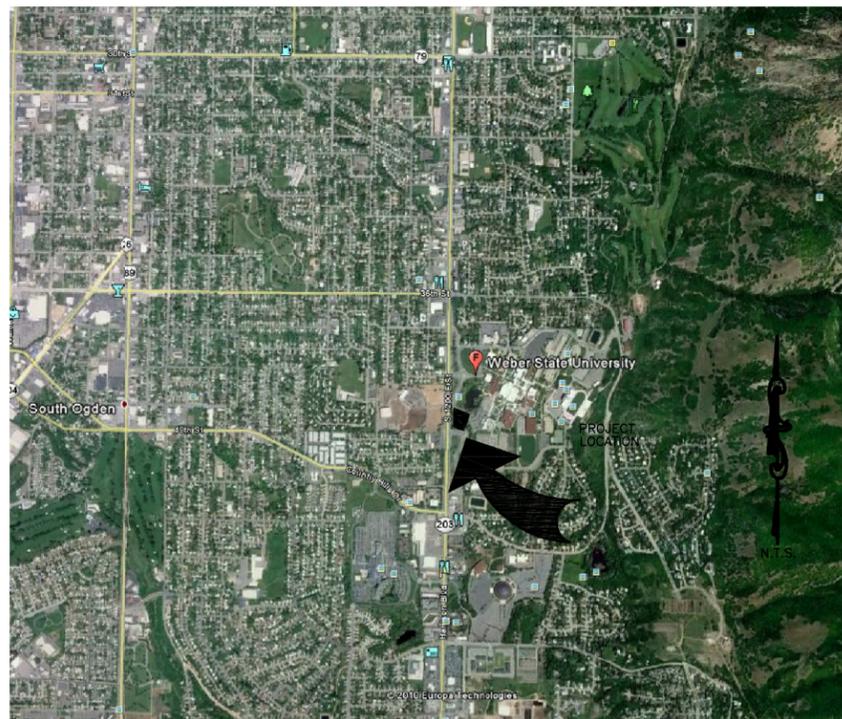




WEBER STATE UNIVERSITY STREAM CHANNEL

OGDEN, UTAH

DFCM PROJECT NO. 10238810



VICINITY MAP

APPROXIMATE ADDRESS: 3848 HARRISON BOULEVARD

DRAWING INDEX	
SHEET	DESCRIPTION
LC-101	COVER SHEET-VICINITY MAP & DRAWING INDEX
C-101	OVERALL SITE PLAN
C-102	ROUGH GRADING PLAN
C-103	PLAN AND PROFILE
C-104	4'X2' BOX CULVERT PLAN AND PROFILE
C-105	FALLS DETAIL PLAN
C-106	CONCRETE PLAN
C-501	DETAILS
C-502	DETAILS
LI-101	IRRIGATION PLAN
LI-501	IRRIGATION DETAILS
LI-502	IRRIGATION DETAILS
LP-101	TREE AND SHRUB PLANTING PLAN
LP-102	GROUNDCOVER AND BULB PLAN
LP-501	PLANTING NOTES AND DETAILS

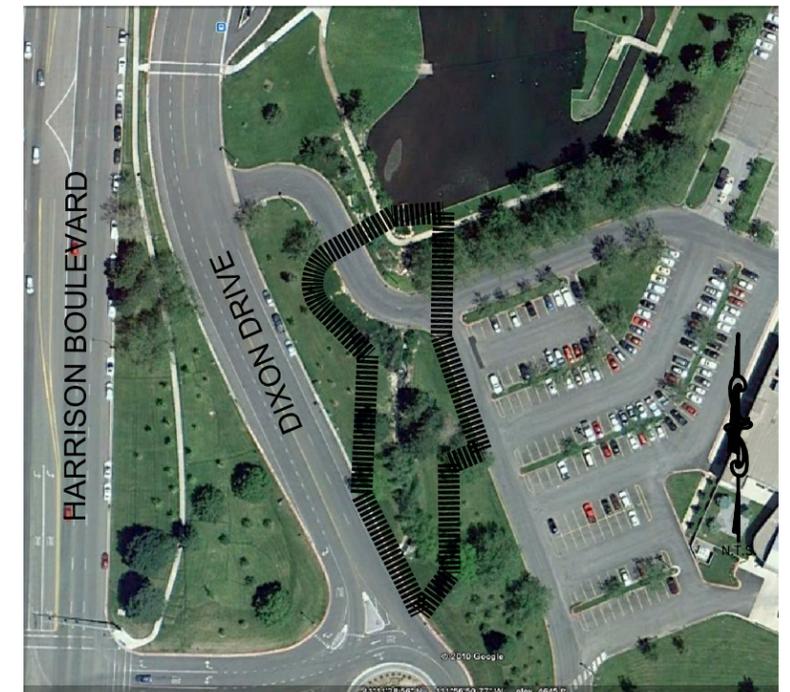
BID SET

SEPTEMBER 8, 2010

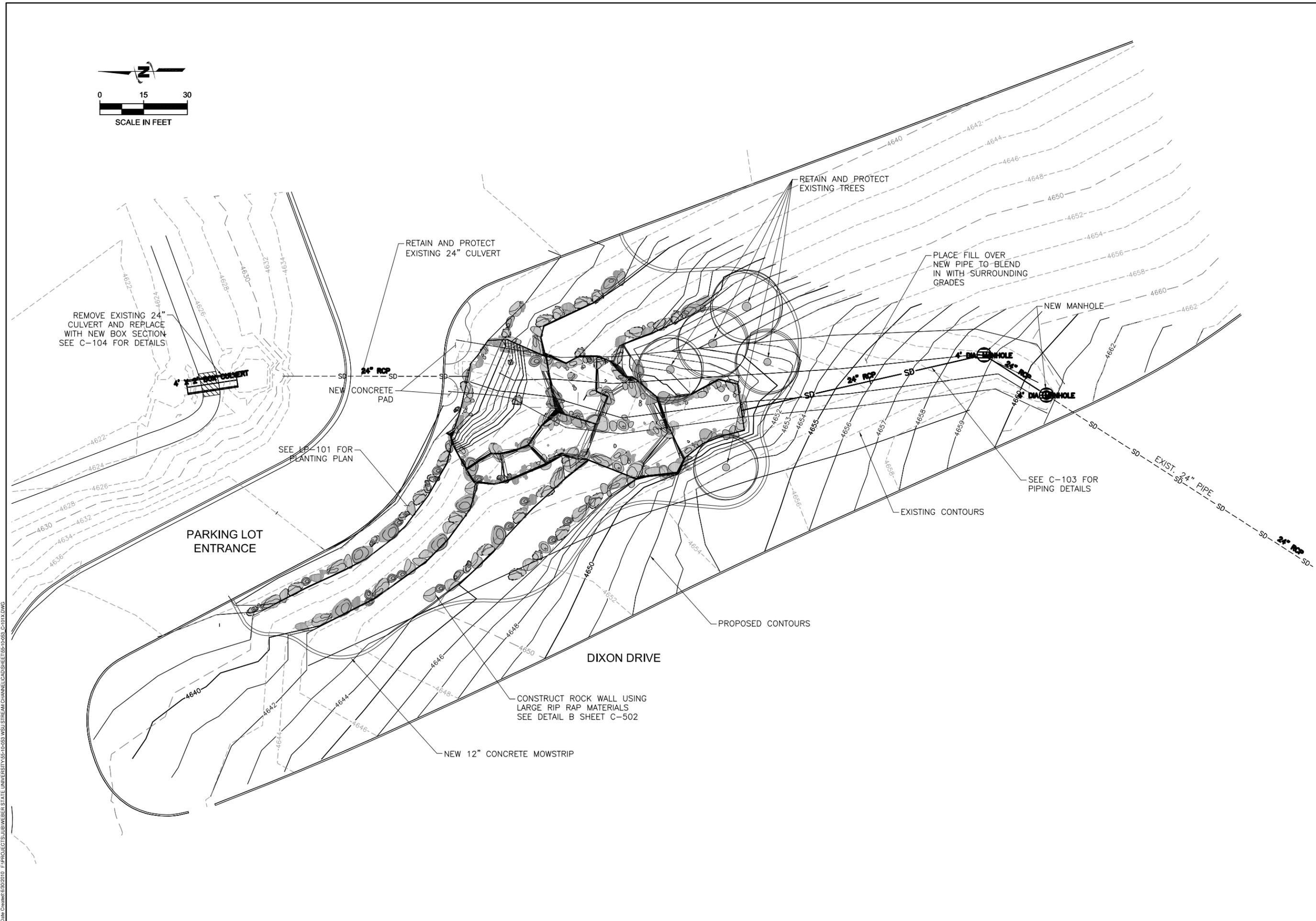
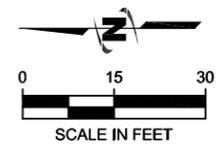


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PROJECT NO. 55-10-054



PROJECT SITE



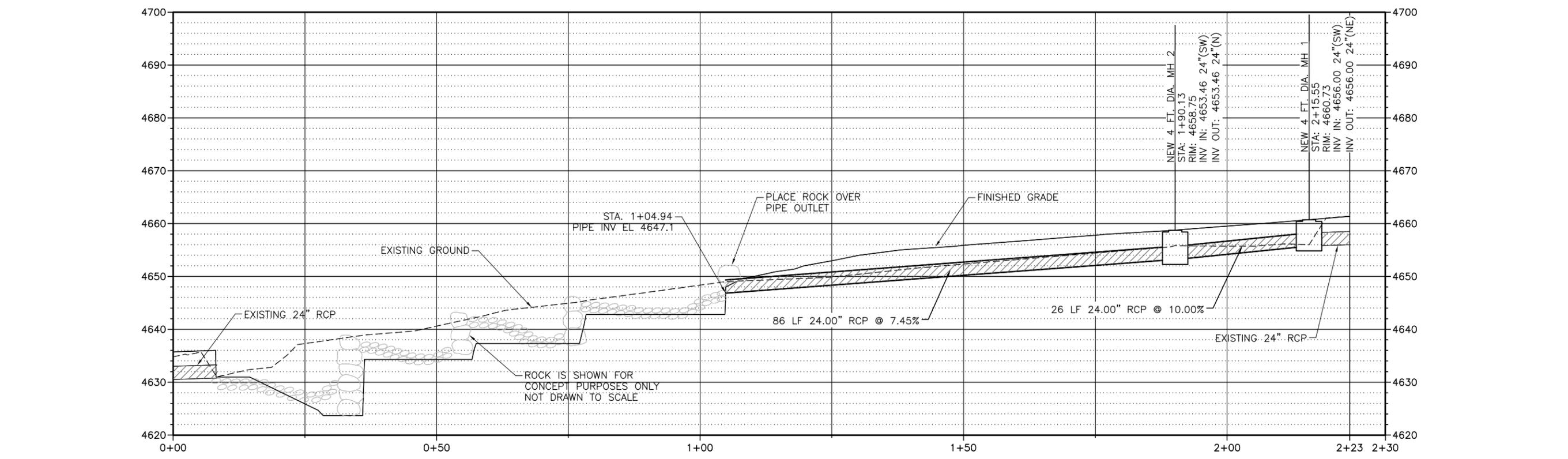
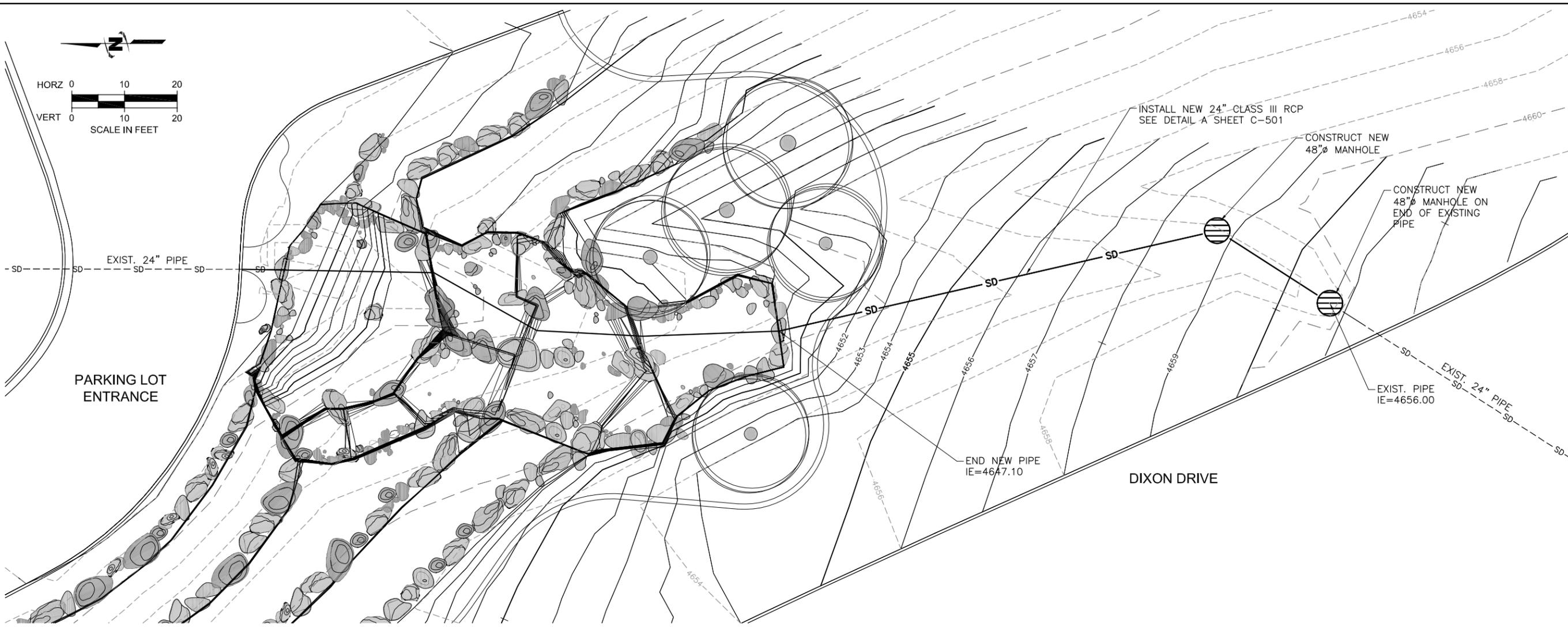
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**STREAM CHANNEL REDESIGN
 WEBER STATE UNIVERSITY**

OVERALL SITE PLAN

Plot Date: 08/22/2010 12:48 PM Plotted By: Jonathan Floukas
 Date Created: 08/20/2010 File Path: C:\PROJECTS\WEBER STATE UNIVERSITY\55-10-053_WSU_STREAM_CHANNEL\CAD\SHEET\55-10-053_C-101X.DWG



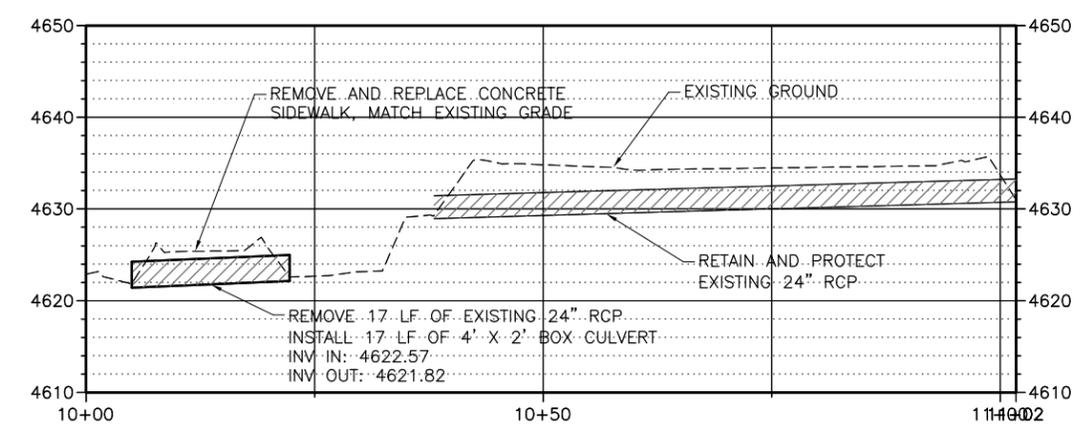
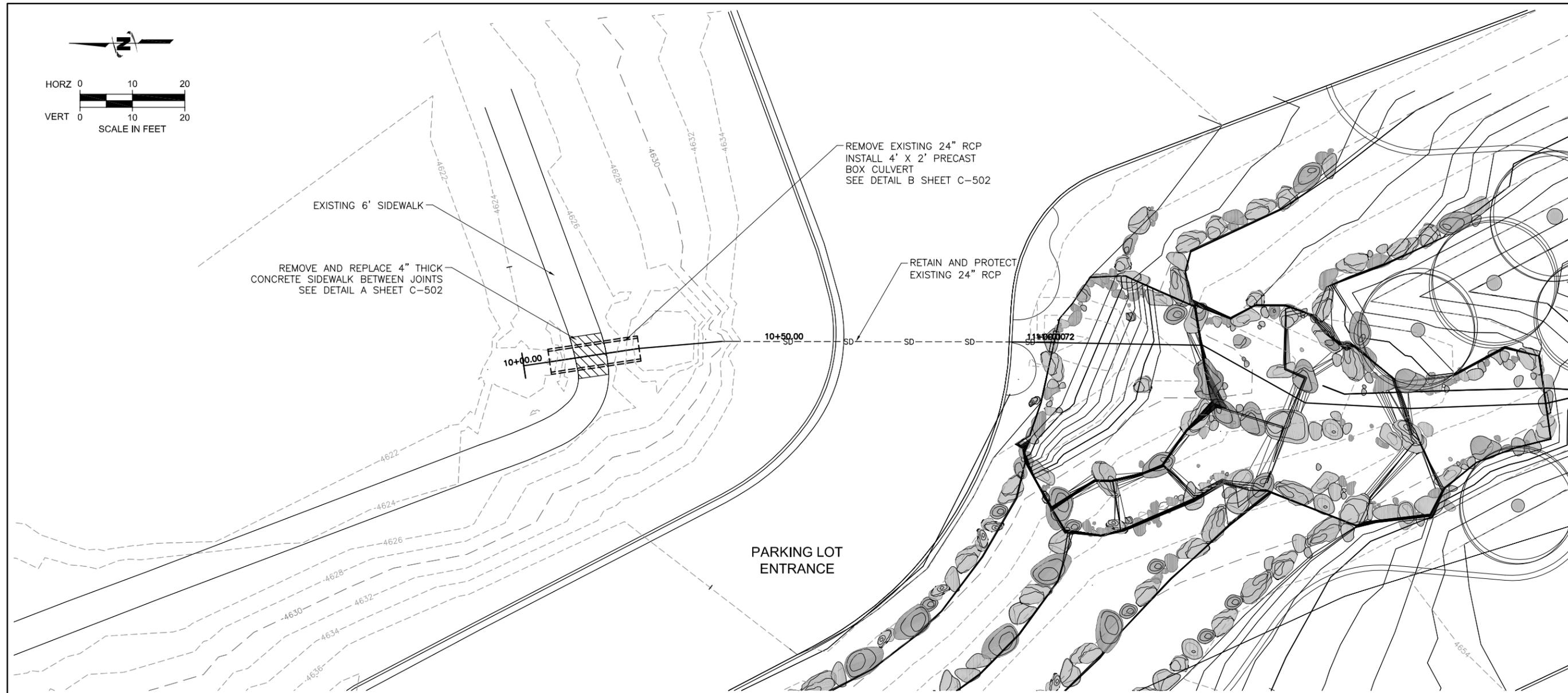
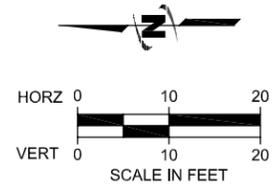
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**STREAM CHANNEL REDESIGN
WEBER STATE UNIVERSITY**

PLAN AND PROFILE

Plot Date: 8/23/2010 12:50 PM Plotted By: Jonathan Ruelas
Date Created: 8/23/2010 P:\PROJECTS\WEBER STATE UNIVERSITY\55-10-053 WSU STREAM CHANNEL CAD\55-10-053 C-101X.DWG



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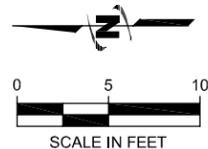
4' X 2' BOX CULVERT
 PLAN AND PROFILE

FILE: 55-10-053_C-101X
 JUB PROJ. #: 55-10-053
 DRAWN BY: JDM
 DESIGN BY: PJT
 CHECKED BY: PJT

ONE INCH
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 LAST UPDATED: 8/19/2010

SHEET NUMBER:
C-104

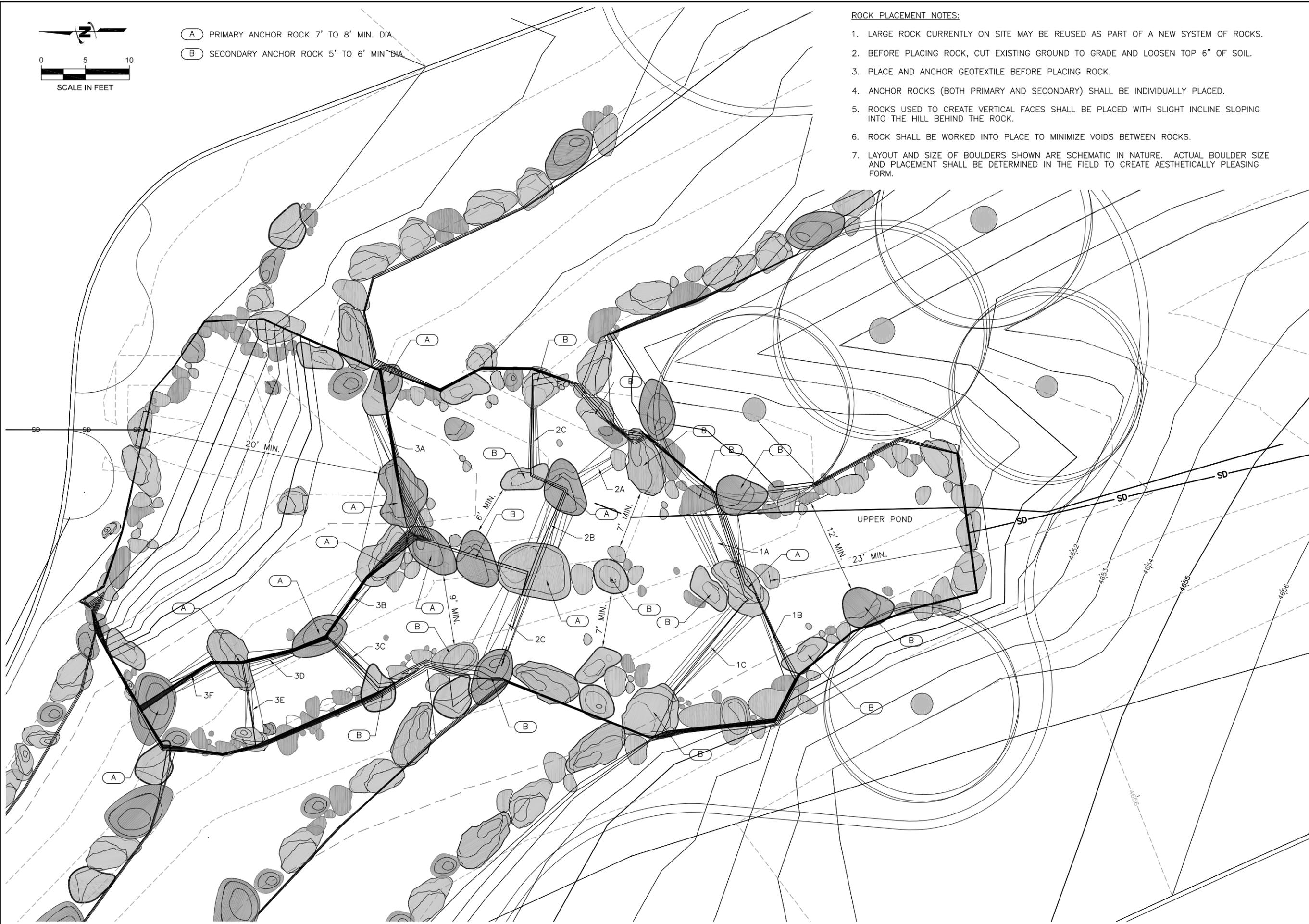
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 Date Created: 03/02/2010 File: PROJECT\SUBWEBER STATE UNIVERSITY\55-10-053_WSU\STREAM CHANNEL\CAD\SHEET\55-10-053_C-101X.DWG



- (A) PRIMARY ANCHOR ROCK 7' TO 8' MIN. DIA.
- (B) SECONDARY ANCHOR ROCK 5' TO 6' MIN DIA.

ROCK PLACEMENT NOTES:

1. LARGE ROCK CURRENTLY ON SITE MAY BE REUSED AS PART OF A NEW SYSTEM OF ROCKS.
2. BEFORE PLACING ROCK, CUT EXISTING GROUND TO GRADE AND LOOSEN TOP 6" OF SOIL.
3. PLACE AND ANCHOR GEOTEXTILE BEFORE PLACING ROCK.
4. ANCHOR ROCKS (BOTH PRIMARY AND SECONDARY) SHALL BE INDIVIDUALLY PLACED.
5. ROCKS USED TO CREATE VERTICAL FACES SHALL BE PLACED WITH SLIGHT INCLINE SLOPING INTO THE HILL BEHIND THE ROCK.
6. ROCK SHALL BE WORKED INTO PLACE TO MINIMIZE VOIDS BETWEEN ROCKS.
7. LAYOUT AND SIZE OF BOULDERS SHOWN ARE SCHEMATIC IN NATURE. ACTUAL BOULDER SIZE AND PLACEMENT SHALL BE DETERMINED IN THE FIELD TO CREATE AESTHETICALLY PLEASING FORM.



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**STREAM CHANNEL REDESIGN
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FALLS DETAIL PLAN

FILE: 85-10-053 C-101X
 JUB PROJ. #: 85-10-053
 DRAWN BY: JDM
 DESIGN BY: PJT
 CHECKED BY: PJT

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY
 LAST UPDATED: 8/19/2010

SHEET NUMBER:
C-105

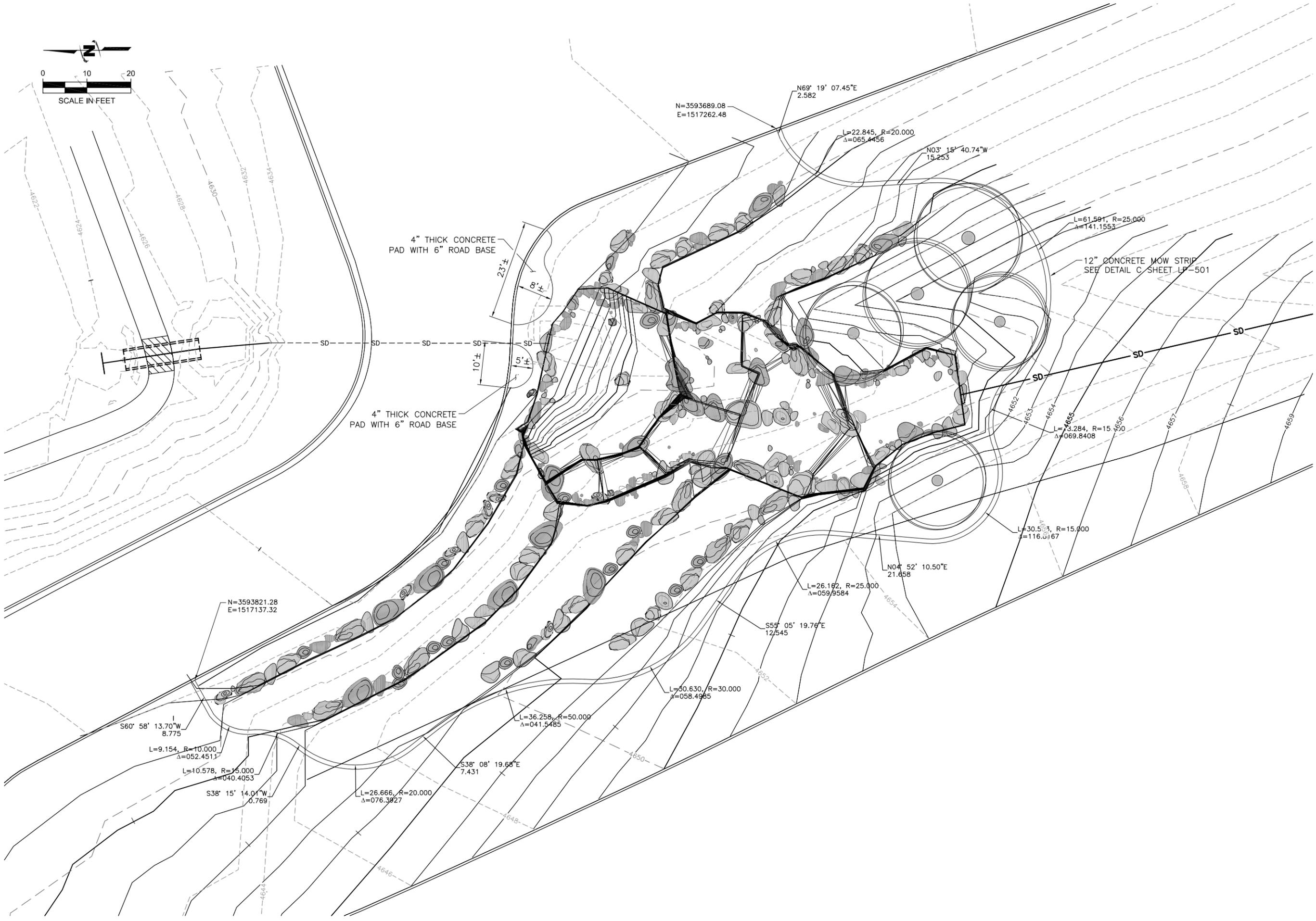
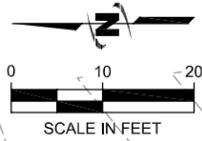
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**STREAM CHANNEL REDESIGN
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 CONCRETE PLAN**

FILE: 55-10-053 C-101X
 JUB PROJ. #: 55-10-053
 DRAWN BY: JDM
 DESIGN BY: PJT
 CHECKED BY: PJT
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 8/19/2010
**SHEET NUMBER:
 C-106**

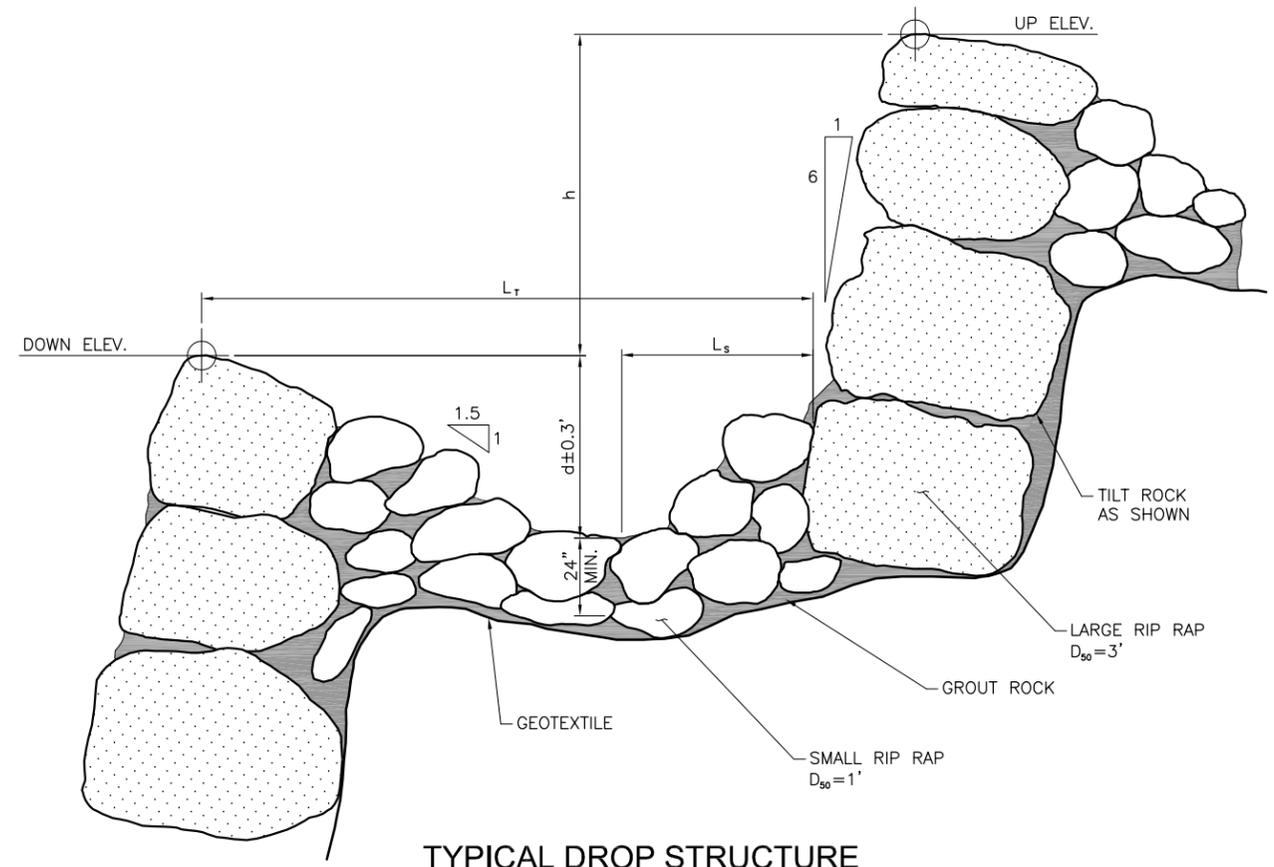


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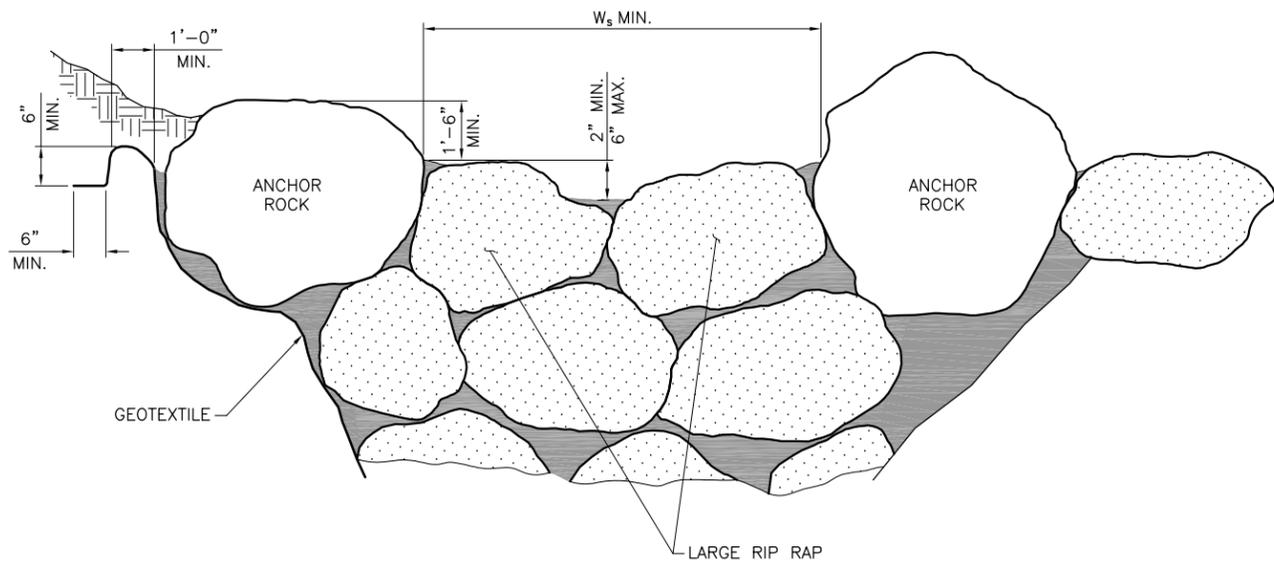
WATER FALL DIMENSION TABLE

Label	Design Flow (cfs)	Elevation		h (ft)	Spillway W_s (ft)	Scour hole			
		UP ELEV	DOWN ELEV			d (ft)	W_H (ft)	L_s (ft)	L_T (ft)
UPPER POND	59	4647.1	4647.1	NA	NA	0.6	12	3	23
1A	45	4647.1	4644.1	3.0	5	4.5	6.8	1.5	11.3
1B	45	4647.1	4645.5	1.6	5.5	3.5	5.3	1.2	8.8
1C	45	4645.5	4644.1	1.4	11.5	2	3	1.5	5
2A	35	4644.1	4643.1	1.0	4	3	4.5	0.9	7.5
2B	35	4644.1	4641.1	3.0	3.5	4.5	6.8	1.5	11.3
2C	35	4643.1	4641.1	2.0	6.5	2.5	3.8	1.5	6.3
2D	35	4644.1	4641.1	3.0	6.5	3	4.5	1.9	7.5
3A	35	4641.1	4631.0	10.1	5	5	7.5	2.6	12.5
3B	30	4641.1	4631.0	10.1	4.5	4.5	6.8	2.7	11.3
3C	30	4641.1	4639.1	2.0	4.5	3	4.5	1.4	7.5
3D	30	4639.1	4631.0	8.1	5	4.5	6.8	2.6	11.3
3E	30	4639.1	4637.0	2.1	4	3.5	5.3	1.4	8.8
3F	30	4637.1	4631.0	6.1	5	4	6	2.4	10

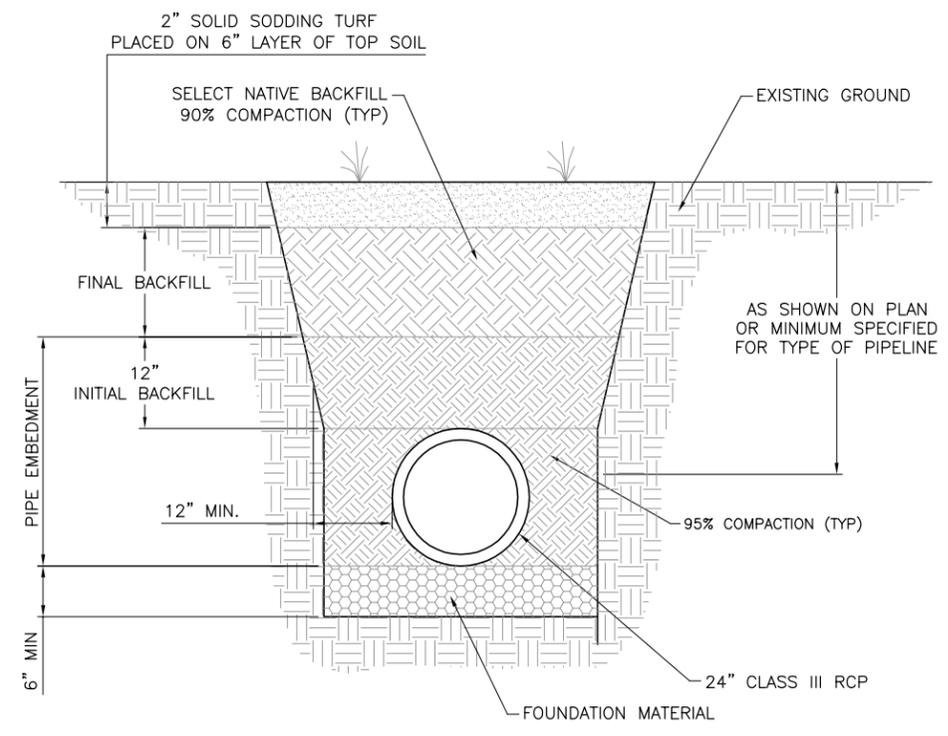
ALL DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS



TYPICAL DROP STRUCTURE
SCALE: N.T.S.



TYPICAL SPILLWAY SECTION
SCALE: N.T.S.



A TYPICAL TRENCH DETAIL
SCALE: N.T.S.

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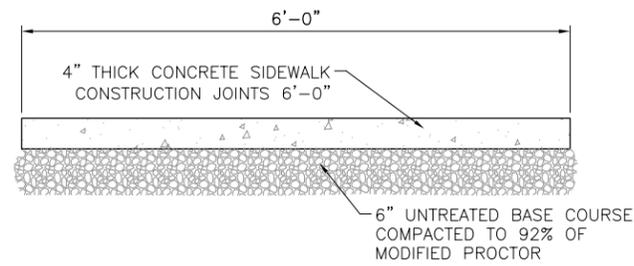
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STREAM CHANNEL REDESIGN
WEBER STATE UNIVERSITY

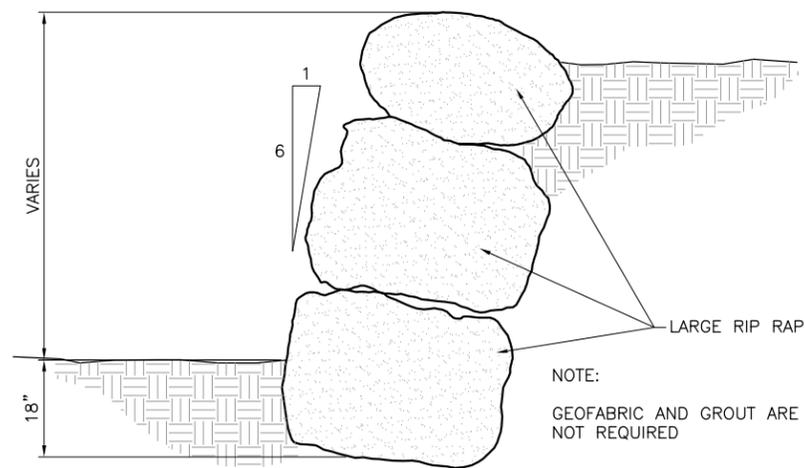
DETAILS

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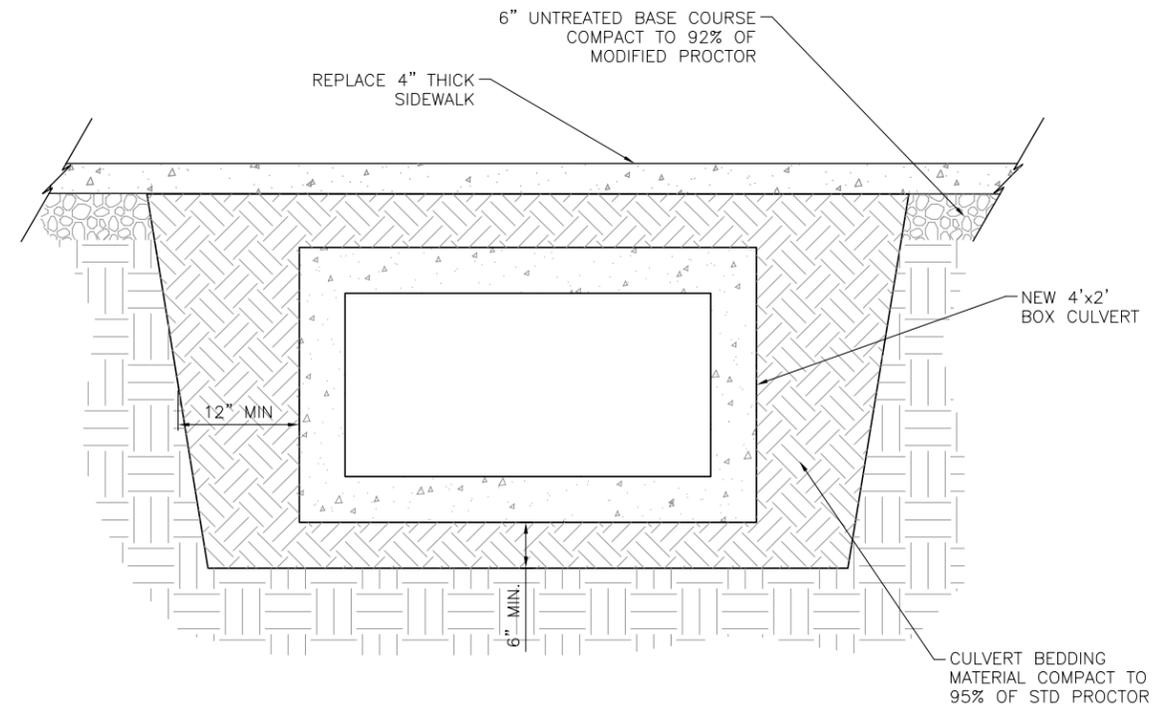
NO.	REVISION	DESCRIPTION	BY	DATE



A SIDEWALK DETAIL
 SCALE: N.T.S.



B TYPICAL RETAINING WALL DETAIL
 SCALE: N.T.S.



C TYPICAL BOX CULVERT DETAIL
 SCALE: N.T.S.

STREAM CHANNEL REDESIGN
 WEBER STATE UNIVERSITY

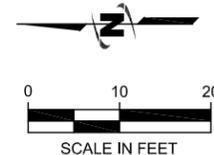
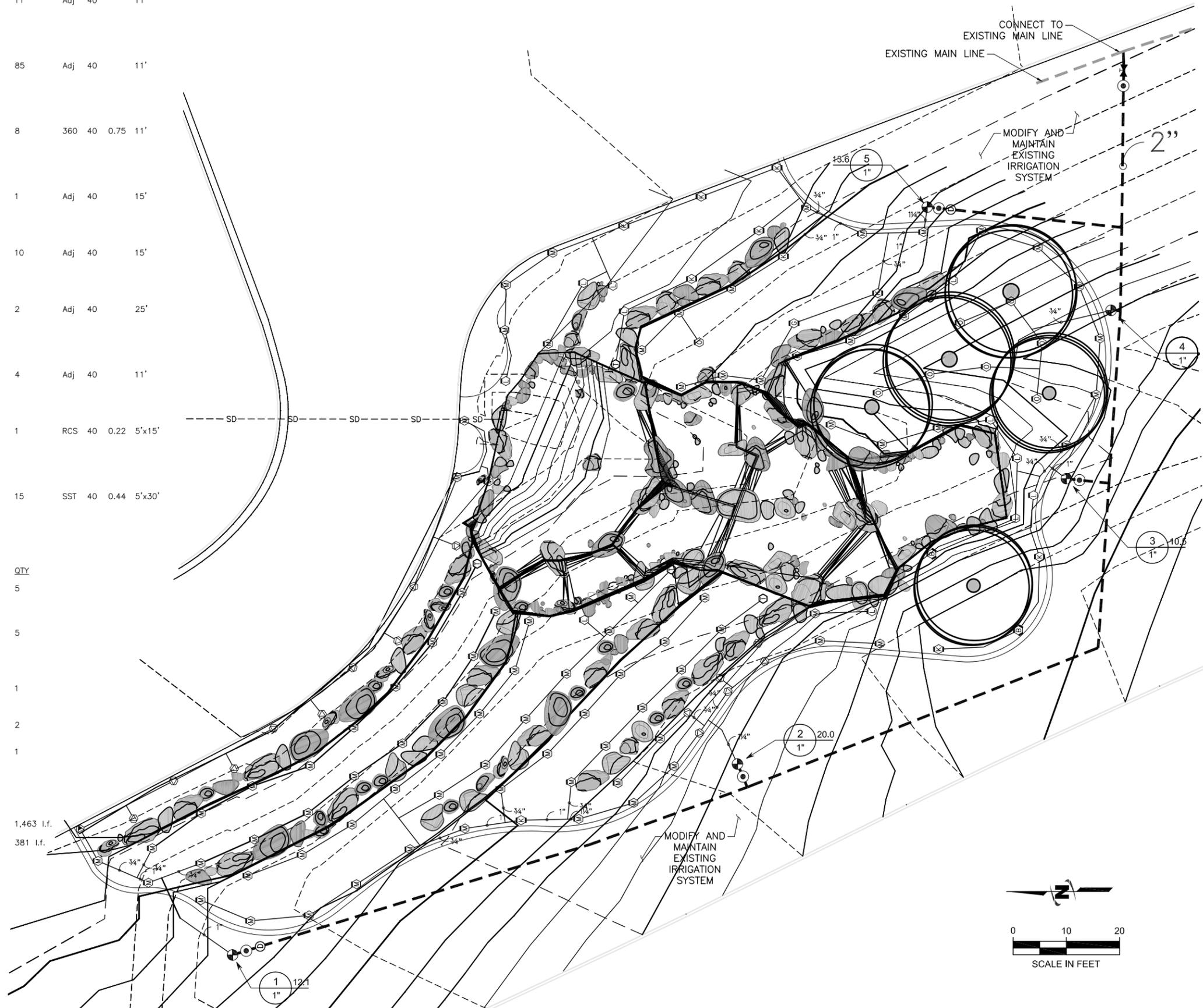
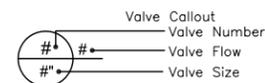
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FILE: 55-10-053_C-501X
 JUB PROJ. #: 55-10-053
 DRAWN BY: JDM
 DESIGN BY: PJT
 CHECKED BY: PJT
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 LAST UPDATED: 8/19/2010
 SHEET NUMBER:

C-502

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS
⊙	Hunter MP1000 w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with check valve, reclaimed body cap, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on MPR40 12" pop-up body.	11	Adj	40		11'
⊙	Hunter MP1000 w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with check valve, reclaimed body cap, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on MPR40 12" pop-up body.	85	Adj	40		11'
⊙	Hunter MP1000 w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with check valve, reclaimed body cap, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on MPR40 12" pop-up body.	8	360	40	0.75	11'
⊙	Hunter MP2000 w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with check valve, reclaimed body cap, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on MPR40 12" popup body.	1	Adj	40		15'
⊙	Hunter MP2000 w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with check valve, reclaimed body cap, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on MPR40 12" popup body.	10	Adj	40		15'
⊙	Hunter MP3000 w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with factory installed check valve, reclaimed body cap, MP Rotator nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc, on MPR40 12" pop-up body.	2	Adj	40		25'
⊙	Hunter MP Corner w/ MPR40-12-CV-R Shrub Rotator, 12" pop-up with factory installed check valve, reclaimed body cap, MP Rotator nozzle. T=Turquoise adj arc 45-105, on MPR40 12" pop-up body.	4	Adj	40		11'
⊙	Hunter MP Strip w/ MPR40-12-CV-R Shrub Rotator, 12" popup with factory installed check valve, reclaimed body cap, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on MPR40 12" pop-up body.	1	RCS	40	0.22	5'x15'
⊙	Hunter MP Strip w/ MPR40-12-CV-R Shrub Rotator, 12" popup with factory installed check valve, reclaimed body cap, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on MPR40 12" pop-up body.	15	SST	40	0.44	5'x30'
⊕	Electric Remote Control Valve Assembly Rain Bird EFB-CP-PRS-D, Brass Electric Remote Control Valve, with pressure regulating module and DC latching solenoid.	5				
⊙	Quick Coupler Valve Assembly Hunter HQ-44LRC-AW, Quick coupler valve, yellow locking rubber cover, acme key w/ anti-rotation wings, red brass and stainless steel, with 1" NPT inlet, 2-piece wing.	5				
⊕	Isolation Gate Valve Nibco PR-113, 250 PSI CWP Bronze Gate Valve, Push-on Ends with Joint Restraints, Size - 2"	1				
⊙	Manual Drain Valve Assembly Ford B11-333	2				
⊕	Controller Assembly Rainmaster Controller Green Tech Satellite Assembly in a 16" Flip Top Satellite Assembly SA6-RM4-6T RFL-Radio, Comm. Board and Antenna, PMR-CAC- Promax Remote CAC-Receiver, FSB- Flow Sensing Board, LPP-Line Primary Protection	1				
---	Irrigation Lateral Line: PVC Schedule 40	1,463 l.f.				
---	Irrigation Mainline: PVC Schedule 40 2"	381 l.f.				



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NO.	DESCRIPTION	BY	DATE

STREAM CHANNEL REDESIGN
 WEBER STATE UNIVERSITY

Irrigation Plan

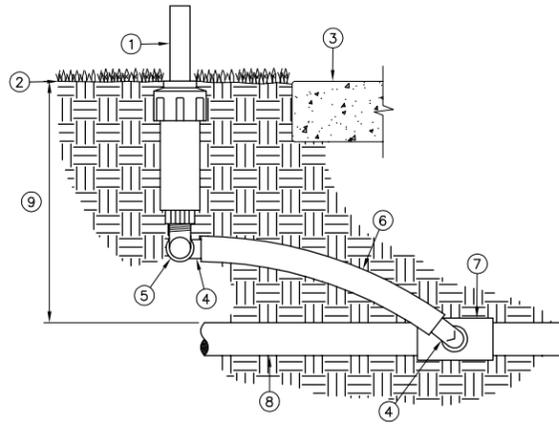
CAD FILE: 5510053 IRRIGATION PLAN
 PROJ. #: 55-10-053
 DRAWN BY: ###
 DESIGN BY: ###
 CHECKED BY: ###
 SCALE OF SHEET
 HOR SCALE: ###
 VER SCALE: ###
 LAST UPDATED: 8/12/2010
 SHEET

LI-101

Plan Date: 8/12/2010
 Date Created: 7/2/2010
 PROJECT: WEBER STATE UNIVERSITY 55-10-053 STREAM CHANNEL REDESIGN IRRIGATION PLAN DWG

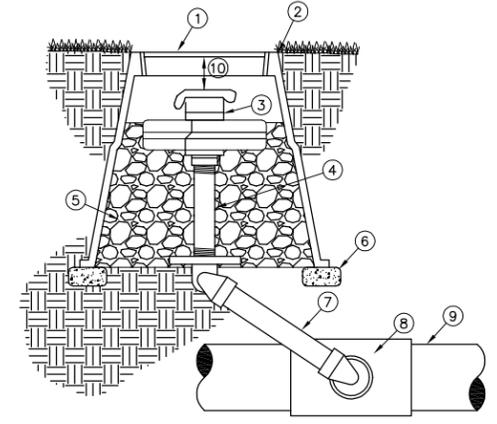
IRRIGATION NOTES

1. THE CONTRACTOR SHALL BE FAMILIAR WITH THE IRRIGATION TECHNICAL SPECIFICATIONS FOR THIS PROJECT. FAILURE TO DO SO SHALL NOT RELIEVE HIM OF MEETING ALL OF THE REQUIREMENTS CONTAINED THEREIN.
2. THE IRRIGATION PLAN IS DIAGRAMMATIC IN NATURE, AND SOME DRAFTING LIBERTIES HAVE BEEN TAKEN TO MAINTAIN THE GRAPHIC CLARITY OF THE DRAWINGS. ALL IRRIGATION EQUIPMENT SHALL BE LOCATED IN PLANTING AREAS ONLY, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL INSTALL PIPING TO MINIMIZE CHANGES IN DIRECTION, AVOID PLACEMENT UNDER LARGE TREES OR LARGE SHRUBS, AND AVOID PLACEMENT UNDER HARDSCAPE FEATURES. REFER TO THE IRRIGATION EQUIPMENT SCHEDULE, INSTALLATION DETAILS, AND SPECIFICATIONS FOR EQUIPMENT AND ITS PROPER INSTALLATION.
3. THE CONTRACTOR SHALL USE ONLY THE EQUIPMENT AND PRODUCTS SPECIFIED IN THE CONSTRUCTION DRAWINGS. NO SUBSTITUTION OF MATERIALS WILL BE ALLOWED ON THE IRRIGATION SYSTEM WITHOUT PRIOR AUTHORIZATION FROM THE LANDSCAPE ARCHITECT AND THE OWNER.
4. THE CONTRACTOR SHALL VISIT AND INSPECT THE PROJECT SITE. HE SHALL TAKE INTO CONSIDERATION KNOWN AND REASONABLY INFERRABLE CONDITIONS AFFECTING THE PROPOSED WORK. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE THE CONTRACTOR OF FURNISHING MATERIALS AND PERFORMING THE WORK REQUIRED. ANY DISCREPANCIES BETWEEN EXISTING SITE CONDITIONS AND THOSE INDICATED ON THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO CONTINUANCE OF THE PROJECT.
5. IF THE WATER POINT OF CONNECTION IS LOCATED OTHER THAN AS SHOWN ON THE DRAWINGS, OR IF THE WATER PRESSURE IS DIFFERENT THAN INDICATED ON THE PLANS, OR APPEARS TO BE UNUSUALLY HIGH OR LOW, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO PROCEEDING WITH ANY IRRIGATION WORK.
6. THE CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND FREE OF EXCESS EQUIPMENT, MATERIALS, AND RUBBISH INCIDENTAL TO WORK OF THIS PROJECT. WORK AREAS SHALL BE SWEEPED CLEAN AND TRASH AND DEBRIS PICKED UP DAILY. OPEN TRENCHES OR HAZARDS SHALL BE PROTECTED WITH YELLOW CAUTION TAPE. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND LEGAL DISPOSAL (OFFSITE) OF TRASH AND DEBRIS GENERATED BY HIS WORK ON THIS PROJECT.
7. PIPE FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS UNLESS OTHERWISE NOTED:
 - a. ALL MAIN LINE FITTINGS FOUR (4) INCHES OR LARGER SHALL BE PUSH-ON, GASKETED, AND CONSTRUCTED OF DUCTILE IRON MATERIAL.
 - b. ALL MAIN LINE FITTINGS THREE (3) INCHES AND SMALLER SHALL BE SOLVENT WELD SCHEDULE 80 PVC.
 - c. EPOXY COATED DOUBLE STRAP SADDLES, M.J. TEES, SCHEDULE 80 TEES WITH SXT SCHEDULE 80 BUSHINGS, OR HARCO DUCTILE IRON SERVICE TEES ARE APPROVED ON PVC MAIN LINES FOR AUTOMATIC CONTROL VALVE INSTALLATION. M.J. FITTINGS SHALL BE GREASED AND WRAPPED.
 - d. ALL LATERAL LINE FITTINGS SHALL BE SOLVENT WELD SCHEDULE 40 PVC.
 - e. ALL RISERS AND EXPOSED FITTINGS SHALL BE SOLVENT WELD SCHEDULE 80 PVC, INCLUDING CONVERSIONS TO METAL PIPE AND FIXTURES, UNLESS OTHERWISE NOTED ON THE PLANS.
 - f. ALL MAIN LINE FITTINGS FOUR (4) INCHES AND LARGER, WHETHER DUCTILE IRON OR SOLVENT WELD, SHALL BE THRUST BLOCKED.
8. IRRIGATION WIRE SHALL CONFORM TO THE FOLLOWING:
 - a. ALL IRRIGATION CONTROL WIRE SHALL BEAR APPROVAL AS U.L. LISTED TYPE OF UNDERGROUND FEEDER (DIRECT BURIAL) AND EACH CONDUCTOR SHALL BE OF ELECTRICAL CONDUCTIVITY GRADE SOLID COPPER IN ACCORDANCE WITH ASTM 30.
 - b. NO ALUMINUM WIRE SHALL BE USED ON THIS PROJECT.
 - c. WIRE SIZE SHALL BE #14 GAUGE MINIMUM.
 - d. TWO SPARE WIRES SHALL BE RUN FROM EACH CONTROLLER TO THE FARTHEST VALVE UNDER ITS CONTROL IN ALL DIRECTIONS AND ANY VALVE WHICH IS ON A DEAD-END LINE.
 - e. ALL WIRE CROSSING WATER, ATTACHED TO BRIDGES, GOING UNDER PAVING, OR WHERE CONDITIONS REQUIRE PROTECTION, SHALL BE HOUSED IN CONDUIT OR SLEEVES. ALL OUT-OF-GROUND CONDUITS SHALL BE RIGID METAL. ALL BURIED CONDUIT MAY BE PVC.
 - f. ALL SPLICES SHALL BE WATER-TIGHT. ALL CONNECTIONS MADE INSIDE THE BOX TO CONNECT WIRES TO THE VALVE SHALL BE MADE USING A 3M DBY DRY-SPLICE CONNECTOR OR PRE-APPROVED EQUAL. EACH CONNECTOR SHALL BE COMPLETELY SEALED AND WATER-PROOFED.
 - g. ALL OTHER SPLICES IN CONTROL WIRE SHALL BE HOUSED IN A SEPARATE VALVE BOX.
 - h. THE PIGMENT OR COLOR OF THE WIRES SHALL BE INTEGRATED INTO THE COVERING, RATHER THAN PAINTED ON. ALL COMMON OR GROUND WIRES SHALL BE WHITE IN COLOR, WHERE MORE THAN ONE CONTROLLER IS REQUIRED, A DIFFERENT COLORED HOT WIRE SHALL BE USED FOR EACH CONTROLLER. A SEPARATE COLOR SHALL BE USED FOR ALL SPARE WIRES.
9. RUN A SINGLE FOURTEEN (14) GAUGE WIRE ALONG THE TOP OF THE MAIN LINE TO BE USED FOR TRACKING THE LOCATION OF THE MAIN LINE. EVERY TWENTY (20) FEET THERE SHALL BE A TWENTY FOUR (24) INCH LOOP. THE COLOR OF THE TRACING WIRE SHALL BE DIFFERENT THAN ANY OTHER WIRE COLOR USED.
10. ALL PRESSURE MAIN LINES SHALL HAVE BETWEEN EIGHTEEN (18) AND THIRTY (30) INCHES OF COVER, WHILE ALL LATERAL LINES SHALL HAVE BETWEEN TWELVE (12) AND FOURTEEN (14) INCHES OF COVER. TRENCH BEDDING AND BACKFILL MATERIAL SHALL CONSIST OF EXISTING SITE SOIL FREE OF ROCKS LARGER THAN ONE (1) INCH IN DIAMETER AND ANY OTHER DEBRIS, WASTED PIPE AND OTHER EXCESS PROJECT MATERIALS OR RUBBISH (TAPE, WIRE, TRASH, WRAPPERS, BOXES, PLASTIC OR GLASS BOTTLES, ETC.) SHALL NOT BE BACKFILLED INTO THE TRENCHES. ALL TRENCHES SHALL BE BACKFILLED, AND THEN WATERED SUFFICIENTLY TO INSURE NO SETTLING OF THE SURFACE. IN THE EVENT OF ANY BACKFILL SETTLEMENT PRIOR TO THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL PERFORM ALL REQUIRED REPAIRS AT HIS OWN EXPENSE.
11. CHECK VALVES SHALL BE USED WHERE INDICATED AND WHERE NECESSARY TO PREVENT WATER FLOW FROM LOWER ELEVATION HEADS WHEN THE IRRIGATION SYSTEM IS TURNED OFF.
12. ALL CONTROL VALVES SHALL BE LOCATED WITHIN SHRUB AREAS WHERE POSSIBLE AND INSTALLED PER THE DETAILS SHOWN ON THE PLANS. EACH CONTROL VALVE SHALL HAVE ITS OWN SEPARATE SHUT-OFF VALVE, AND ONLY ONE (1) CONTROL VALVE AND GATE VALVE PER VALVE BOX. NO VALVE MANIFOLDS SHALL BE ALLOWED. THE BOTTOM OF THE REMOTE CONTROL VALVE SHALL BE A MINIMUM OF FOUR (4) INCHES ABOVE THE GRAVEL. ISOLATION GATE VALVES ON THE MAIN LINE SHALL BE LOCATED IN SEPARATE VALVE BOXES.
13. ALL MAIN LINES AND LATERAL LINES SHALL BE SLEEVED WHERE THEY PASS UNDER ANY PAVED AREAS. THE SIZE OF THE SLEEVE SHALL BE TWICE THE SIZE OF THE PIPE BEING SLEEVED, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
14. THE AUTOMATIC CONTROLLER SHALL BE OF THE TYPE AND MANUFACTURER SPECIFIED, AND LOCATED AS SHOWN ON THE PLANS. ELECTRICAL SERVICE TO THE CONTROLLER HAS BEEN PROVIDED.
15. PRIOR TO BACKFILLING ANY TRENCHES OR IRRIGATION LINES:
 - a. ALL MAIN LINES SHALL BE CAPPED AND PRESSURE TESTED AT 120 PSI FOR A PERIOD OF 4 HOURS. ANY LEAKS FOUND SHALL BE CORRECTED BY REMOVING THE LEAKING PIPE OR FITTINGS AND INSTALLING NEW MATERIAL IN ITS PLACE. REPEAT THE PRESSURE TEST TO INSURE THE ABSENCE OF LEAKS.
 - b. THE CONTRACTOR SHALL NOT ALLOW NOR CAUSE ANY OF HIS WORK TO BE COVERED UNTIL IT HAS BEEN INSPECTED, TESTED, AND APPROVED BY THE LANDSCAPE ARCHITECT.
 - c. WHERE A MAIN LINE HAS BEEN ALLOWED TO SIT IN THE TRENCH UNCOVERED FOR ANY LENGTH OF TIME PRIOR TO TESTING, THE LINE MAY BE SHADED WITH A THIN LAYER OF SOIL TO MINIMIZE WEATHER RELATED EXPANSION OR CONTRACTION OF THE PIPE.
16. THE CONTRACTOR SHALL ADJUST ALL IRRIGATION HEADS TO PROVIDE AN EVEN COVERAGE AND TO KEEP SPRAY OFF OF BUILDINGS, WALKWAYS, AND PAVED SURFACES.
17. WHEN THE SPRINKLER SYSTEM HAS BEEN COMPLETED, THE CONTRACTOR SHALL, IN THE PRESENCE OF THE LANDSCAPE ARCHITECT, CONDUCT A COVERAGE TEST OF THE WATER AFFORDED TO THE PLANTING AREAS TO INSURE THAT IT IS CONSISTENT AND UNIFORM. THE CONTRACTOR SHALL PROVIDE, AT HIS OWN EXPENSE, ALL MATERIALS AND LABOR NECESSARY TO CORRECT ANY DEFICIENCIES OR INADEQUACIES DISCOVERED DURING THE COVERAGE TEST.
18. THE CONTRACTOR SHALL KEEP ON SITE A CURRENT AND ACCURATE AS-BUILT RECORD OF HIS WORK. IT SHALL INCLUDE EXACT DIMENSIONED LOCATIONS, GRADES, ELEVATIONS, AND THE SIZE OF ALL EXTERIOR AND INTERIOR UNDERGROUND PIPING, VALVES, AND DRAINS. DIMENSIONS SHALL INDICATE DISTANCES FROM COLUMNS, BUILDINGS, CURBS, AND SIMILAR PERMANENT FEATURES ON THE SITE. THIS INFORMATION SHALL BE RECORDED ON A PRINT AS THE WORK PROGRESSES, BUT SHALL BE PERMANENTLY RECORDED ON A REPRODUCIBLE, TWO (2) MIL MYLAR ORIGINAL WHICH SHALL BE GIVEN TO THE OWNER BEFORE THE PROJECT IS ACCEPTED.
19. THE IRRIGATION CONTRACTOR SHALL MAINTAIN THE SYSTEM FOR THE DURATION OF THE CONTRACT PERIOD, INCLUDING THE MAINTENANCE PERIOD.
20. UPON FINAL ACCEPTANCE OF THE SPRINKLER IRRIGATION SYSTEM AS BEING OPERATIONAL AND PROPERLY INSTALLED, THE CONTRACTOR SHALL GUARANTEE THE WORKMANSHIP, MATERIALS, FIXTURES, AND EQUIPMENT TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THAT DATE.



A POP-UP SPRAY/ROTARY SPRINKLER
NTS

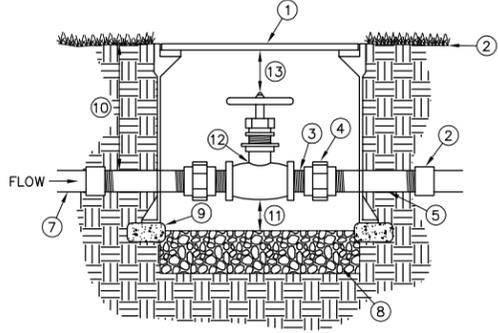
- 1 POP-UP SPRAY HEAD - SEE IRRIGATION EQUIPMENT SCHEDULE
- 2 TOP OF SPRINKLER WILL BE FLUSH WITH GRADE
- 3 NOTE: ALL SPRAY HEADS TO BE PLACED 2" CLEAR OF ALL HARDSCAPE SURFACES
- 4 SWING PIPE ELL WITH SPIRAL BARB FITTING (TYP.)
- 5 MARLEX STREET ELL
- 6 FLEXIBLE SWING PIPE, 12" MIN. LENGTH
- 7 PVC SCH 40 SxSxT TEE (OR ELL)
- 8 PVC LATERAL LINE, SIZE AS NOTED ON PLAN
- 9 DEPTH - SEE TRENCH DETAIL & SPECIFICATIONS



B CONTROL VALVE ASSEMBLY
NTS

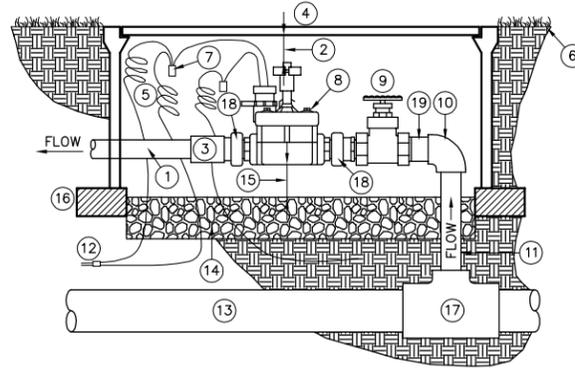
- 1 10" ROUND GREEN PLASTIC VALVE BOX W/ BOLT LOCK, CARSON-BROOKS 910 OR EQUAL
- 2 FLUSH WITH GRADE
- 3 QUICK COUPLING VALVE - SEE EQUIPMENT SCHEDULE
- 4 BRASS NIPPLE, LENGTH AS REQUIRED
- 5 6" MIN. DEPTH CLEAN PEA GRAVEL
- 6 CONCRETE PAVERS ONLY
- 7 12" LASCO UNITIZED SWING JOINT W/ BRASS INSERT STABILIZER ELBOW, OR 12" SPEARS SWING JOINT RISER ASSEMBLY W/ BRASS FEMALE THREAD 90° ELL OUTLET
- 8 2 1/2" AND SMALLER, USE PVC SCH 80 TEE AND 90° (SIDE MOUNTED, SIZE AS REQUIRED)
- 9 PVC MAIN LINE
- 10 3" MIN. 6" MAX. CLEARANCE

C QUICK COUPLING VALVE ASSEMBLY
NTS



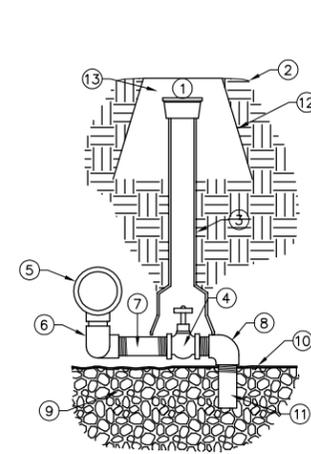
- 1 10" ROUND GREEN PLASTIC VALVE BOX W/ BOLT LOCK, CARSON-BROOKS OR EQUAL, MARKED "G.V." IN 2" WHITE LETTERS
- 2 FINISH GRADE
- 3 CLOSE NIPPLE (TYP.)
- 4 ACTION UNIONS - SIZE AS REQUIRED
- 5 12" MIN. GALVANIZED NIPPLE
- 6 PVC SCH. 80 FEMALE ADAPTER (TYP.)
- 7 PVC MAINLINE
- 8 4" MIN. DEPTH PEA GRAVEL
- 9 CONCRETE PAVERS ONLY
- 10 DEPTH - SEE NOTES
- 11 2" MIN. 5" MAX CLEARANCE
- 12 THREADED GATE VALVE - SEE IRRIGATION EQUIPMENT SCHEDULE
- 13 3" MIN. 6" MAX. CLEARANCE

D GATE VALVE (THREADED 2" AND SMALLER)
NTS



- NOTES:
1. ONLY ONE VALVE PER BOX.
2. PLACE BOXES A MINIMUM OF 2' APART.
3. USE BOX EXTENSIONS AS REQUIRED.

E MANUAL DRAIN VALVE
NTS



- 1 ADJUSTABLE CURB BOX W/ BOLT LID. CARSON-BROOKS 250 OR EQUAL
- 2 FINISH GRADE
- 3 ADJUST HEIGHT AS REQUIRED
- 4 3/4" VALVE (SEE IRRIGATION EQUIP. SHC.)
- 5 PVC MAINLINE & SERVICE TEE
- 6 (2)-FIPtxFIPt 90° ELL (2)-3/4" x CLOSE PVC NIPPLE
- 7 3/4"x12" PVC SCH 80 NIPPLE
- 8 3/4" 90° STREET ELL
- 9 3/4" ROCK SUMP - 6 C.F. MIN. SIZE
- 10 FILTER FABRIC COVERING SUMP
- 11 3/4" x 6" PVC SCH 80 TOE NIPPLE
- 12 10" ROUND GREEN PLASTIC VALVE BOX, CARSON-BROOKS 910 OR EQUAL AT TOP OF GRADE
- 13 3" TO 6" CLEAR SPACE

- 1 PVC LATERAL LINE
- 2 3" MIN. 6" MAX. CLEARANCE
- 3 COUPLER SCH. 80 SLIP TO SLIP
- 4 VALVE BOX W/ BOLT LOCK (CARSON-BROOKS OR APPROVED EQUAL) SIZE AS PER VALVE SIZE: 1" VALVE = 18" STANDARD 1419 BOX 1 1/2"-2" VALVE = 18" JUMBO 1220 BOX
- 5 PROVIDE 24" EXPANSION LOOP AT EACH WIRE CONNECTOR IN BOX
- 6 FINISH GRADE
- 7 WATER TIGHT WIRE CONNECTORS (TYP)
- 8 VALVE - RAIN BIRD PESB VALVE
- 9 BRASS GATE VALVE (MUELLER, MATCO, NIBCO)
- 10 PVC SCH. 80 ELL
- 11 PVC SCH. 80 PIPE, SOLVENT WELDED, LENGTH AS REQUIRED
- 12 WIRES TO CONTROLLER, TAPE AND BUNDLE EVERY 10' - SEE TRENCH DETAIL
- 13 MAIN LINE
- 14 4" MIN. DEPTH 3/4" WASHED GRAVEL
- 15 4" MIN. CLEARANCE REQUIRED
- 16 CONCRETE PAVERS ONLY
- 17 PVC SCH. 80 TEE (OR ELL OR DUCTILE IRON SERVICE TEE)
- 18 ACTION UNION - PART 18010--XX PART 18011--XX PART 18012--XX
- 19 PVC TOE NIPPLE



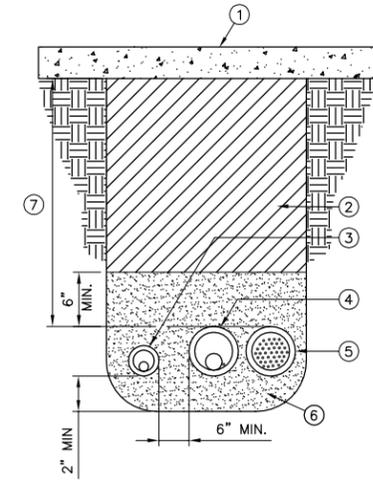
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NO.	REVISION	DESCRIPTION	BY	DATE

STREAM CHANNEL REDESIGN
WEBER STATE UNIVERSITY
IRRIGATION DETAILS

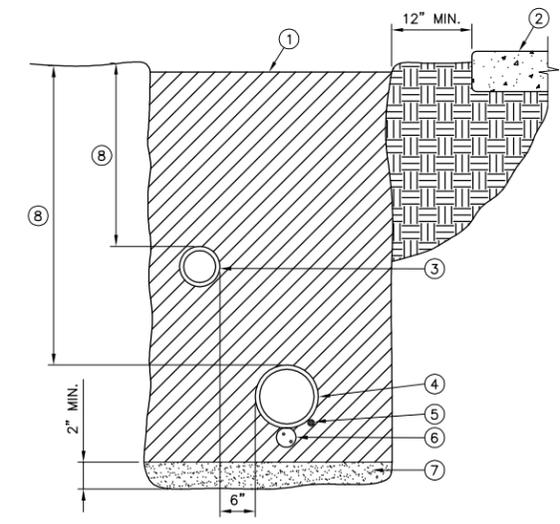
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DRAWN BY: JDM
DESIGN BY: PJT
CHECKED BY: PJT
SCALE: 1" = 1' ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 7/6/2010
SHEET NUMBER: LI-501



- ① HARDSCAPE SURFACE – SEE CIVIL PLANS
- ② BACKFILL MATERIAL – SEE NOTES
- ③ LATERAL LINE WITH SLEEVE
- ④ PRESSURE MAIN LINE AND TONER WIRE WITH SLEEVE
- ⑤ CONTROL WIRE SLEEVE (SAME SIZE AS MAINLINE SLEEVE)
- ⑥ BEDDING MATERIAL – SEE NOTES
- ⑦ MINIMUM COVER:
12" UNDER WALKS
18" UNDER STREETS

NOTES:
1) SLEEVES 4" AND SMALLER USE PVC SCH. 40 PIPE.
2) SLEEVES >4" USE PVC SCH. 40 PIPE.
3) ALL SLEEVES SHALL BE TWO (2) TIMES LARGER THAN DIAMETER OF PIPE TO BE SLEEVED.
4) INSTALL SLEEVES AT A DEPTH TO AVOID CONFLICT WITH OTHER UTILITIES AND MAINS.

A SLEEVE DETAIL
NTS



- ① BACKFILL MATERIAL – SEE NOTES, COMPACT TO 90% MIN.
 - ② ADJACENT HARD SURFACE
 - ③ NON-PRESSURE LATERAL LINE
 - ④ PRESSURE MAIN LINE
 - ⑤ MAIN LINE TONER WIRE. BURIED WITH ALL MAINLINES
 - ⑥ DIRECT BURIAL, LOW VOLTAGE CONTROL WIRES; TO BE BURIED AND TAPED AT 10' INCREMENTS. LOCATE DIRECTLY ADJACENT TO MAIN LINE (NOT UNDER AS SHOWN).
 - ⑦ BEDDING MATERIAL – SEE NOTES
 - ⑧ PIPE DEPTHS – SEE NOTES
- NOTE:
SEE SLEEVING DETAIL FOR TRENCHING IN PAVED AREAS.

B TRENCH DETAIL
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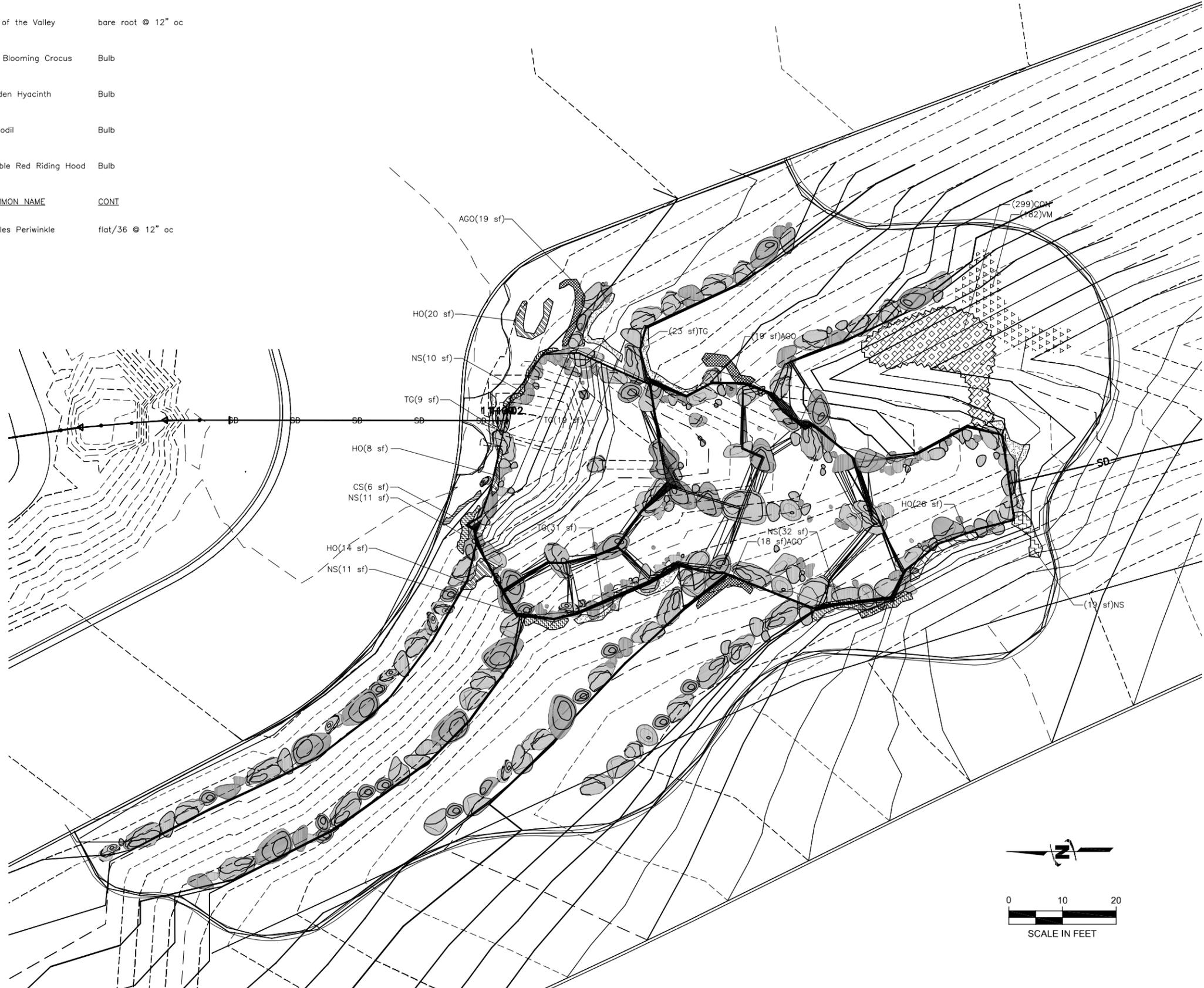
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LAST UPDATED: 7/6/2010

SHEET NUMBER:
LI-502

PLANT SCHEDULE

SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
	AGO	69	Allium x 'Globemaster'	Hybrid Star of Persia	Bulb
	CON	299	Convallaria majalis	Lily of the Valley	bare root @ 12" oc
	CS	7	Crocus speciosus	Fall Blooming Crocus	Bulb
	HO	83	Hyacinthus orientalis	Garden Hyacinth	Bulb
	NS	100	Narcissus species Yellow Variety	Daffodil	Bulb
	TG	130	Tulipa greigii	Double Red Riding Hood	Bulb
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
	VM	6	Vinca minor 'Bowles Blue'	Bowles Periwinkle	flat/36 @ 12" oc



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Groundcover and Bulb Plan

CAD FILE: 5510053 PLANTING PLAN 2
PROJ. #: 55-10-053
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DESIGN BY: ####
CHECKED BY: ####
SCALE OF SHEET
HOR SCALE: ###
VER SCALE: ###
LAST UPDATED: 8/17/2010

