN FORM AND CHARACTER, WELL ROOTED. TRIANGULAR SPACED
	SPR MIX	LEUCANTHEMUM x SUPERBUM, ECHINACEA PURPUREA, & RUDBECKIA FULGIDA 'GOLDSTURM'	SHASTA DAISY, PURPLE CONEFLOWER, & BLACK-EYED SUSAN	1 GAL.	12" O.C.	30% LEUCANTHEMUM, 40% ECHINACEA, 30% RUDBECKIA. MATCHING IN FORM AND CHARACTER, WELL ROOTED
	BAYV MIX	MONARDA FISTULOSA, ALLIUM CERNUUM, ACHILLEA MILLEFOLIUM, VERONIA LETTERMANII	BEEBALM, ALLIUM, YARROW, VERONIA MIX	1 GAL.	12" O.C.	20% MONARDA, 30% ALLIUM, 30% ACHILLEA, 20% VERONIA. MATCHING IN FORM AND CHARACTER, WELL ROOTED
SHRUBS/HERBACEOUS						
SYMBOL	ABBREVIATION	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS/ COMMENTS
	MYR PUS	MYRICA PUSILLA	DWARF WAX MYRTLE	3 GAL.	24" O.C.	18"H X 18"W. FULL, MATURE, MATCHING IN FORM AND CHARACTER, WELL ROOTED. TRIANGULAR SPACING
	BAP SPH	BAPTISIA SPHAEROCARPA & BAPTISIA AUSTRALIS	YELLOW WLD INDIGO & BLUE FALSE INDIGO	1 GAL.	18" O.C.	15"H X 15"W. FULL, WELL ROOTED, MATCHING IN FORM AND CHARACTER.. TRIANGULAR SPACED 50-50 MIX
	CAL AME	CALICARPA AMERICANA	AMERICAN BEAUTYBERRY	3 GAL.	24" O.C.	18"H X 15"W. FULL, MATURE, MATCHING IN FORM AND CHARACTER, WELL ROOTED. TRIANGULAR SPACING.
	CEP OCC	CEPHALANTHUS OCCIDENTALIS 'MAGICAL MOONLIGHT'	BUTTONBUSH	3 GAL.	24" O.C.	18"H X 15"W. FULL, MATURE, MATCHING IN FORM AND CHARACTER, WELL ROOTED. TRIANGULAR SPACING.
	HYP PRO	HYPERICUM PROLIFICUM 'SUNNY BOULEVARD'	SCARLET ROSE MALLOW	3 GAL.	24" O.C.	18"H X 15"W FULL, MATURE, MATCHING IN FORM AND CHARACTER, WELL ROOTED. TRIANGULAR SPACING.
	ILE VER	ILEX VERTICILLATA 'RED SPRITE' AND 'JIM DANDY'	WINTERBERRY HOLLY	3 GAL.	18" O.C.	18"H X 15"W FULL, MATURE, MATCHING IN FORM AND CHARACTER, WELL ROOTED. TRIANGULAR SPACING. MIX 30% JIM DANDY WITH 70% RED SPRITE
VINES						
	LON JAP	LONICERA JAPONICA 'HALLIANA'	HALL'S HONEYSUCKLE	3 GAL.	36" O.C.	FULL, MATURE, WELL ROOTED, STAKED, 5 RUNNERS MINIMUM.

GENERAL PLANTING NOTES CONTINUED (2/3):

- TOPSOIL SHALL BE A MINIMUM OF 8 INCHES IN DEPTH OVER ALL NON-HARDSCAPE AREAS PER SPECIFICATIONS AND PLACED SUCH THAT TOP ELEVATION OF TOPSOIL IS ELEVATION OF FINISHED GRADE NOTED ABOVE. TOPSOIL SHALL CONFORM TO SPECIFICATIONS, IMPORT SOIL SHALL BE SIMILAR TO THE AREA'S EXISTING TOPSOIL. REFER TO SPECIFICATIONS. ON SITE TOPSOIL FROM STRIPPING OPERATIONS SHALL BE USED ON SITE PRIOR TO OFF SITE TOPSOIL USE. TESTING OF ON SITE TOPSOIL TO OCCUR PER SPECIFICATIONS AND AMENDMENTS SHALL BE PROVIDED PER RESULTS OF TESTING. OFF SITE TOPSOILS SHALL BE TESTED PER SPECIFICATION AND AMENDED PER RECOMMENDATIONS FROM TESTING AGENT AND HORTICULTURIST. REFER TO SPECIFICATIONS FOR SOIL AMENDMENTS AND DEPTHS.
- ALL PLANTING BEDS SHALL RECEIVE REQUIRED BED PREPARATIONS ADDED TO TOPSOIL PER SOIL ANALYSIS RECOMMENDATIONS AND PER SPECIFICATIONS.
- FINAL GRADING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO PLANTING.
- FINISH GRADES OF ALL SHRUB AREAS SHALL BE (2 1/2") BELOW ADJACENT CURB OR PAVEMENT. APPLIED MULCH (2" DEPTH) SHALL BE 1/2" BELOW ADJACENT PAVEMENT.
- FINISH GRADES OF ALL TURF AREAS (TOP OF SOD SOIL LEVEL) SHALL BE 1/2" BELOW ADJACENT CURB OR PAVEMENT, (UNLESS OTHERWISE NOTED).
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF FINE GRADING, REMOVAL OF MISCELLANEOUS DEBRIS AND ANY ADDITIONAL FILL REQUIRED TO CREATE A SMOOTH CONDITION PRIOR TO PLANTING IN ALL AREAS.
- LANDSCAPE AND OPEN AREAS SHALL BE KEPT FREE OF TRASH, LITTER AND WEEDS AT ALL TIMES DURING CONSTRUCTION.
- PROVIDE MATCHING FORMS AND SIZES FOR ALL PLANT MATERIALS WITHIN EACH SPECIES, PLANT TYPE AND SIZE DESIGNATED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND SQUARE FOOTAGE'S. QUANTITIES, IF PROVIDED ON THESE DOCUMENTS ARE FOR OWNER OR CITY INFORMATION ONLY. PLANT SPACING IS AS INDICATED ON 'PLANT SCHEDULE' UNLESS OTHERWISE NOTED. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE REMARKS.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION, AND MUST BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE IF DAMAGED, DESTROYED, OR REMOVED.

GENERAL PLANTING NOTES CONTINUED (3/3):

- TREE LOCATIONS ARE GENERALLY DIAGRAMMATIC. CONTRACTOR SHALL STAKE ALL TREE LOCATIONS IN FIELD USING DIFFERENT COLORED OR FLAGGED WOOD STAKES FOR EACH DIFFERENT TREE SPECIES FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATION. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST TREES TO FINAL LOCATION IN FIELD.
- SHRUB, GROUND COVER AND SEASONAL COLOR BED LAYOUTS SHALL BE STAKED BY CONTRACTOR FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO EXCAVATION OR EDGE SETTING. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST MINOR PLANT BED LAYOUTS TO EXACT LOCATION IN FIELD.
- ALL TREES TO BE PLANTED A MINIMUM OF (10'-0") FEET FROM FACE OF BUILDING AND (5'-0") FEET FROM CURBS OR PAVEMENT EXCEPT AS APPROVED BY LANDSCAPE ARCHITECT. ALL TREES TO BE PLANTED A MINIMUM (5'-0") FROM ALL UTILITY LINES EXCEPT AS APPROVED BY LANDSCAPE ARCHITECT.
- ALIGN AND EQUALLY SPACE IN ALL DIRECTIONS ALL TREES, SHRUBS AND VINES AS NOTED IN THE DRAWINGS.
- TREES PLANTED ON A SLOPE SHALL HAVE THE SOIL STAIN AT THE AVERAGE GRADE OF SLOPE.
- PRUNE NEWLY PLANTED TREES ONLY AS DIRECTED BY LANDSCAPE ARCHITECT. DO NOT PRUNE TREES AT NURSERY ONCE TAGGED BY SWA UNTIL ON-SITE AND SET AND ONLY UNDER DIRECTION OF LANDSCAPE ARCHITECT.
- HARDWOOD MULCH SHALL BE USED IN ALL PLANTED AREAS EXCEPT HYDROSEEDED OR LAWN AREAS. ALL AREAS ARE TO BE MULCHED USING SHREDDED HARDWOOD MULCH AS NOTED IN DETAILS AND SPECIFICATIONS. PROVIDE A (2") LAYER OF MULCH COVER (PER SPECIFICATIONS) AT ALL SHRUB AND GROUND COVER AREAS (UNLESS NOTED OTHERWISE).

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

PROJECTED BOUNDED BY MARKHAM, SPENCER STREET CONWAY, ARKANSAS 72032

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11 JANUARY 2021

Phase

ISSUE FOR BID

Job Number

CAK001

Drawing Title

PLANT MATERIAL SCHEDULES

Drawing Number

FOR BID

L4.0.1

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WETLAND FRINGE MIX (PLUGS)									
BOTANICAL NAME	COMMON NAME	% OF MIX	MATURE SIZE	NATIVE AR	SUN	WATER	U OF A RECOMMENDED	PHYTOREMEDIATOR	REMARKS
ALLIUM CERNUUM	NODDING ONION	5%	1-1.5' HIGH, .5' WIDE	Y	FULL TO PART SHADE	DRY TO MED	Y	-	ATTRACTS BUTTERFLIES
AMSONIA HUBRICHTII	ARKANSAS BLUE STAR	5%	2-3' HIGH, 2-3' SPREAD	Y	FULL TO PART SHADE	MED	Y	-	ATTRACTS BUTTERFLIES
BAPTISIA SPHAEROCARPA	YELLOW WILD INDIGO	10%	2-3' HIGH AND WIDE	Y	FULL TO PART SHADE	DRY TO MED	Y	-	ATTRACTS BUTTERFLIES
BOUTELOUA GRACILIS	BLUE GRAMA GRASS	10%	6" HIGH AND WIDE	-	FULL TO PART SHADE	DRY TO MED	-	-	EASILY GROWN FROM SEED. SOW IN SPRING.
COREOPSIS TINCTORIA	PLAINS COREOPSIS	10%	2-4' HIGH, 1.5' SPREAD	Y	FULL	DRY TO MED	Y	-	ATTRACTS BUTTERFLIES
ECHINACEA PURPUREA	PURPLE CONEFLOWER	10%	2-5' HIGH, 1-2' SPREAD	Y	FULL TO PART SHADE	DRY TO MED	Y	-	ATTRACTS POLLINATORS
HELIANTHUS ANGUSTIFOLIUS	SWAMP SUNFLOWER	10%	VAR.	Y	FULL TO PART SHADE	MED	Y	-	ATTRACTS MANY POLLINATORS. VARIOUS CULTIVAR HEIGHTS (2' 'LOW DOWN' TO 5-7' 'GOLD LACE')
LIATRIS SPICATA 'KOBOLD'	BLAZING STAR	10%	1.5-2.5' HIGH, 1' SPREAD	Y	FULL	MED	Y	-	ALTERNATIVE: L. PYCNOSTACHYA. ATTRACTS BUTTERFLIES AND HUMMINGBIRDS
PYCNANTHEMUM TENUIFOLIUM	NARROWLEAF MOUNTAIN MINT	5%	2'-3'	Y	FULL TO PART SHADE	DRY TO MED	Y	-	RECOMMENDED BY DR. LARRY PRICE OF THE ARKANSAS NATIVE PLANT SOCIETY
RUDBECKIA FULGIDA 'GOLDSTRUM'	BLACK-EYED SUSAN	10%	2-3' HIGH, 2' SPREAD	Y	FULL	DRY TO MED	Y	-	ATTRACTS BUTTERFLIES
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	5%	2-4' HIGH, 1.5-2' WIDE	Y	FULL	DRY TO MED	Y	Y	BREAKS DOWN HARD PETROLEUM CLASSES
VERNONIA LETTERMANII 'IRON BUTTERFLY'	LETTERMAN'S IRONWEED	10%	2-3' HIGH AND WIDE	Y	FULL	DRY TO MED	Y	-	ALTERNATIVES: V. ARKANSANA, V. MISSURICA. ATTRACTS POLLINATORS
RAIN GARDEN MATRIX (PLUGS)									
BOTANICAL NAME	COMMON NAME	% OF MIX	MATURE SIZE	NATIVE AR	SUN	WATER	U OF A RECOMMENDED	PHYTOREMEDIATOR	REMARKS
ANDROPOGON GLOMERATUS	BUSHY BLUESTEM	10%	3-6' HIGH, 2-3' WIDE	Y	FULL	MED TO WET	Y	Y	BREAKS DOWN EASY PETROLEUM CLASSES IN SOIL
ASCLEPIAS SPP.	MILKWEED	15%	VARIES	Y	FULL	MED TO WET	Y	-	VARIETIES 'INCARNATA' OR 'PURPURASCENS'. ATTRACTS BUTTERFLIES
IRIS VERSICOLOR	BLUE FLAG IRIS	15%	2-2.5' HIGH, 2-2.5' SPREAD	Y	FULL TO PART SHADE	MED TO WET	Y	-	SIMILAR ALTERNATIVE: 'IRIS VIRGINICA'
OSMUNDASTRUM CINNAMOMEUM	CINNAMON FERN	25%	2-3' HIGH AND WIDE	Y	PART SHADE TO FULL SHADE	MED TO WET	Y	-	
PANICUM VIRGATUM	SWITCH GRASS	10%	3-6' HIGH, 2-3' WIDE	Y	FULL TO PART SHADE	MED TO WET	Y	Y	BREAKS DOWN BOTH EASY AND HARD PETROLEUM CLASSES
POLYGONATUM BIFLORUM	SMOOTH SOLOMON'S SEAL	10%	1-3' HIGH, 1-1.5' WIDE	Y	PART SHADE TO FULL SHADE	MED TO WET	Y	-	
VERONICASTRUM VIRGINICUM 'CUPID'	CUPID' CULVER'S ROOT	15%	4-7' HIGH, 2-4' WIDE	Y	FULL	MED TO WET	Y	-	ATTRACTS BUTTERFLIES
REMEDICATION MATRIX (SEED)									
BOTANICAL NAME	COMMON NAME	% OF MIX	MATURE SIZE	NATIVE AR	SUN	WATER	U OF A RECOMMENDED	PHYTOREMEDIATOR	REMARKS
COREOPSIS TINCTORIA	PLAINS COREOPSIS	20%	2-4' HIGH, 1.5' SPREAD	Y	FULL	DRY TO MED	Y	-	ATTRACTS BUTTERFLIES
HELIANTHUS ANGUSTIFOLIUS 'LOW DOWN'	LOW DOWN' SWAMP SUNFLOWER	20%	VARIES	Y	FULL TO PART SHADE	MED	Y	-	ATTRACTS MANY POLLINATORS
HELIANTHUS ANNUUS	COMMON SUNFLOWER	20%	3'-10'	Y	FULL	DRY TO MED	-	Y	PHYTOREMEDIATES HARD PAH CLASS, PB, CD, ZN. ACCUMULATES ARSENIC.
MONARDA CITRIODORA	LEMON BEE BALM	20%	2' HIGH, 1' SPREAD	Y	FULL TO PART SHADE	DRY TO MED	-	-	ATTRACTS HUMMINGBIRDS AND BUTTERFLIES
OENOTHERA SPECIOSA	PINK EVENING PRIMROSE	20%	1'-2.5'	Y	FULL	DRY TO MED	-	-	

PLANT QUANTITY REFERENCE CHART:

QUANTITY FORMULA BASED ON SPACING TYPE	EXAMPLE (100 SQ FT. AREA @ 24" O.C. SPACING)
SQUARE SPACING: $\frac{AREA (IN SQ FT.)}{SPACING^2 (IN FEET)}$	$\frac{100}{24^2} = 25 QTY$
TRIANGULAR SPACING: $\frac{AREA (IN SQ FT.)}{0.86 SPACING^2 (IN FEET)}$	$\frac{100}{0.86 \cdot 24^2} = 29 QTY$
NOTE: DEDUCT THE OFFSET DIMENSION SHOWN TO THE FIRST SHRUB WHEN CALCULATING SQUARE FOOT OF COVERAGE FOR THE AREA.	
SEED TO BE SOWN AT 15 LBS. PER ACRE.	

NOTE:
SEED TO BE SOWN IN FALL MONTHS.
REFER TO SPECIFICATIONS FOR METHOD.

MARKHAM STREET WATER QUALITY DEMONSTRATION PROJECT

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Scale

North

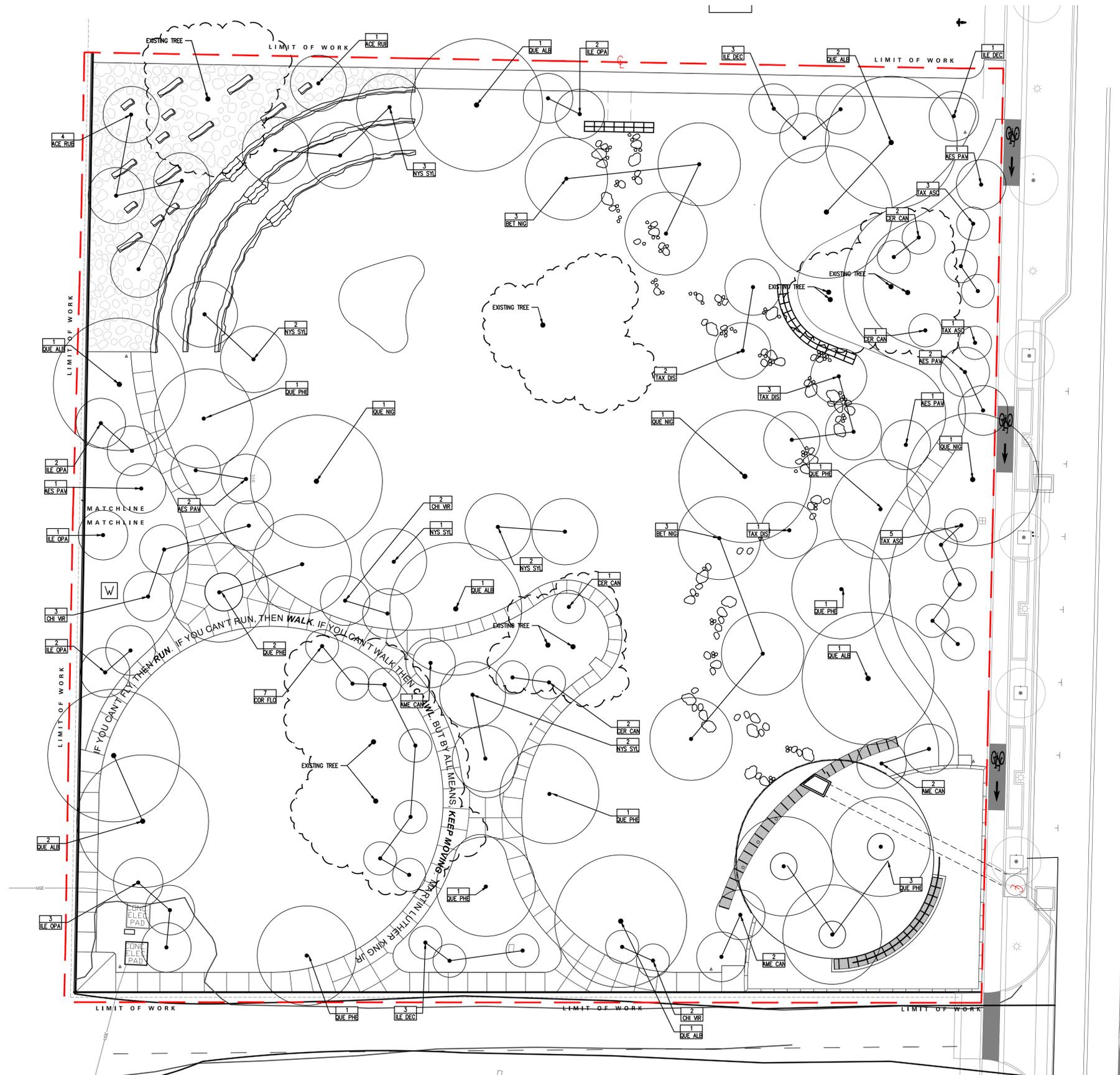
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PLANT MATERIAL SCHEDULE

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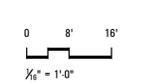
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Drawing Title

OVERALL TREE PLANTING PLAN

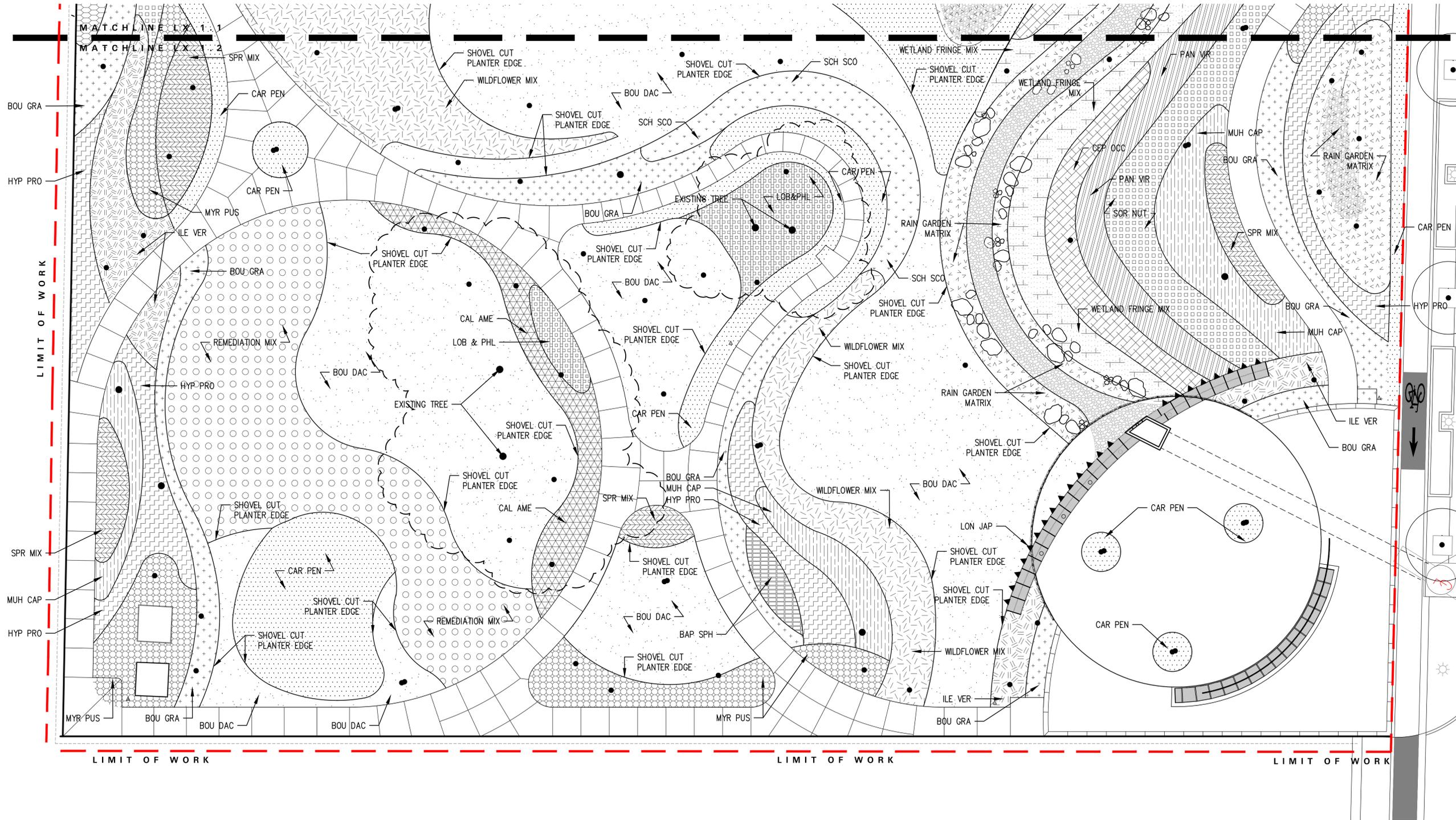
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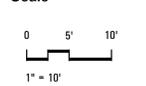
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PLANTING PLAN

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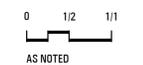
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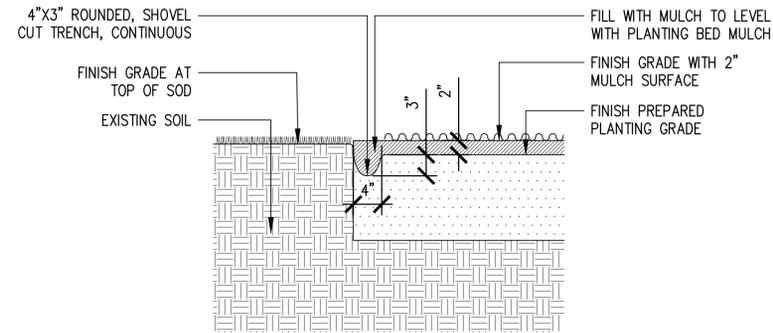
PLANTING DETAILS

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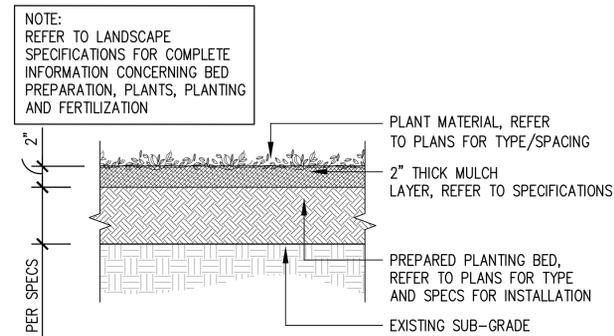
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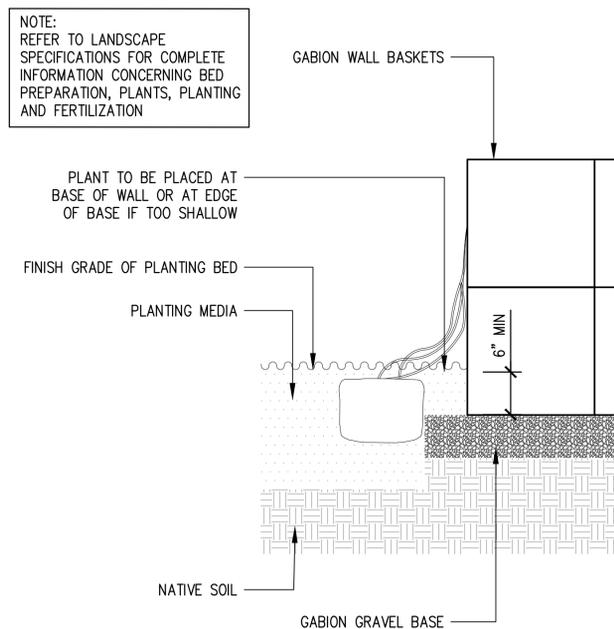
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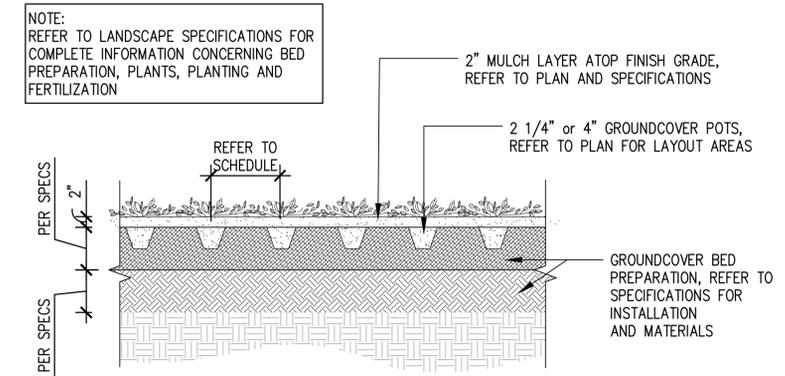
06 TRENCH EDGE DETAIL
1" = 1'-0"



05 HARDWOOD MULCH
1" = 1'-0"



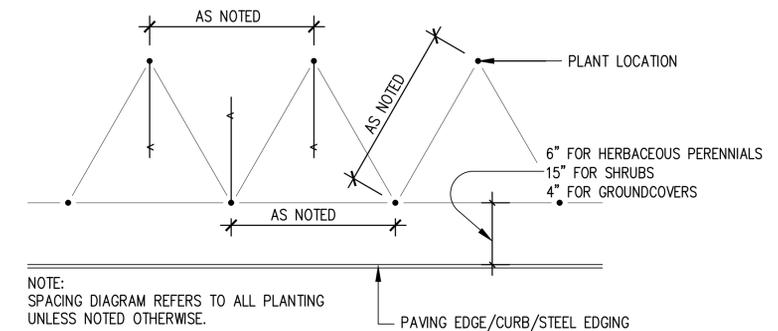
04 VINE PLANTING
1" = 1'-0"



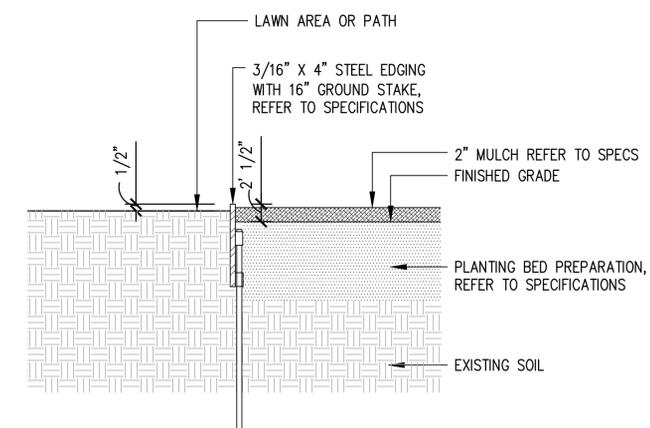
03 GROUNDCOVER PLANTING
1" = 1'-0"

PLANT QUANTITY CALCULATION		EXAMPLE (100 SQ FT. AREA @ 24" O.C. SPACING)
SQUARE SPACING:	AREA (IN SQ FT.) SPACING ² (IN FEET)	$\frac{100}{2^2} = 25$ QTY
TRIANGULAR SPACING:	AREA (IN SQ FT.) / 0.86 SPACING ² (IN FEET)	$\frac{100 / 0.86}{2^2} = 29$ QTY

NOTE:
DEDUCT THE OFFSET DIMENSION SHOWN TO THE FIRST SHRUB WHEN CALCULATING SQUARE FOOT OF COVERAGE FOR THE PLANT AREA.



02 TRIANGULAR SPACING
1" = 1'-0"



01 STEEL EDGING
1" = 1'-0"