NATIVE SUN CONSTRUCTION

MONUMENT, COLORADO

CONSTRUCTION PLANS

LEGAL DESCRIPTION LOT 1:

LOT 1, NATIVE SUN CONSTRUCTION FILING NO. 1, LOCATED IN THE TOWN OF MONUMENT, COUNTY OF EL PASO, STATE OF COLORADO.

1. GENERAL
   - 1.1. THE NATIVE SUN PROJECT SHALL CONSIST OF IMPROVING VACANT LAND BY ADDING AN OFFICE BUILDING, MAINTENANCE SHOP AND CONSTRUCTION YARD. IN ADDITION, UNPAVED PARKING (ABC SURFACE) AND CIRCULATION AISLES, AN EXTENDED DETENTION POND, AND DRAINAGE FEATURES WILL BE PART OF THE PROJECT. BOTH WET AND DRY UTILITIES WILL BE EXTENDED TO AND FROM THE PROJECT, AND A NEW WELL DRILLED ON SITE.
   - 1.2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, STATE DEPARTMENT OF TRANSPORTATION STATE OF COLORADO AND REVISIONS THERETO AS REFLECTED IN THE TECHNICAL SPECIFICATIONS AND DESIGN STANDARDS. ALL UTILITY WORK SHALL CONFORM TO THE STANDARDS OF THE TOWN OF MONUMENT/COLORADO SPRINGS UTILITIES.
   - 1.3. THE FOLLOWING CDOT SPECIFICATION SECTIONS ARE TO BE IMPLEMENTED ON THE PROJECT. NOT ALL SPECIFICATIONS LISTED BELOW MAY BE REQUIRED FOR THE PROJECT. INFORMATION AND NOTES FOUND ON THESE PLANS SHALL OVERRIDE THE CDOT SPEC IN CASE OF CONFLICT:
     - 1.3.1. 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS
     - 1.3.2. 203 EXCAVATION AND EMBANKMENT
     - 1.3.3. 207 TOPSOIL
     - 1.3.4. 208 EROSION CONTROL
     - 1.3.5. 209 WATERING AND DUST PALLIATIVES
     - 1.3.6. 213 MULCHING
     - 1.3.7. 216 SOIL RETENTION COVERING
     - 1.3.8. 304 AGGREGATE BASE COURSE
     - 1.3.9. 406 COLD ASPHALT PAVEMENT (RECYCLE)
     - 1.3.10. 506 RIPRAP
     - 1.3.11. 603 CULVERTS AND SEWERS
     - 1.3.12. 604 MANHOLES, INLETS, AND METER VAULTS
     - 1.3.13. 609 CURB AND GUTTER
     - 1.3.14. 625 CONSTRUCTION SURVEYING
     - 1.3.15. 626 MOBILIZATION
   - 1.4. A QUALIFIED SUPERINTENDENT, WHO IS ACCEPTABLE TO THE OWNER, SHALL BE APPOINTED TO SUPERVISE THE WORK UNTIL COMPLETION. THE SUPERINTENDENT SHALL HAVE FULL AUTHORITY TO ACT IN BEHALF OF THE CONTRACTOR, AND ALL DIRECTIONS GIVEN TO THE SUPERINTENDENT SHALL BE CONSIDERED GIVEN TO THE CONTRACTOR.
   - 1.5. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS TO COMPLETE THE CONSTRUCTION CONTAINED ON THESE DOCUMENTS AND SHALL COMPLY WITH ALL PERTINENT LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
   - 1.6. THE CONTRACTOR SHALL MAINTAIN MINIMUM STATUTORY INSURANCE COVERAGE DURING CONSTRUCTION AND SHALL INDEMNIFY THE OWNER IN ACCORDANCE WITH THEIR REQUIREMENTS.
   - 1.7. CONSTRUCTION STAGING FOR THIS PROJECT SHALL OCCUR ON-SITE.
   - 1.8. THE OWNER WILL RETAIN A QUALIFIED GEOTECHNICAL CONSULTANT TO PERFORM QUALITY CONTROL TESTING OF DENSITIES AND MATERIALS. ANY WORK NOT MEETING THE SPECIFICATIONS SHALL BE REWORKED AND RETESTED AT NO ADDITIONAL COST TO THE PROJECT. DISTRIBUTION OF TEST RESULTS SHALL BE SUBMITTED TO CONTRACTOR AND ENGINEER.
   - 1.9. CONSTRUCTION INSPECTION OF THE WORK WILL BE PROVIDED BY THE OWNER.
   - 1.10. UPON COMPLETION OF ALL CONSTRUCTION AND PROBATIONARY ACCEPTANCE THE CONTRACTOR SHALL PROVIDE A ONE (1) YEAR WARRANTY ON ALL WORKMANSHIP AND MATERIAL ASSOCIATED WITH THIS PROJECT. ANY DEFICIENCIES IDENTIFIED DURINGTHE WARRANTY PERIOD SHALL BE PROMPTLY ADDRESSED BY THE CONTRACTOR.
   - 1.11. MATERIALS TESTING AND CONSTRUCTION OBSERVATION WILL BE PROVIDED BY THE OWNER/DEVELOPER.
   - 1.12. PLANS BASED ON TOPOGRAPHICAL DATA SUPPLIED BY:

     BARRON LAND
     COLORADO SPRINGS, CO
     SURVEYED 2021

     - 1.12.1. ACCURACY OF THIS DATA HAS NOT BEEN VERIFIED. USE OF THESE PLANS IMPLIES THE OWNER AND CONTRACTOR ACCEPTS THIS SUPPLIED TOPOGRAPHICAL DATA AS ACCURATE.
2. CONTROL POINTS
   - 2.1. SEE FINAL PLAT-NATIVE SUN CONSTRUCTION FILING NO.1, PREPARED BY BARRON LAND, LAST REVISED 9-30-21.
3. SITE PREPARATION
   - 3.1. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE OWNER/DEVLOPER/ENGINEER REPRESENTATIVE IMMEDIATELY SO THAT APPROPRIATE ACTION CAN BE TAKEN. CONTRACTOR SHALL NOTIFY OWNER/DEVLOPER/ENGINEER REPRESENTATIVE OF ANY DESIGN ISSUES OR INCONSISTENCIES PRIOR TO CONSTRUCTION SO THAT APPROPRIATE ACTION CAN BE TAKEN.
   - 3.2. CONTRACTOR SHALL PROTECT ALL MONUMENTS, INCLUDING PROPERTY CORNERS WITHIN THE PROJECT LIMITS. ANY MONUMENT WHICH IS DISTURBED OR DESTROYED BY THE CONTRACTOR WILL BE RESTORED IN ACCORDANCE WITH CDOT STANDARDS AT THE CONTRACTORS EXPENSE. ALL MONUMENTS AND PROPERTY CORNERS WILL BE ADJUSTED TO FINAL GRADE PER CDOT STANDARDS.
   - 3.3. DEMOLITION FOR THIS PROJECT CONSISTS GENERALLY OF GRADING AND CLEARING OBSTRUCTIONS IN THE VICINITY OF THE WORK. CLEARING AND GRUBBING ACTIVITIES SHALL OCCUR UNDER REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
   - 3.4. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING.
   - 3.5. CONTRACTOR SHALL PROTECT TREES NOT BEING REMOVED.
   - 3.6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY DISPOSING OF ALL REMOVALS OFF THE PROJECT SITE. COST FOR DISPOSAL OF ALL REMOVED ITEMS SHALL BE INCLUDED IN THE WORK.
4. EROSION CONTROL
   - 4.1. ALL PERSONS ENGAGING IN EARTH DISTURBANCES SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
   - 4.2. SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO PUBLIC ROAD SHALL BE CLEANED AT THE END OF EACH DAY.
   - 4.3. ALL NEWLY GRADED AND DISTURBED AREAS SHALL REQUIRE EROSION CONTROL, INCLUDING STABILIZATION AS DESCRIBED IN SECTION 208 OF THE CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
   - 4.4. WATER USED AS A DUST PALLIATIVE AND WATER REQUIRED FOR AIR POLLUTION CONTROL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN COST OF OTHER WORK.
5. EARTHWORK
   - 5.1. AFTER REMOVAL OF EXISTING ASPHALT, CONCRETE, AND OTHER EXISTING SITE FEATURES IN THE AREA OF THE PROPOSED IMPROVEMENTS, AND PRIOR TO PLACEMENT OF NEW ASPHALT PAVEMENT, RECYCLED ASPHALT PAVEMENT, CONCRETE CURB & GUTTER, DRAINAGE STRUCTURES, OR OTHER NEW FEATURES, THE FOLLOWING SHALL BE PERFORMED IN REGARD TO SUBGRADE PREPARATION AND PLACEMENT OF ANY NEW FILL.
     - 5.1.1. SUBGRADE PREPARATION SHALL INCLUDE SCARIFYING TO A MINIMUM DEPTH OF 6 INCHES, MOISTURE CONDITIONING TO WITHIN 2% OF OPTIMUM, AND RE-COMPACTING THE SUBGRADE TO MINIMUM 92% STANDARD PROCTOR DRY DENSITY (ASTM D698).
     - 5.1.2. NEW FILL FOR EMBANKMENT, STRUCTURAL, OR TRENCH BACKFILL, ETC. SHALL CONSIST OF ON-SITE SOILS OR NON-PLASTIC, WELL-GRADED, GRANULAR FILL WITH MAXIMUM PARTICLE SIZE OF 1-INCH AND NO MORE THAN 20% PASSING THE NUMBER 200 SIEVE. COMPACTION OF NEW FILL SHALL BE MINIMUM 95% STANDARD PROCTOR, AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM (ASTM D698).
6. STORMWATER MANAGEMENT
   - 6.1. DRAINAGE AND STORMWATER MANAGEMENT SHALL CONSIST OF CONSTRUCTION OF DITCHES, INSTALLATION OF FLARED END SECTIONS, INLETS AND RCP CULVERTS, CURB & GUTTER, AND CONSTRUCTION OF A FULL SPECTRUM EXTENDED DETENTION BASIN.
   - 6.2. PROTECT INLETS WITH BMPS ONCE COMPLETED AND OPERATIONAL. INSPECT AND, IF NECESSARY, CLEAN AND FLUSH STORM SEWER SYSTEM UPON COMPLETION OF CONSTRUCTION AND PRIOR TO REQUEST FOR FINAL INSPECTION.
7. UTILITY
   - 7.1. EXISTING UTILITY LOCATIONS ARE ONLY APPROXIMATE AS PROVIDED BY THE VARIOUS UTILITY COMPANIES. ALL UTILITIES MAY NOT BE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES OR VARIATION IN UTILITY LOCATION FROM THAT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND RESOLVED PRIOR TO BEGINNING CONSTRUCTION IN ANY AREA. UTILITY LOCATIONS CAN BE COORDINATED THROUGH ONE CALL 811 OR THROUGH A LOCATING COMPANY. IF ANY DAMAGE OCCURS TO THESE UTILITIES DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE THE UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR ANY UTILITIES DISRUPTED BY THE CONSTRUCTION AND ALL EXPENSES INCURRED FOR REPAIR. EXISTING UTILITIES IN OR NEAR THE SITE SHALL BE PROTECTED DURING CONSTRUCTION BY THE CONTRACTOR.
   - 7.2. UTILITIES SHALL BE CONSTRUCTED ACCORDING TO THE TOWN OF MONUNENT CONSTRUCTION STANDARDS AND SPECIFICATIONS.
   - 7.3. UTILITY WORK FOR THIS PROJECT IS GENERALLY DESCRIBED AS FOLLOWS:
     - 7.3.1. WATER: A WELL WILL BE DRILLED IN THE LOCATION SHOWN ON THE UTILITY PLAN. WELL PERMIT HAS BEEN SECURED BY OTHERS. WATER LINE WILL BE ROUTED TO THE SHOP, THEN TO THE OFFICE. DESIGN OF WELL, PIPING, PUMPS AND OTHER EQUIPMENT IS BY OTHERS.
     - 7.3.2. SANITARY SEWER: NEW SERVICE LINES WILL BE CONSTRUCTED FROM BOTH THE SHOP AND OFFICE, AND CONVEYED NORTH AND EAST TO A AN EXISTING MANHOLE ACROSS THE SANTA FE TRAIL. NATIVE SUN HAS SECURED A PERMIT TO CROSS EL PASO COUNTY TRAIL PROPERTY AND TO CONNECT TO THE EXISTING MANHOLE.
     - 7.3.3. GAS: PROPANE FOR THE SITE WILL BE STORED AND PROVIDED IN A PROPOSED TANK TO THE WEST OF THE SHOP. FEEDER LINES FROM THE TANK WILL SERVICE BOTH THE SHOP AND OFFICE AS ILLUSTRATED ON THE UTILITY PLAN.
     - 7.3.4. ELECTRIC: EXISTING SERVICES ENTER THE SITE AT THE NORTHWEST PART OF THE PROPERTY. THE EXISTING SERVICES ARE OVERHEAD, AND IN LIKELY CONFLICT WITH THE ACCESS ROAD GRADING AND CONSTRUCTION. CONTRACTOR TO WORK WITH MVEA ON RELOCATION AND POSSIBLE BURIAL. ELECTRIC, EITHER UNDERGROUND OR OVERHEAD, WILL BE FED TO BOTH THE SHOP AND OFFICE ORIGINATING FROM THE SOUTHWEST INTERSECTION OF THE TWO ACCESS ROADS.
     - 7.3.5. TELECOM IS PROPOSED TO COME OFF THE EXISTING LINES IN WOODCARVER ROAD. IT IS PROPOSED TO BRING THIS FEED DIRECTLY INTO THE SHOP, THEN ROUTE TO THE OFFICE.
   - 7.4. THE CONTRACTOR SHALL ADJUST ANY VALVES OR MANHOLES OF EXISTING UTILITIES NOT TO BE RELOCATED TO THE PROPOSED GRADE. THE COST SHALL BE INCLUDED IN THE PRICE OF THE WORK.
8. LIGHTING
   - 8.1. SITE LIGHTING SHALL BE PROVIDED BY WALLPAK FIXTURES MOUNTED DIRECTLY ON EACH BUILDING. SEE ARCHITECTURAL/ELECTRICAL PLANS FOR MORE DETAIL.

Indicates comment addressed by CD Civil Design

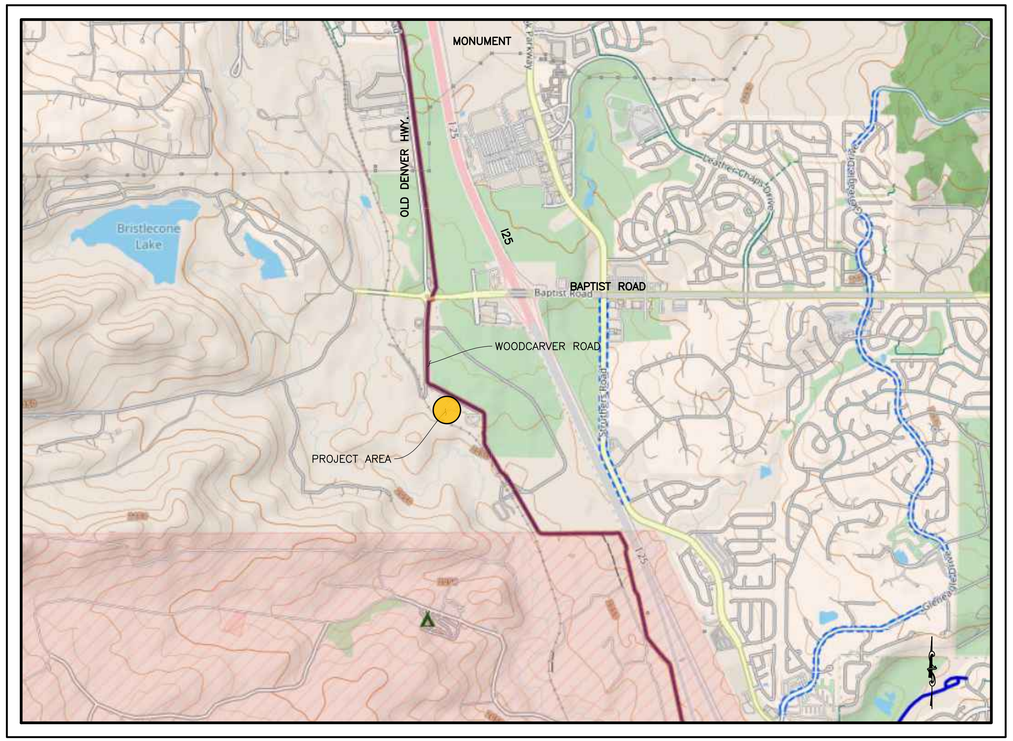
DEVELOPMENT PLAN NOTES

- PROJECT NAME & DESCRIPTION: NATIVE SUN CONSTRUCTION, SITE IMPROVEMENTS-CONSTRUCT AN OFFICE BUILDING, REPAIR SHOP, AND CONSTRUCTION YARD ON THE PROPERTY TO THE WEST OF WOODCARVER ROAD.

OWNER:	NATIVE SUN CONSTRUCTION INC. 16050 OLD DENVER RD MONUMENT, CO 80132 719-593-5874	PLANNER:	PATTEN ASSOCIATES, INC 4271 HORSE GULCH LOOP COLORADO SPRINGS, CO 80924 970-846-9111
ENGINEER:	CD CIVIL DESIGN LLC 2013 STONELEIGH TRAIL MONUMENT, CO 80132 719-271-1175	ARCHITECT:	J:BROWN:RIGG ARCHITECTURE 60 NORTH MAIN STREET CEDAR CITY,UT 84720 435-590-3577
LANDSCAPE ARCH:	CIVIL DESIGN PARTNERSHIP 142 S RAVEN MINE DR STE 100 COLORADO SPRINGS, CO 80905	SURVEYOR:	BARRON LAND, LLC 2790 N ACADEMY BLVD #311 COLORADO SPRINGS, CO 80917 719-360-6827

- TOTAL DEVELOPMENT PLAN AREA: 7.36 ACRES.
- SITE ADDRESS LOT 1: 15020 WOODCARVER ROAD, MONUMENT CO 80132
- SITE ADDRESS LOT 2: 15010 WOODCARVER ROAD, MONUMENT CO 80132
- TAX SCHEDULE NUMBER: 7135000004 (PRIOR TO SUBDIVIDING)

VICINITY MAP



NTS

DEVELOPER'S STATEMENT:

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE EROSION AND STORMWATER QUALITY CONTROL PLAN INCLUDING TEMPORARY BMP INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS.I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (COPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

_____ _____

EPHRAIM JESSOP DATE

DBA_____

TITLE_____

NAME _____ PHONE _____

EMAIL_____

ADDRESS_____ FAX_____

_____

FOREST LAKES METROPOLITAN DISTRICT APPROVAL:

_____ _____

FOREST LAKES METROPOLITAN DISTRICT PLAN APPROVAL DATE

ENGINEER'S STATEMENT:

THE EROSION AND STORM WATER QUALITY CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. WORK PERFORMED IN ACCORDANCE WITH THE EROSION AND STORM WATER QUALITY CONTROL PLAN WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE, OR STABILITY OF A PUBLIC WAY,DRAINAGE CHANNEL, OR OTHER PROPERTY.

_____ _____

CHRISTIAN L. DAY, COLORADO P.E. DATE

CD CIVIL DESIGN LLC

TOWN OF MONUMENT ACCEPTANCE:

THESE PLANS HAVE BEEN REVIEWED BY THE TOWN OF MONUMENT STAFF AND FOUND TO BE IN GENERAL COMPLIANCE WITH TOWN OF MONUMENT AND TRIVIEW STANDARDS. IT IS THE RESPONSIBILITY OF THE SITE ENGINEER AND GENERAL CONTRACTOR TO ENSURE CONSTRUCTION IS IN COMPLIANCE WITH THESE PLANS AND IN CONFORMANCE WITH THE TOWN OF MONUMENT DESIGN CRITERIA & CONSTRUCTION SPECIFICATIONS, REGULATIONS, TRIVIEW METROPOLITAN DISTRICT DESIGN CRITERIA CONSTRUCTION SPECIFICATIONS, AND THE CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUALS VOLUMES 1 AND 2 SHALL PREVAIL IN ANY INSTANCES WHERE THESE PLANS DIFFER WITH THOSE REQUIREMENTS.

THE DEVELOPMENT SERVICES DEPARTMENT SHALL BE NOTIFIED IF ANY CHANGES NEED TO BE MADE.

_____ _____

TOWN OF MONUMENT DATE

COLORADO 811 KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

SHEET INDEX

CIVIL
CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION
CONSTRUCTION PLANS
TITLE SHEET

REVISIONS:

CD REVIEW SET
7/22/2022 8:45 AM

SCALE:
NOTED

DATE:
MARCH 2021

PROJECT NO.:
21001

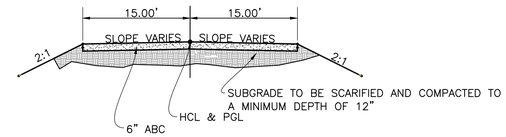
SHEET NO.:

C-1

OF: 17

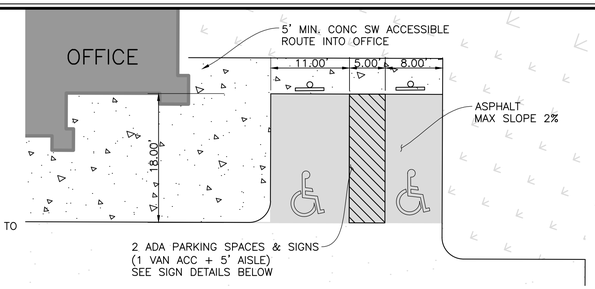
SHEET NOTES:

1. REFERENCE NATIVE SUN CONSTRUCTION, PRELIMINARY/FINAL PLANNED UNIT DEVELOPMENT SITE PLAN, FOR ADDITIONAL INFORMATION AND REQUIREMENTS, INCLUDING BUILDING ELEVATIONS AND SIGNS.
2. PARKING LOT AND ACCESSES WILL NOT BE PAVED AT THIS POINT. PAINT SYMBOLS AND PARKING LINES ARE SHOWN FOR ILLUSTRATIVE PURPOSES.
3. SEE SHEET C–16 FOR DETAILED DIMENSIONS AND COORDINATE GEOMETRY.
4. CONSTRUCTION YARD FENCE MOUNTED 1' IN BACK OF CURB, WHERE ADJACENT TO C&G.
5. CONTRACTOR MUST BE FAMILIAR WITH AND ABIDE BY ANY REGULATIONS AND REQUIREMENTS FOR WORKING ADJACENT TO OR AROUND THE RAILROAD.



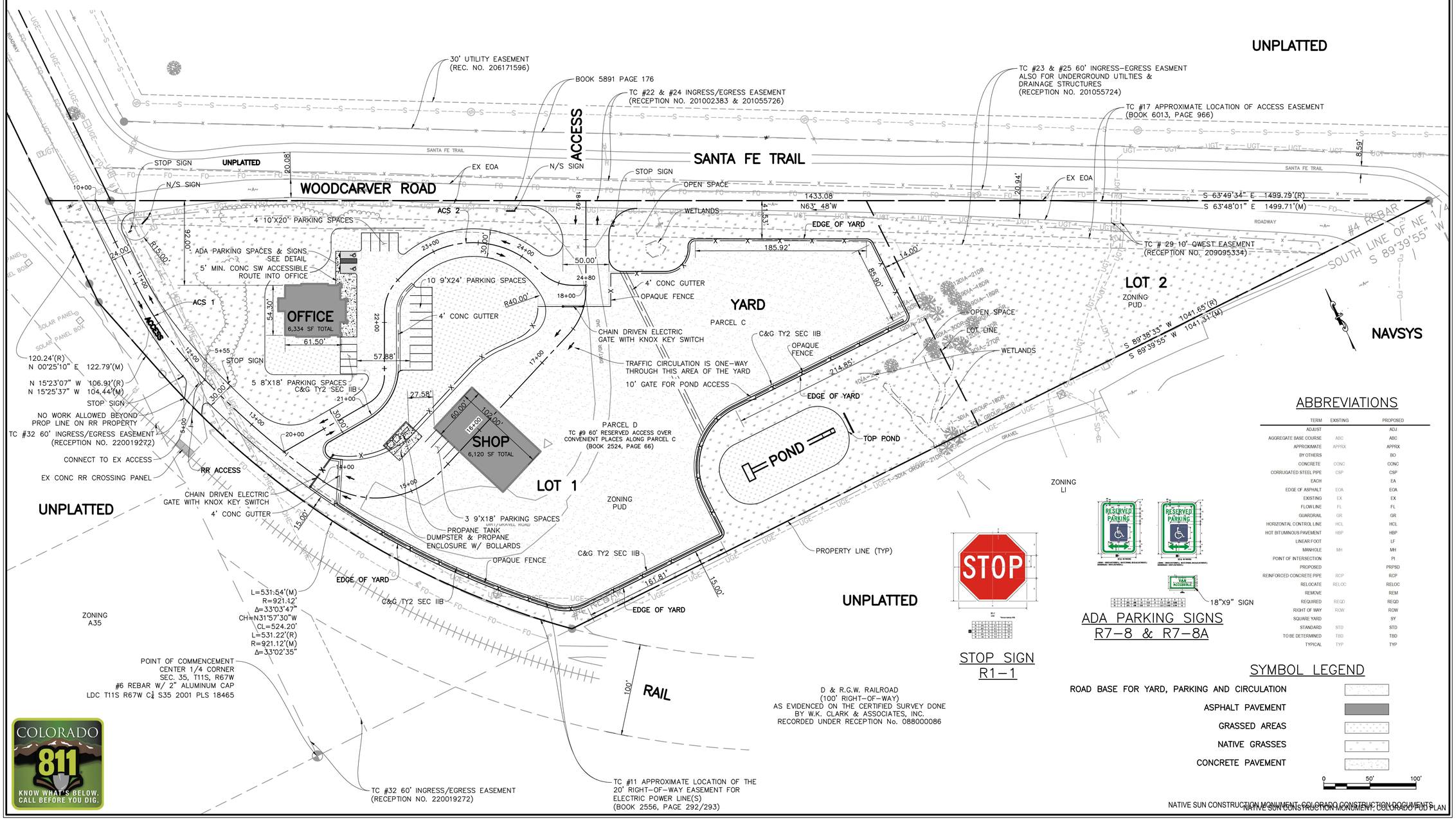
TYPICAL SECTION–SITE ACCESS

0 10' 20'



DETAIL–ADA SPACES

0 10' 20'



STOP SIGN
R1–1

ADA PARKING SIGNS
R7–8 & R7–8A

ABBREVIATIONS

TERM	EXISTING	PROPOSED
ADJUST		ADJ
AGGREGATE BASE COURSE	ABC	ABC
APPROXIMATE	APPRX	APPRX
BY OTHERS		BO
CONCRETE	CONC	CONC
CORRUGATED STEEL PIPE	CSP	CSP
EACH		EA
EDGE OF ASPHALT	EOA	EOA
EXISTING	EX	EX
FLOW LINE	FL	FL
GUARDRAIL	GR	GR
HORIZONTAL CONTROL LINE	HCL	HCL
HOT BITUMINOUS PAVEMENT	HBP	HBP
LINEAR FOOT		LF
MANHOLE	MH	MH
POINT OF INTERSECTION		PI
PROPOSED		PRPSD
REINFORCED CONCRETE PIPE	RCP	RCP
RELOCATE	RELOC	RELOC
REMOVE		REM
REQUIRED	REQD	REQD
RIGHT OF WAY	ROW	ROW
SQUARE YARD		SY
STANDARD	STD	STD
TO BE DETERMINED	TBD	TBD
TYPICAL	TYP	TYP

SYMBOL LEGEND

ROAD BASE FOR YARD, PARKING AND CIRCULATION
ASPHALT PAVEMENT
GRASSED AREAS
NATIVE GRASSES
CONCRETE PAVEMENT

0 50' 100'

CIVIL
CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
GENERAL SITE PLAN, SIGNAGE & STRIPING

REVISIONS:

CD REVIEW SET
7/13/2022 3:45 PM

SCALE:
NOTED

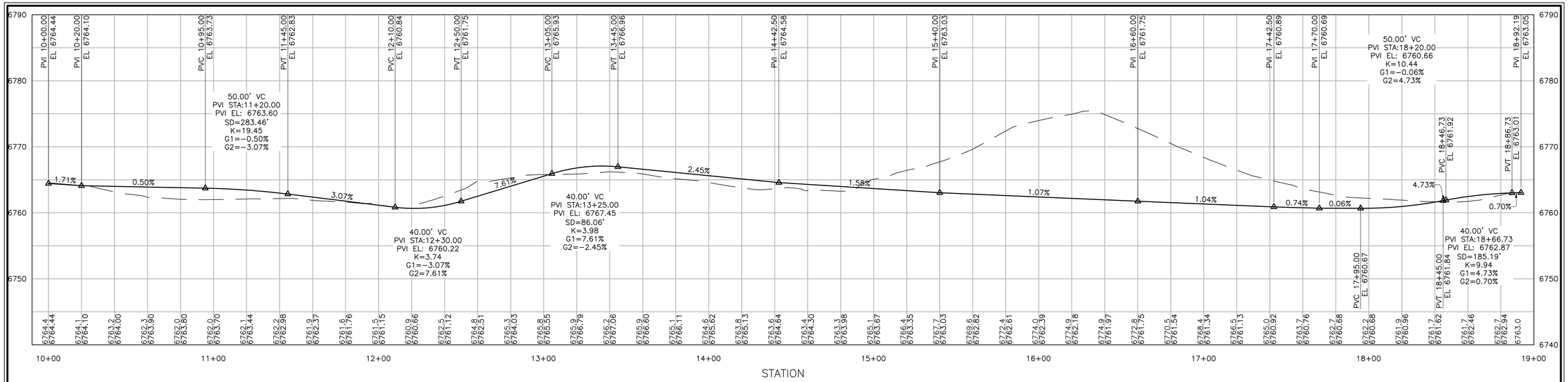
DATE:
MARCH 2021

PROJECT NO.:
21001

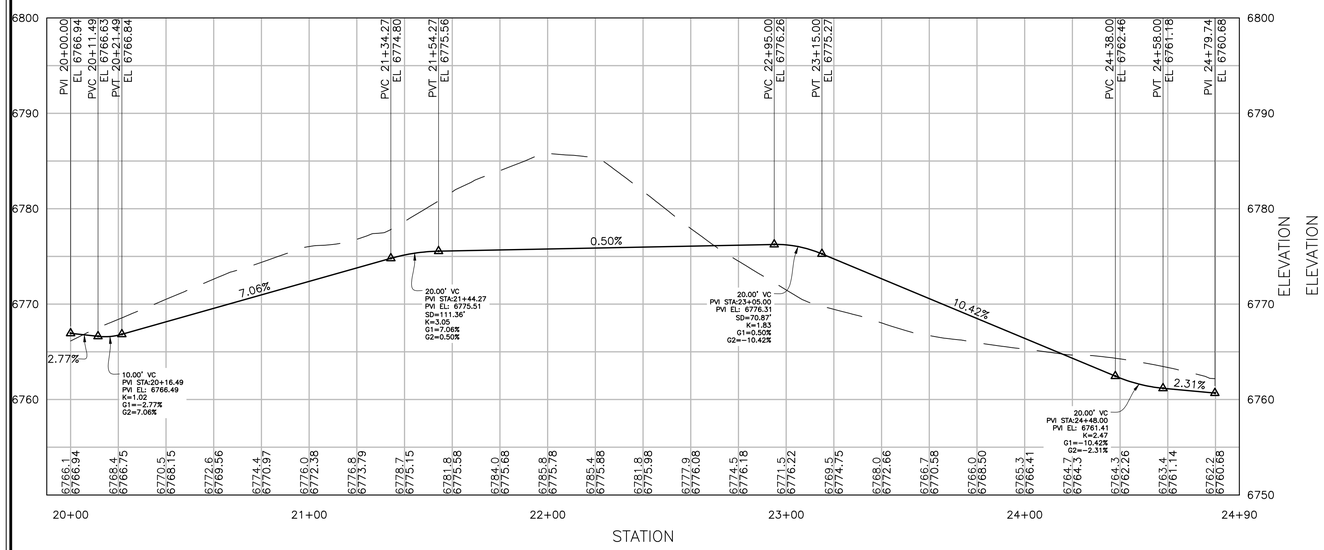
SHEET NO.:

C-2

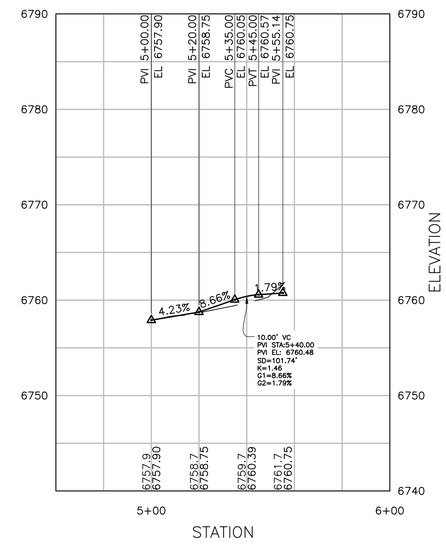
OF: 17



PROFILE ACS 1



PROFILE ACS 2



PROFILE RR ACCESS

CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
ACCESS & SITE PROFILES

REVISIONS:

CD REVIEW SET
5/28/2022 9:50 AM

SCALE:
NOTED

DATE:
MARCH 2021

PROJECT NO.:
21001

SHEET NO.:

C-3

OF: 17

0 30' 60'

0 7.5' 15'

COORDINATE GEOMETRY ALIGNMENT LINE–A

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L5	10+00.00	10+96.50	96.501	N63° 47' 10.46"W						15554.82	10348.34	10390.96	15468.24

COORDINATE GEOMETRY ALIGNMENT LINE–B

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L4	0+00.00	2+69.56	269.557	N33° 14' 36.23"W						15727.51	10095.29	10320.74	15579.74

COORDINATE GEOMETRY ALIGNMENT LINE–C

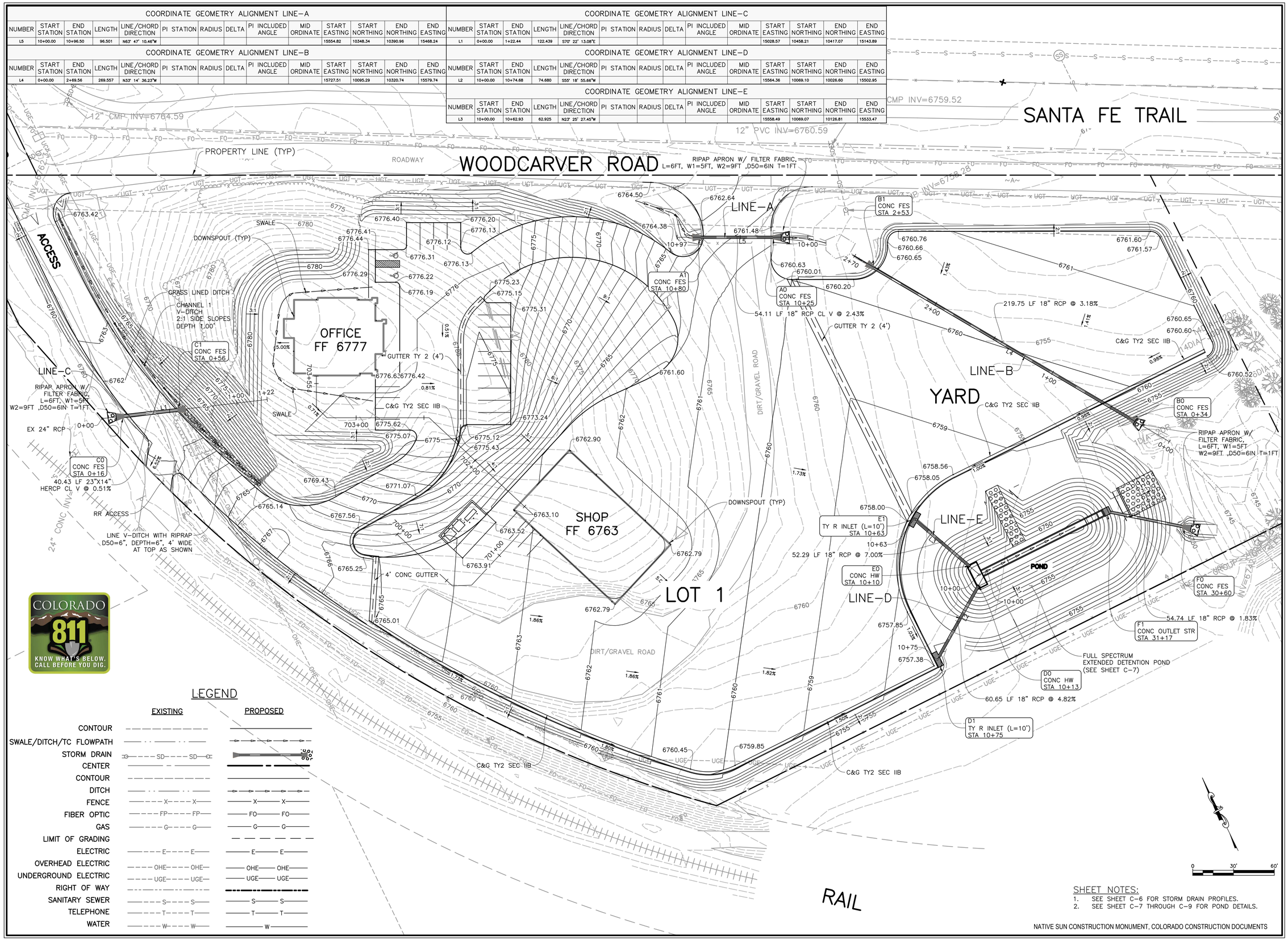
NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L1	0+00.00	1+22.44	122.439	S70° 22' 13.08"E						15028.57	10458.21	10417.07	15143.89

COORDINATE GEOMETRY ALIGNMENT LINE–D

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L2	10+00.00	10+74.68	74.680	S55° 18' 55.66"W						15564.36	10069.10	10026.60	15502.95

COORDINATE GEOMETRY ALIGNMENT LINE–E

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L3	10+00.00	10+62.93	62.925	N23° 25' 27.45"W						15558.49	10069.07	10126.81	15533.47



LEGEND

	EXISTING	PROPOSED
CONTOUR		
SWALE/DITCH/TC FLOWPATH		
STORM DRAIN	SD	
CENTER		
CONTOUR		
DITCH		
FENCE	X	X
FIBER OPTIC	FP	FO
GAS	G	G
LIMIT OF GRADING		
ELECTRIC	E	E
OVERHEAD ELECTRIC	OHE	OHE
UNDERGROUND ELECTRIC	UGE	UGE
RIGHT OF WAY		
SANITARY SEWER	S	S
TELEPHONE	T	T
WATER	W	W

SHEET NOTES:

1. SEE SHEET C–6 FOR STORM DRAIN PROFILES.
2. SEE SHEET C–7 THROUGH C–9 FOR POND DETAILS.

NATIVE SUN CONSTRUCTION MONUMENT, COLORADO CONSTRUCTION DOCUMENTS

CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
GRADING AND DRAINAGE PLAN

REVISIONS:

CD REVIEW SET
7/22/2022 8:44 AM

SCALE: NOTED

DATE: MARCH 2021

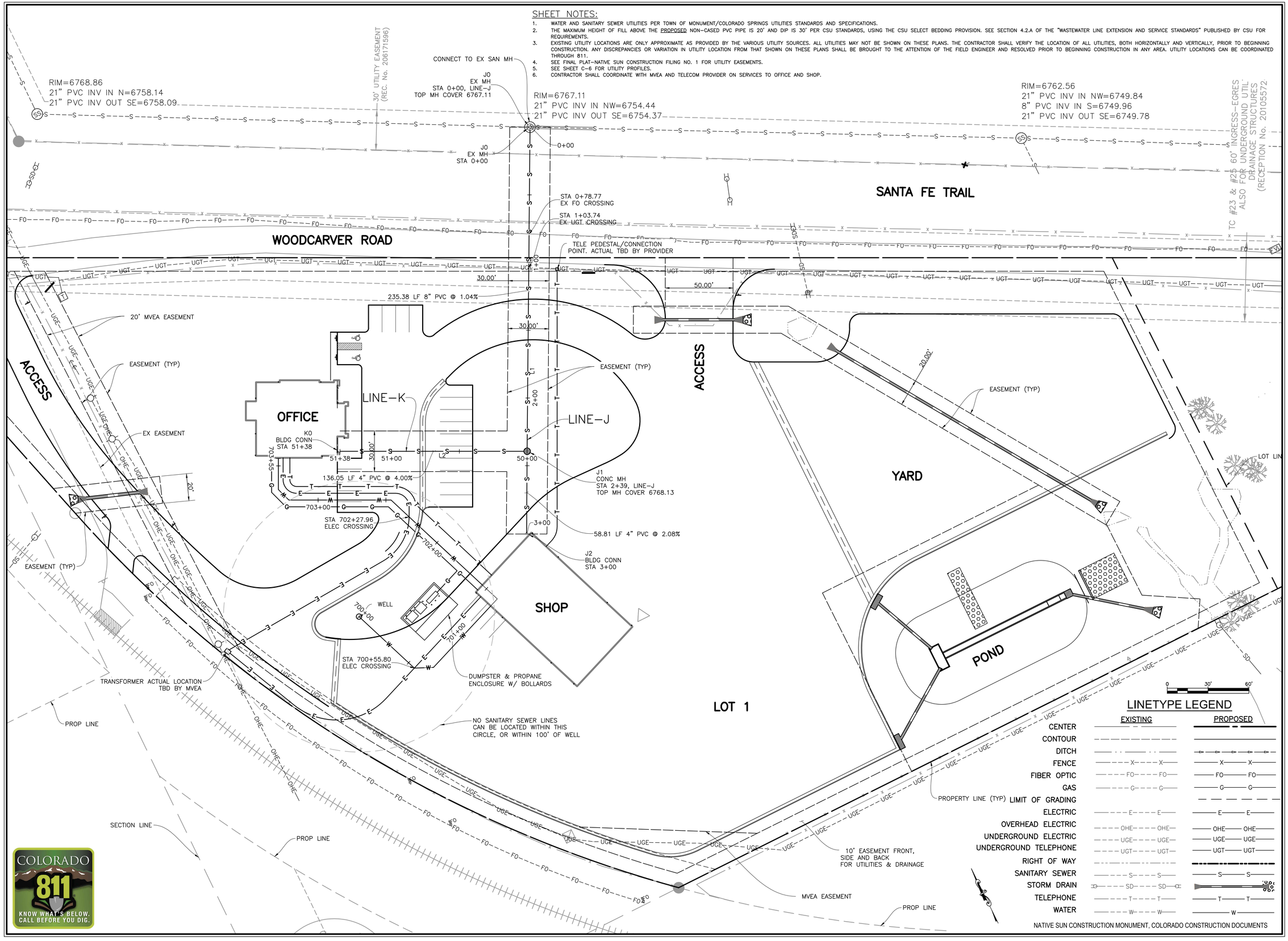
PROJECT NO.: 21001

SHEET NO.: C-4

OF: 17

SHEET NOTES:

1. WATER AND SANITARY SEWER UTILITIES PER TOWN OF MONUMENT/COLORADO SPRINGS UTILITIES STANDARDS AND SPECIFICATIONS.
2. THE MAXIMUM HEIGHT OF FILL ABOVE THE PROPOSED NON-CASED PVC PIPE IS 20' AND DIP IS 30' PER CSU STANDARDS, USING THE CSU SELECT BEDDING PROVISION. SEE SECTION 4.2.A OF THE "WASTEWATER LINE EXTENSION AND SERVICE STANDARDS" PUBLISHED BY CSU FOR REQUIREMENTS.
3. EXISTING UTILITY LOCATIONS ARE ONLY APPROXIMATE AS PROVIDED BY THE VARIOUS UTILITY SOURCES. ALL UTILITIES MAY NOT BE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES OR VARIATION IN UTILITY LOCATION FROM THAT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE FIELD ENGINEER AND RESOLVED PRIOR TO BEGINNING CONSTRUCTION IN ANY AREA. UTILITY LOCATIONS CAN BE COORDINATED THROUGH 811.
4. SEE FINAL PLAT-NATIVE SUN CONSTRUCTION FILING NO. 1 FOR UTILITY EASEMENTS.
5. SEE SHEET C-6 FOR UTILITY PROFILES.
6. CONTRACTOR SHALL COORDINATE WITH MVEA AND TELECOM PROVIDER ON SERVICES TO OFFICE AND SHOP.



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NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
UTILITY PLAN

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C-5

OF: 17

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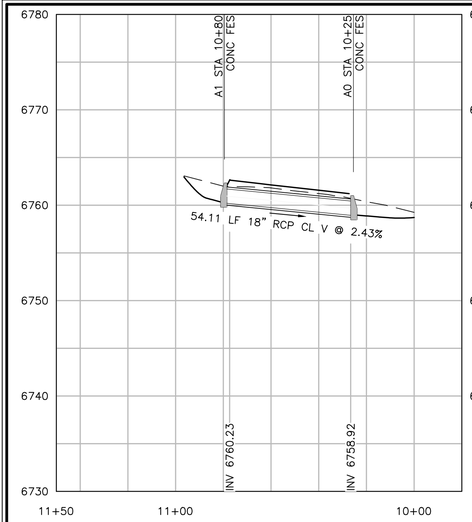
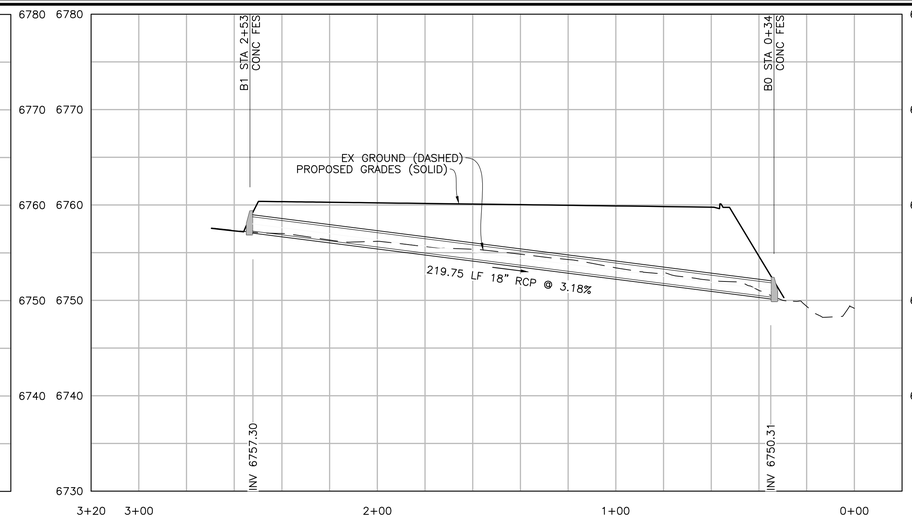


LINE–A PROFILE



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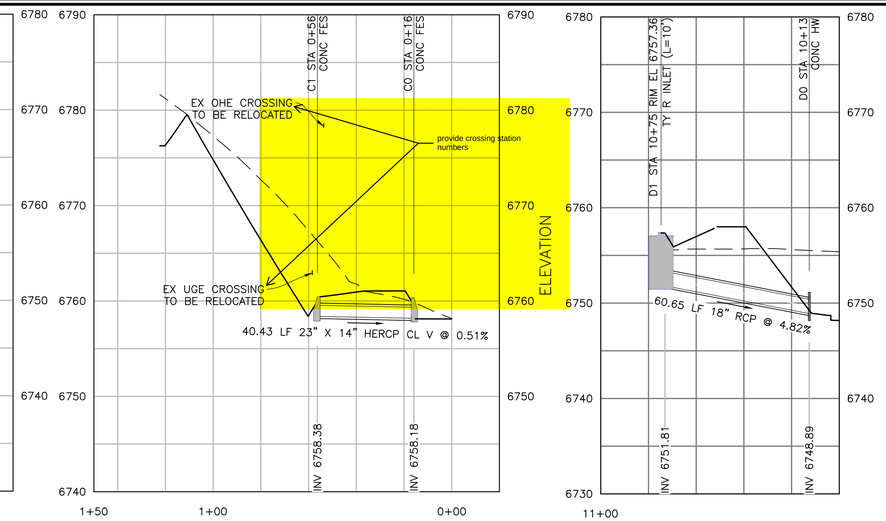
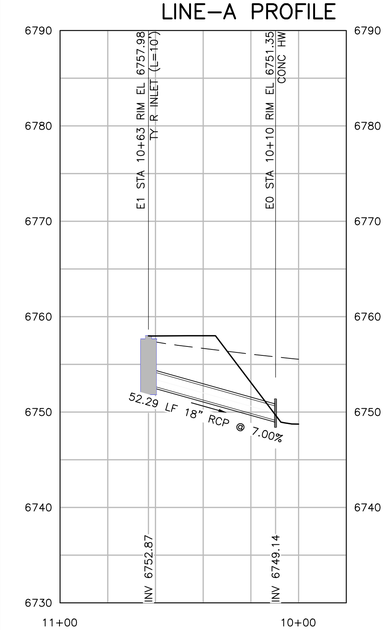


LINE–C PROFILE

PROFILE LINE–D



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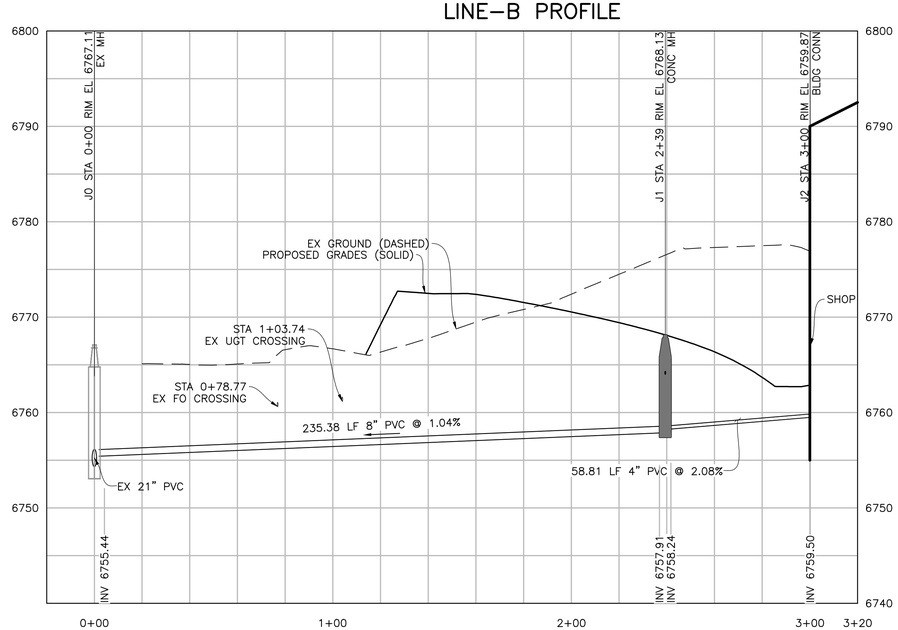

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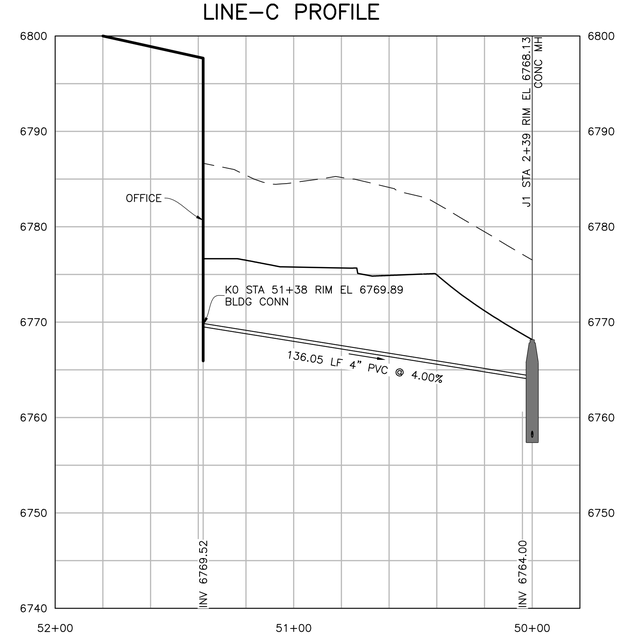

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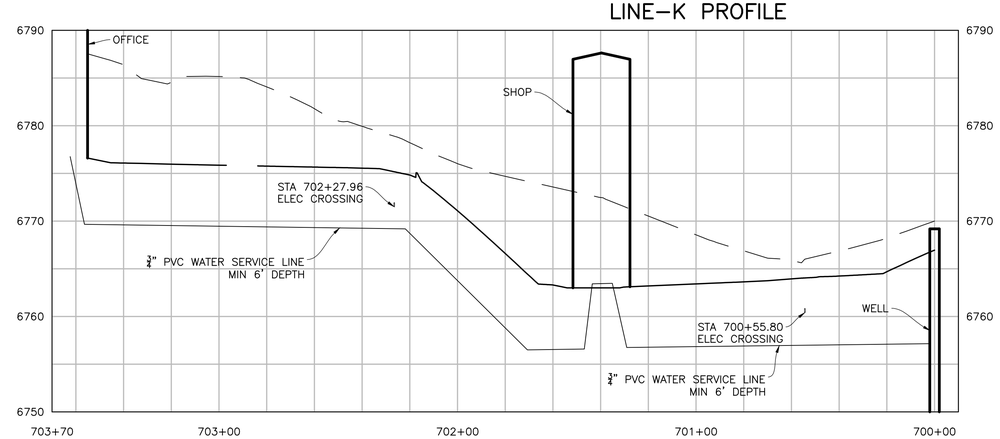

WATER PROFILE

SHEET NOTES:

1. ALL PROPOSED RCP IS CL III UNLESS NOTED OTHERWISE.

PRE-EXCAVATION CHECKLIST

- GAS AND OTHER UTILITY LINES SHOWN ON CONSTRUCTION PLANS
- UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) - TO BE CALLED AT LEAST TWO (2) BUSINESS DAYS AHEAD -
- UTILITIES LOCATED & MARKED
- EMPLOYEES BRIEFED ON MARKING AND COLOR CODES*
- EMPLOYEES TRAINED ON EXCAVATION AND SAFETY PROCEDURES FOR NATURAL GAS LINES
- WHEN EXCAVATION APPROACHES GAS LINES, EMPLOYEES MUST EXPOSE LINES BY CAREFUL PROBING AND HAND DIGGING

*STANDARD UTILITY MARKING COLOR CODE

NATURAL GAS	- YELLOW
ELECTRIC	- RED
WATER	- BLUE
WASTEWATER	- GREEN

IF YOU DAMAGE A GAS LINE, SMELL GAS OR HAVE A GAS EMERGENCY, CALL THE GAS DEPARTMENT.

CALL TWO (2) BUSINESS DAYS BEFORE YOU DIG, FOR LOCATIONS MONDAY-FRIDAY FROM 7 A.M.-5 P.M.
CALL 1-800-922-1987. FOR EMERGENCY LOCATIONS DURING NON- BUSINESS HOURS CALL 520-0022. (NO CHARGE FOR THIS SERVICE)

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NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
DRAINAGE & UTILITY PROFILES

REVISIONS:

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DATE:
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PROJECT NO.:
21001

SHEET NO.:

C-6

OF: 17

COORDINATE GEOMETRY ALIGNMENT TOP POND

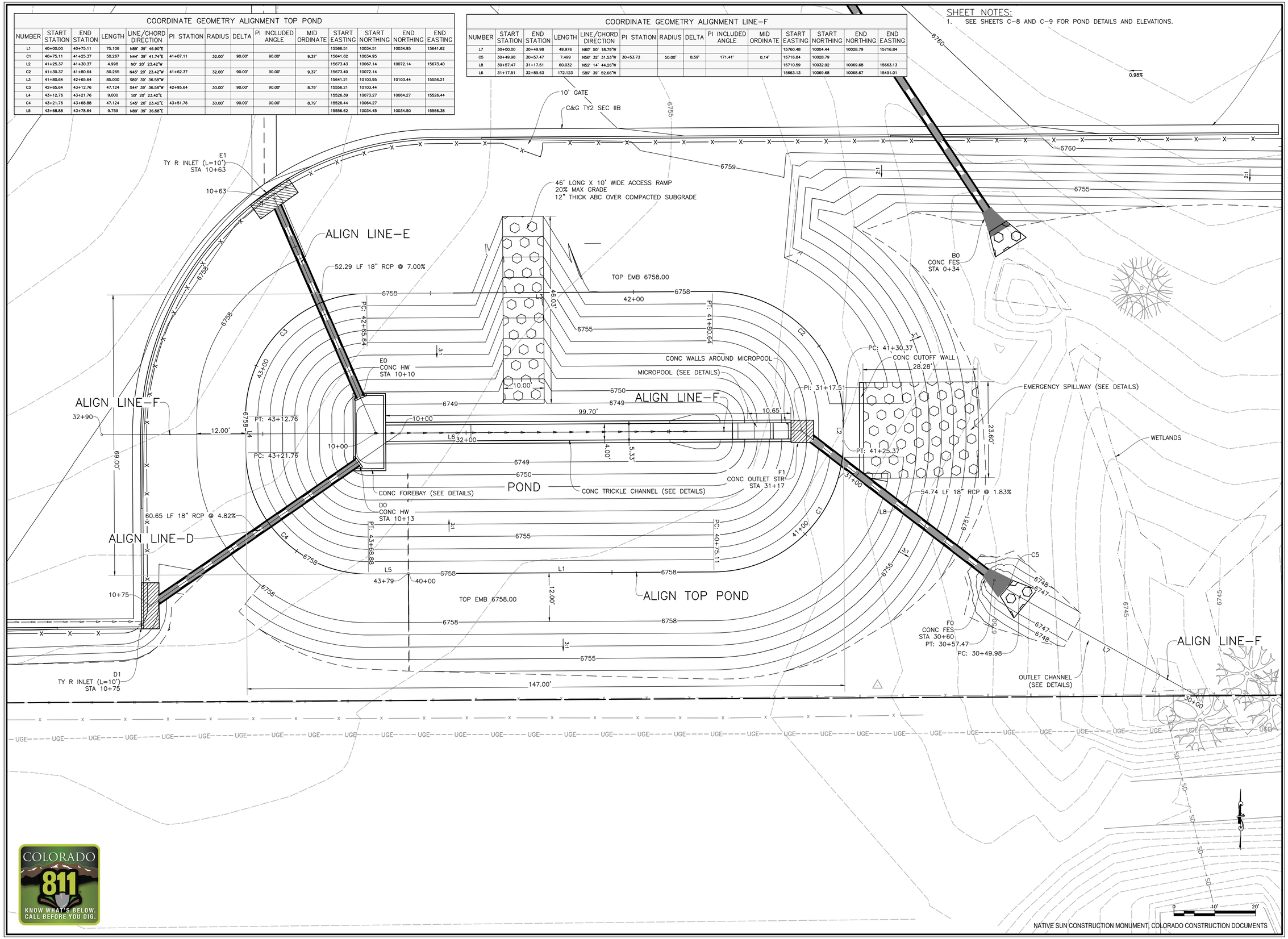
NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L1	40+00.00	40+75.11	75.106	N89° 39' 46.90"E						15566.51	10034.51	10034.95	15641.62
C1	40+75.11	41+25.37	50.267	N44° 39' 41.74"E	41+07.11	32.00'	90.00'	90.00'	9.37'	15641.62	10034.95		
L2	41+25.37	41+30.37	4.998	N0° 20' 23.42"W						15673.43	10067.14	10072.14	15673.40
C2	41+30.37	41+80.64	50.265	N45° 20' 23.42"W	41+62.37	32.00'	90.00'	90.00'	9.37'	15673.40	10072.14		
L3	41+80.64	42+65.64	85.000	S89° 39' 36.58"W						15641.21	10103.95	10103.44	15556.21
C3	42+65.64	43+12.76	47.124	S44° 39' 36.58"W	42+95.64	30.00'	90.00'	90.00'	8.79'	15556.21	10103.44		
L4	43+12.76	43+21.76	9.000	S0° 20' 23.42"E						15526.39	10073.27	10064.27	15526.44
C4	43+21.76	43+68.88	47.124	S45° 20' 23.42"E	43+51.76	30.00'	90.00'	90.00'	8.79'	15526.44	10064.27		
L5	43+68.88	43+78.64	9.759	N89° 39' 36.58"E						15556.62	10034.45	10034.50	15566.38

COORDINATE GEOMETRY ALIGNMENT LINE-F

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L7	30+00.00	30+49.98	49.976	N60° 50' 18.79"W						15760.48	10004.44	10028.79	15716.84
C5	30+49.98	30+57.47	7.499	N56° 32' 31.53"W	30+53.73	50.00'	8.59'	171.41°	0.14'	15716.84	10028.79		
L8	30+57.47	31+17.51	60.032	N52° 14' 44.26"W						15710.59	10032.92	10069.68	15663.13
L6	31+17.51	32+89.63	172.123	S89° 39' 52.66"W						15663.13	10069.68	10068.67	15491.01

SHEET NOTES:

1. SEE SHEETS C-8 AND C-9 FOR POND DETAILS AND ELEVATIONS.



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NATIVE SUN CONSTRUCTION

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CONSTRUCTION PLANS

POND PLAN

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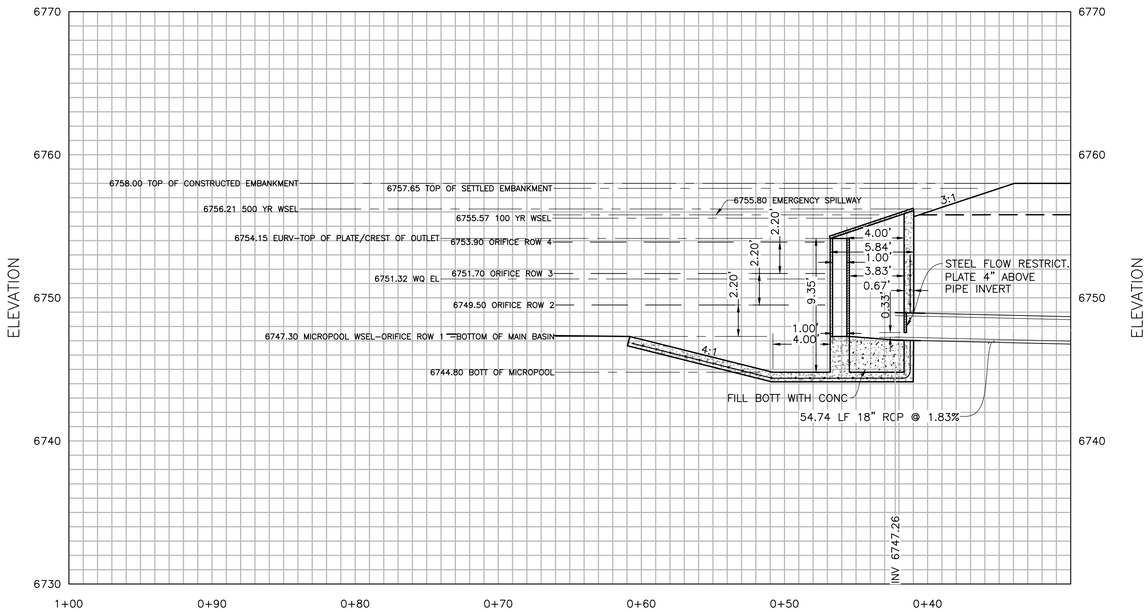
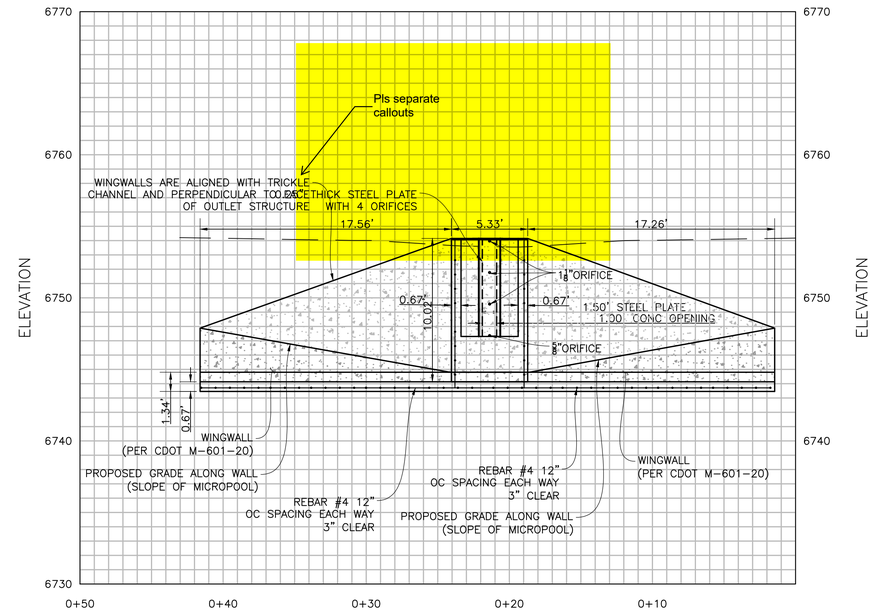
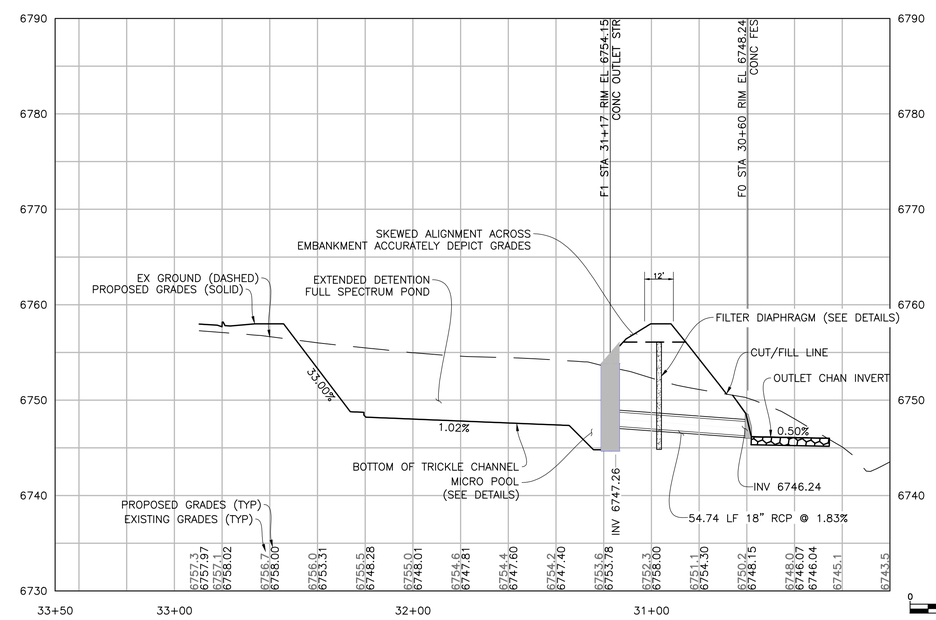




OUTLET STRUCTURE ELEVATION

SEE UDFCD DETAILS NEXT SHEET



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NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
POND ELEVATIONS

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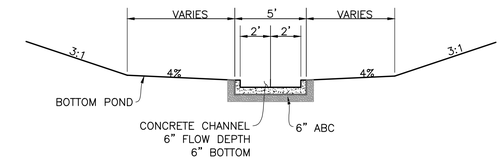
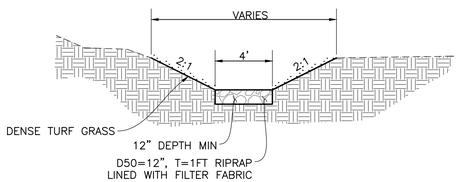
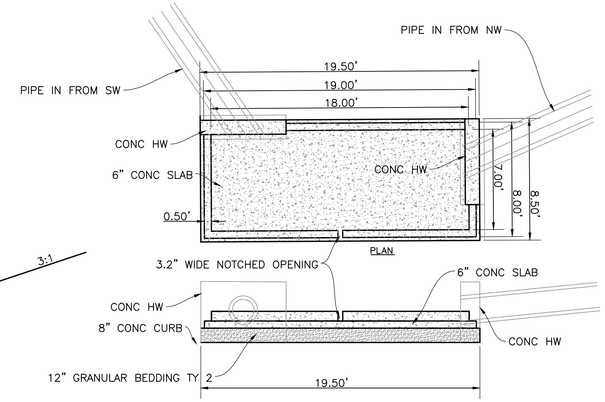


TRICKLE CHANNEL



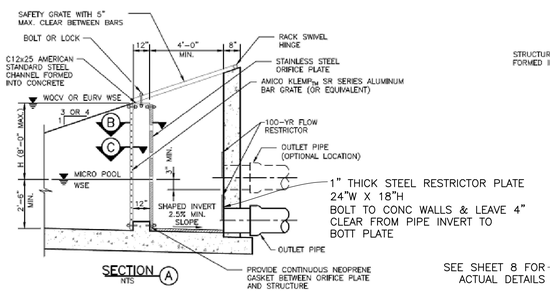
OUTLET CHANNEL

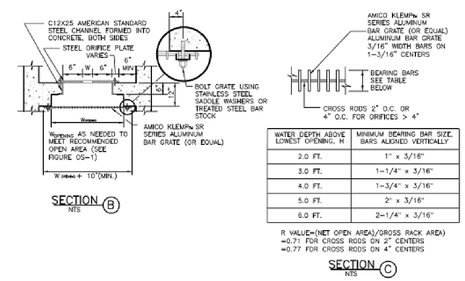


FOREBAY

NOTE:

1. CONNECT HEADWALLS TO FOREBAY WITH REBAR DOWELLS.
2. PROVIDE WATER TIGHT GROUT BETWEEN HEADWALL AND FOREBAY INTERFACE.

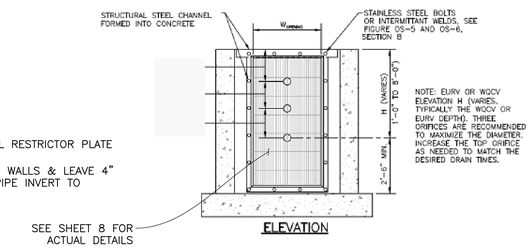




WATER DEPTH ABOVE LOWEST OPENING, H	MINIMUM BEARING BAR SIZE. BARS ALIGNED VERTICALLY
2.0 FT.	1" x 3/16"
3.0 FT.	1-1/4" x 3/16"
4.0 FT.	1-3/4" x 3/16"
5.0 FT.	2" x 3/16"
6.0 FT.	2-1/4" x 3/16"

R VALUE=(NET OPEN AREA)/GROSS RACK AREA)
=0.71 FOR CROSS RODS ON 2" CENTERS
=0.77 FOR CROSS RODS ON 4" CENTERS

Figure OS-6. Typical outlet structure with bar grate trash rack



ORIFICE PLATE NOTES:

1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER. SEE TABLE OS-2 FOR PLATE THICKNESS.

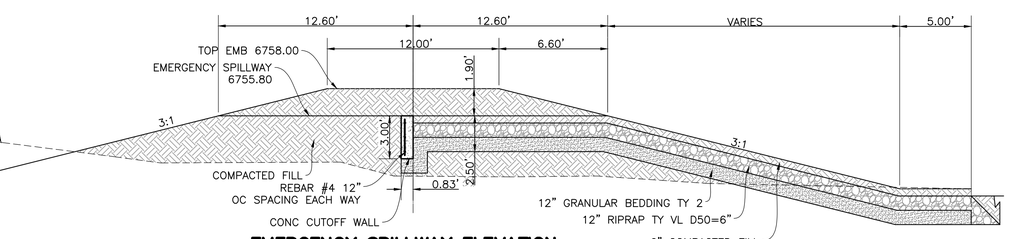
EURV AND WQCV TRASH RACKS:

1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/GROSS AREA RATIO (R VALUE).
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

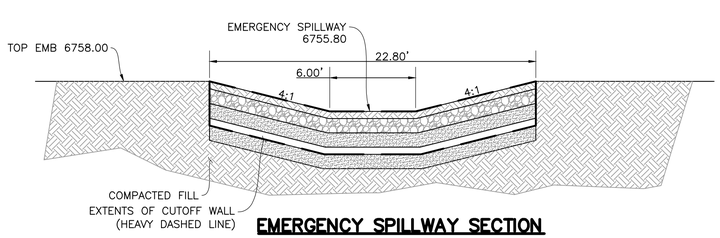
OVERFLOW SAFETY GRATES:

1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. SAFETY GRATES SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF SAFETY GRATES SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

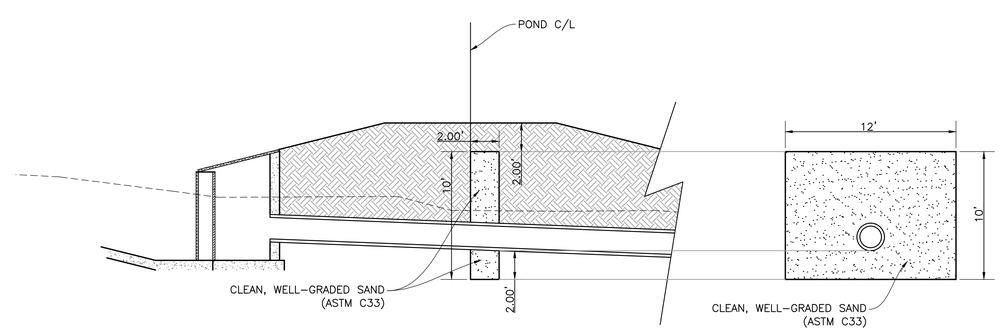
Figure OS-4. Orifice plate and trash rack detail and notes



EMERGENCY SPILLWAY ELEVATION



EMERGENCY SPILLWAY SECTION



FILTER DIAPHRAGM

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NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION
CONSTRUCTION PLANS
POND DETAILS

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OF: 17

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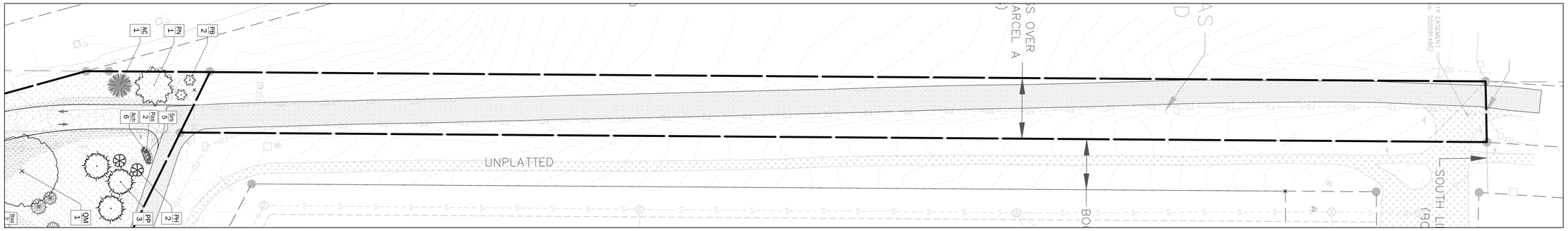


Flag Lot Inset
Scale: 1" = 50'-0"
0' 25' 50' 100' 150'

GROUND COVER SCHEDULE

GROUND COVERS	QTY	NOTES
	29,580 sf	Low Grow Native Mix Grass Seed with Erosion Control (See Notes and Details for more information)
	40,365 sf	Low Grow Native Mix Grass Seed (See Notes and Details for more information)
	2,680 sf	Shredded Cedar Mulch - 3" Depth, Gorilla Hair or Equal
	3,140 sf	3" - 4" Cobble River Rock
	To be Finalize During Construction Phase	Existing, Undisturbed Landscape

SHRUB AND PERENNIAL SCHEDULE

SHRUBS / PERENNIALS	QTY	ABR	BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
	31	Ach	Agastache cana / Hummingbird Mint	1 Gal.	24" X 30" H
	4	Avs	Artemisia.versicolor.'Sea Foam' / Sea Foam Sage	1 Gal.	24" X 12" H
	22	Bcg	Bouteloua gracilis 'Blond Ambition' / Grama Grass	1 Gal.	24" X 24" H
	3	Baa	Buddleia alternifolia 'Argentea' / Silver Fountain Butterfly Bush	5 Gal.	10' X 15' H
	18	Cps	Cytisus purgans 'Spanish Gold' / Spanish Gold Broom	5 Gal.	5' X 3' H
	11	Dbc	Daphne x burkwoodii 'Carol Mackie' / Carol Mackie daphne	5 Gal.	4' X 4' H
	36	Pas	Perovskia atriplicifolia 'Little Spire' / Little Spire Russian Sage	1 Gal.	36" X 36" H
	11	Srs	Salvia reptans ' Autumn Sapphire' / Autumn Sapphire Sage	1 Gal.	24" X 36" H
	13	Sds	Symphoricarpos x doorenbossi 'Magic Berry' / Pink Snowberry	5 Gal.	36" x 36" H
	9	Sos	Symphoricarpos oreophilus / Mountain Snowberry	5 Gal.	36" x 36" H

Total Shrubs / Perennials: 158

TREE SCHEDULE

EVERGREEN TREES	QTY	ABR	BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
	6	AC	Abies concolor / White Fir	6' H	25' X 50' H
	6	PB	Picea pungens 'Baby Blue Eyes' / Baby Blue Eyes Spruce	6' H	15' X 25'H
	6	PP	Picea pungens / Colorado Blue Spruce	6' H	25' X 50' H
	4	PF	Pinus flexilis 'Vanderwolf's' / Limber Pine	6' H	25' x 40' H
	6	PH	Pinus heldreichii 'leucodermis' / Bosnian Pine	6' H	12' X 20' H
	3	PN	Pinus nigra / Austrian Pine	6' H	35' x 50' H

Total Evergreen Trees : 32

DECIDUOUS TREES	QTY	ABR	BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
	4	QM	Quercus macrocarpa / Bur Oak	1.5" Cal.	70' X 70'H
	3	QR	Quercus robur / English Oak	1.5" Cal.	35' X 50' H
	3	TC	Tilia cordata 'Greenspire' / Greenspire Linden	1.5" Cal.	35' X 40'H

Total Deciduous Trees : 9

Total Trees: 41

EXISTING TREES TO REMAIN

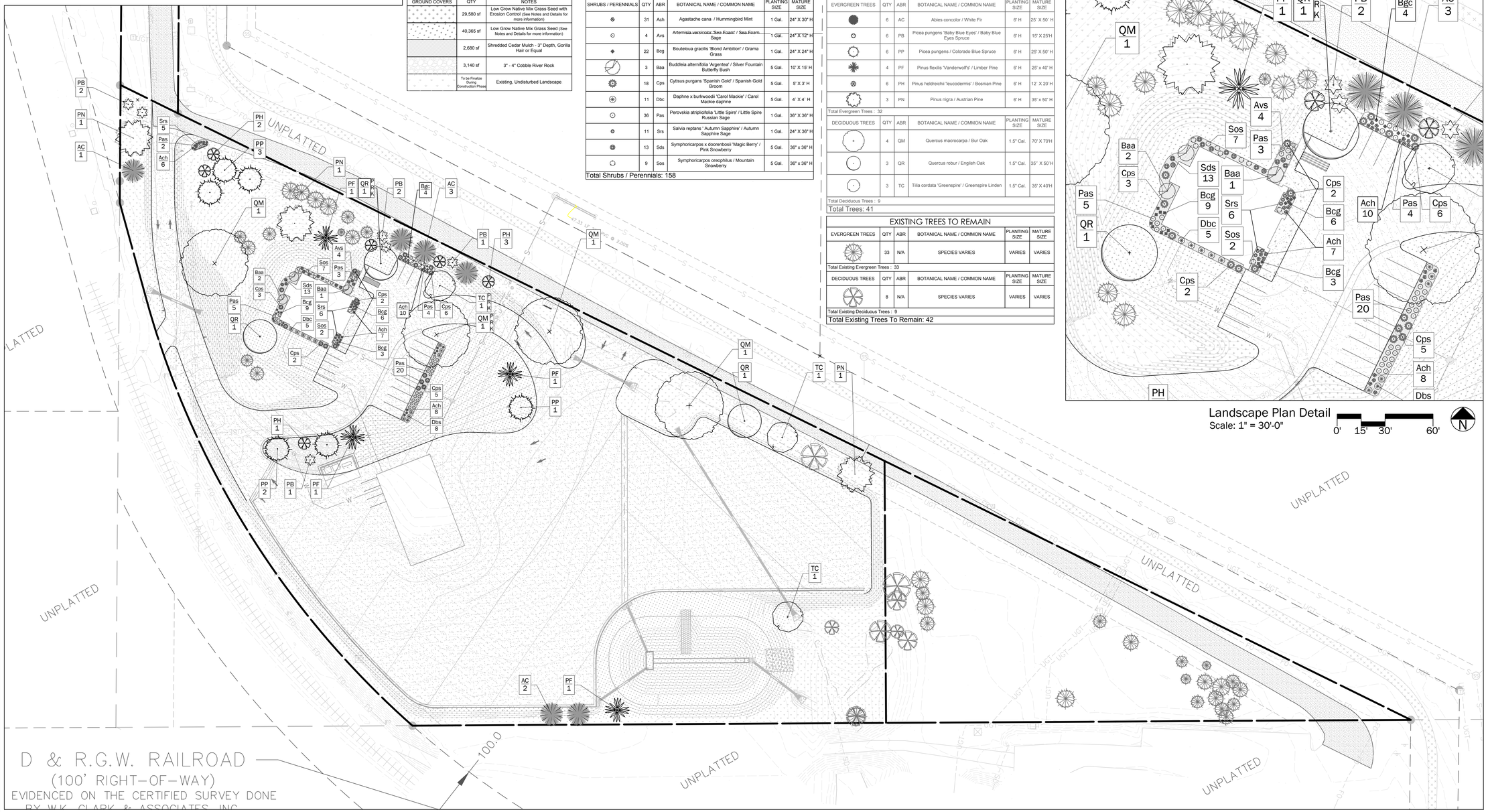
EVERGREEN TREES	QTY	ABR	BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
	33	N/A	SPECIES VARIES	VARIES	VARIES

Total Existing Evergreen Trees : 33

DECIDUOUS TREES	QTY	ABR	BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
	8	N/A	SPECIES VARIES	VARIES	VARIES

Total Existing Deciduous Trees : 9

Total Existing Trees To Remain: 42



Landscape Plan Detail
Scale: 1" = 30'-0"
0' 15' 30' 60'

Landscape Plan
Scale: 1" = 50'-0"
0' 25' 50' 100' 150'

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POPULUS
Planning & Design
9570 CANYON DRIVE
WOODLAND PARK, CO, 80906
208-284-6942
JEFFERYALLENWEBB@GMAIL.COM

NATIVE SUN CONSTRUCTION

PRELIMINARY/FINAL PLANNED UNIT DEVELOPMENT
LANDSCAPE CONSTRUCTION PLAN

REVISIONS:

REVISION	DATE
#1	12.06.2021
#2	05.25.2022
#3	07.21.2022

SCALE:
NOTED

DATE:
MAY 25, 2022

PROJECT NO.:
21001

SHEET NO.:
C10
LANDSCAPE PLAN
10 OF: 17

LANDSCAPE NOTES

WEED BARRIER, EDGING, AND GROUND PLANE TREATMENT:

1. AN EVENLY PLACED LAYER OF GRAVEL MULCH, COBBLE MULCH, OR BREEZE SHALL BE PLACED ON ALL AREAS DESIGNATED TO RECEIVE THE SPECIFIED MULCH. MINIMUM DEPTHS SHALL BE ACHIEVED IN ACCORDANCE TO THE SCHEDULE BY THE TYPE OF MULCH. WEED BARRIER FABRIC SHALL BE COMPLETELY COVERED AND PINNED.
2. AN EVENLY PLACED LAYER OF ORGANIC MULCH SHALL BE PLACED ON ALL AREAS DESIGNATED TO RECEIVE ORGANIC MULCH. ORGANIC MULCH SHALL BE APPLIED DIRECTLY TO TILLED, SCARIFIED, AMENDED AND UNCOMPACTED SOIL.
3. THE LANDSCAPE CONTRACTOR SHALL SUPPLY OWNER'S REPRESENTATIVE WITH A SAMPLE OF ALL TYPES OF MULCH FOR APPROVAL PRIOR TO INSTALLATION.
4. WEED BARRIER SHALL BE A WOVEN, POROUS MAT AS MANUFACTURED BY AMERICAN EXCELSIOR POLYSPUN XL, DUPONT TYPAR STYLE 3341 OR MIRAFI "MIRASCAPE". THE WEED BARRIER SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
5. POROUS WEED BARRIER FABRIC SHALL BE INSTALLED IN ALL PLANTING BEDS WHERE ORGANIC MULCH IS NOT PRESENT.
6. 6" HEIGHT BY 3/16" WIDTH ROLLED-TOP STEEL EDGING SHALL BE USED TO SEPARATE ALL PLANTING BEDS FROM TURFGRASS. ALL EDGING SHALL BE INSTALLED FLUSH WITH GRADE. AVOID BROKEN BACK CURVES AND LONG TANGENTS BETWEEN CURVES. OBTAIN OWNER'S REPRESENTATIVE APPROVAL PRIOR TO INSTALLATION.
7. SEE CIVIL ENGINEERING DRAWINGS AND GEOTECHNICAL ENGINEERING DOCUMENTS FOR INFORMATION REGARDING THE PAVEMENT MATERIALS FOR SIDEWALKS, DRIVEWAYS AND STREETS. SPECIAL PAVING TREATMENTS (COLOR, PAVERS, ETC.) ARE NOTED IN THE GROUND PLANE TREATMENT SCHEDULE ASSOCIATED WITH THE LANDSCAPE PLAN.

TREES, SHRUBS, PERENNIALS AND ORNAMENTAL GRASSES:

1. CULTIVATE THE SUBSOIL ON ALL PLANTING BEDS, SOD AND SEED AREAS PER THE LANDSCAPE DETAIL PROVIDED.
2. THE TILLING OF PLANTING BEDS AND PLACEMENT OF BACKFILL IS TO OCCUR JUST PRIOR TO PLANTING; THEREAFTER, PROTECTION FROM COMPACTION AND CONSTRUCTION TRAFFIC SHALL BE PROVIDED.
3. ALL PLANT MATERIALS SHALL HAVE BACKFILL CAREFULLY PLACED AROUND THE BASE AND SIDES OF BALL TO TWO-THIRDS (2/3) DEPTH OF THE BALL, THEN THOROUGHLY SOAK WITH WATER TO ALLOW SETTLEMENT. ALL WIRE, BURLAP FASTENERS AND LOOSE BURLAP AROUND BASE OF TRUNK SHALL BE REMOVED AT THIS TIME. REMAINDER OF THE PIT SHALL THEN BE BACKFILLED, ALLOWING FOR DEPTH OF MULCH, SAUCER AND SETTLEMENT OF BACKFILL. BACKFILL SHALL THEN BE THOROUGHLY WATERED AGAIN.
4. ALL PLANT MATERIAL SHALL BE WELL-FORMED AND DEVELOPED IN GOOD CONDITION, HEALTHY AND DISEASE-FREE, AND BE TYPICAL OF THE SPECIES. PLANTS SHALL COMPLY IN ALL APPLICABLE RESPECTS WITH ACCEPTABLE STANDARDS AS SET FORTH IN THE COLORADO NURSERY ACT OF 1965 - TITLE 35, ARTICLE 25, CRS 1974 (SEE LANDSCAPE NURSERY ACT). OWNER AND OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT AT ANY TIME OR PLACE PRIOR TO FINAL ACCEPTANCE OF WORK, ANY AND ALL PLANTS WHICH, IN THEIR OPINION, FAIL TO MEET THESE SPECIFICATION REQUIREMENTS.
5. NO ROW TREE SUBSTITUTIONS MAY BE MADE WITHOUT APPROVAL FROM THE TOWN OF MONUMENT. NO MATERIAL SUBSTITUTIONS SHALL BE MADE WITHOUT OWNER'S REPRESENTATIVE APPROVAL. ALTERNATE MATERIALS OF SIMILAR SIZE AND CHARACTER MAY BE CONSIDERED IF SPECIFIED PLANT MATERIALS CANNOT BE OBTAINED. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REVISE PLANT MATERIAL AS DEEMED NECESSARY.
6. ALL PLANT MATERIAL SHALL BE PROTECTED FROM THE DRYING ACTION OF THE SUN AND WIND AFTER BEING DUG, WHILE BEING TRANSPORTED, AND WHILE AWAITING PLANTING. THE ROOT BALL OF PLANTS THAT CANNOT BE PLANTED IMMEDIATELY SHALL BE PROTECTED FROM THE DRYING ACTION BY COVERING THEM WITH MOIST ORGANIC MULCH. PERIODICALLY, APPLY WATER TO THE MULCH-COVERED BALLS TO KEEP MOIST. IF PLANTING SHOULD OCCUR DURING THE GROWING SEASON, APPLY ANTI-DESSICANT TO LEAVES BEFORE TRANSPORT TO REDUCE THE LIKELIHOOD OF WINDBURN. REAPPLY ANTI-DESSICANT AFTER PLANTING TO REDUCE TRANSPIRATION.
7. WRAP ALL TREE TRUNKS SPIRALLY WITH APPROVED WRAPPING MATERIAL FROM GROUND TO THE FIRST BRANCH. SECURELY TIE WRAPPING AT THE TOP AND BOTTOM WITH MASKING TAPE. TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING IN THE MANNER SHOWN ON THE PLANTING DETAILS.
8. AFTER PLANTING IS COMPLETED, REPAIR INJURIES TO ALL PLANTS AS REQUIRED. LIMIT AMOUNT OF PRUNING TO A MINIMUM NECESSARY TO REMOVE DEAD OR INJURED TWIGS AND BRANCHES. PRUNE IN SUCH A MANNER AS NOT TO CHANGE NATURAL HABIT OR SHAPE OF PLANT. CENTRAL LEADERS SHALL NOT BE REMOVED.
9. ALL SHRUBS AND TREES SHALL BE PLANTED A MINIMUM OF 12" INSIDE OF ALL EDGING AND AWAY FROM WALLS AND OTHER PERMANENT STRUCTURES.
10. ALL PLANT LOCATIONS ARE APPROXIMATE; ADJUST LOCATIONS PRIOR TO INSTALLING PLANT MATERIAL AS NECESSARY TO AVOID CONFLICTS WITH UNFORESEEN ELEMENTS MISSING FROM THE LANDSCAPE DRAWING OR ELEMENTS ADDED DURING CONSTRUCTION.
11. QUANTITIES OF MATERIALS SHOWN ON THE PLANTING PLAN TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT SCHEDULE. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON THE PLANTING PLAN. REPORT ANY DISCREPANCIES IN THE PLANTING PLAN IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
12. PLANTS ARE TO BE SIZED AS SHOWN PER SPECIES ON THE PLANT SCHEDULE.

NATIVE GRASS SEED:

1. CONTRACTOR IS TO PROVIDE VERIFICATION THAT ALL SEED IS OF THE SPECIES SHOWN ON THIS PLAN AND LISTED BELOW (OR EQUIVALENT). NO SUBSTITUTIONS WILL BE ALLOWED WITH OUT APPROVAL. THE SPECIFIED SEED MIX IS INTENDED TO BE A DROUGHT-RESISTANT SEED MIX THAT WILL NOT REQUIRE IRRIGATION ONCE ESTABLISHED.
2. RECOMMENDED GRASS SEED MIX: 15% Sheep Fescue, 15% Perennial Ryegrass, 12% Wheatgrass, Slender, 10% Wheatgrass, Western, 7% Sideoats Grama, 5% Switchgrass, 5% Idaho Fescue, 5% Wheatgrass, Streambank, 5% Arizona Fescue, 5% Sanddrop Seed, 4.5% Wheatgrass, Bluebunch, 4.5% Green Needlegrass, 2.5% Buffalo Grass, 2% Blue Grama.
3. ON SLOPES ABOVE 4:1, IT IS RECOMMENDED THAT SEED MIX BE INSTALLED IN CONJUNCTION WITH BIODEGRADABLE EROSION CONTROL NETTING OR BLANKETS (STRAW OR COCONUT OR EQUIVALENT) TO MINIMIZE EROSION, PROTECT EXPOSED SOILS, AND PROMOTE GRASS SEED GERMINATION. INSTALL SEED AND EROSION CONTROL BLANKET PER MANUFACTURERS RECOMMENDATION.
4. GRASS SEED TO BE PLANTED IN DISTURBED AREAS WITH EXPOSED SOILS DUE TO GRADING AND CONSTRUCTION. GRASS SEED IS NOT REQUIRED, OR RECOMMENDED, IN AREAS NOT DISTURBED DURING THE COURSE OF CONSTRUCTION. IF THERE IS CONFLICT BETWEEN LANDSCAPE PLAN SEEDING RECOMMENDATIONS AND FINAL CONSTRUCTION IMPACTS, ON THE GROUND CONSTRUCTION DISTURBANCE SHALL TAKE PRECEDENCE OVER LANDSCAPE PLAN.

IRRIGATION:

1\. IRRIGATION WILL BE PROVIDED TO ALL TREES, SHRUBS AND PERENNIALS VIA DRIP IRRIGATION. IRRIGATION SHALL BE PROVIDED TO ALL AREAS OF TURFGRASS VIA SPRAY/ROTOR IRRIGATION. WHERE TREES ARE LOCATED WITHIN AREAS OF MEDIUM/HIGH WATER-USE TURFGRASS, ASSURE THAT THE TREES ARE PROVIDED ADEQUATE IRRIGATION. WHERE TREES ARE LOCATED WITHIN AREAS OF LOW WATER TURFGRASS, TREES SHALL BE IRRIGATED VIA DRIP IRRIGATION.
2\. ALL PLANTS SHALL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM VIA DRIP IRRIGATION AT THE FOLLOWING RATES.
1.1. TREES: 3 - 1 GPH EMITTERS
1.2. SHRUBS: 2 - 1 GPH EMITTERS
1.3. PERENNIALS AND ORNAMENTAL GRASSES: 1 - 1 GPH EMITTER
2\. A RAIN SENSOR AND BACKFLOW DEVICE, SHALL BE INCLUDED IN THE IRRIGATION SYSTEM
3\. LANDSCAPE IMPROVEMENTS SHALL BE MAINTAINED BY OWNER OR MANAGEMENT COMPANY
4\. AN IRRIGATION PLAN SHALL BE SUBMITTED AT THE TIME OF BUILDING PERMIT APPLICATION AND APPROVED WITHIN THIRTY (30) DAYS SUBSEQUENT TO BUILDING PERMIT ISSUANCE OR PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, WHICHEVER COMES FIRST., OR AS REQUIRED BY THE TOWN OF MONUMENT.
5\. UPON REQUEST BY THE APPLICANT, AN IRRIGATION PLAN SHALL BE SUBMITTED WITHIN NINETY (90) DAYS SUBSEQUENT TO BUILDING PERMIT ISSUANCE AND APPROVED PRIOR TO THE INSTALLATION OF ANY IRRIGATION COMPONENTS AND PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
6\. THE NATIVE SEED AREAS WILL HAVE AN UNDERGROUND IRRIGATION SYSTEM THAT WILL BE TEMPORARY UNTIL FULLY ESTABLISHED. THE SHRUBS AND TREES WITHIN THE NATIVE SEED AREA WILL HAVE A PERMANENT DRIP SYSTEM TO IRRIGATE THE PLANTS.

OTHER:

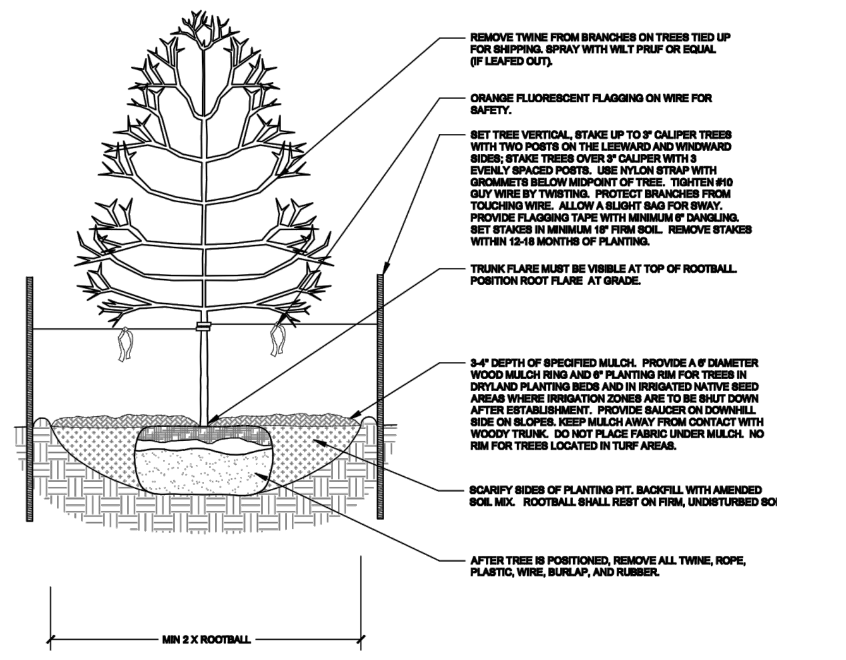
1. INSTALL EROSION CONTROL FABRIC ON SLOPES ON GRADES GRATER THAN 4:1 TO HELP PREVENT EROSION.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EXISTING EROSION CONTROL MEASURES AS PER THE TOWN OF MONUMENT SPECIFICATIONS DURING THE DURATION OF WORK ON-SITE.
3. PRIOR TO BEGINNING ANY WORK ON THE SITE, THE CONTRACTOR SHALL CONTACT THE OFFICE OF THE OWNER'S REPRESENTATIVE FOR SPECIFIC INSTRUCTIONS RELEVANT TO THE SEQUENCING OF WORK.
4. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS AND SERVICE NECESSARY TO FURNISH AND INSTALL ALL WORK SPECIFIED AND AS SHOWN ON THESE PLANS.
5. NO MATERIAL SUBSTITUTIONS SHALL BE MADE WITHOUT OWNER'S REPRESENTATIVE'S APPROVAL. ALTERNATE MATERIALS OF SIMILAR SIZE AND CHARACTER MAY BE CONSIDERED IF SPECIFIED PLANT MATERIALS CANNOT BE OBTAINED. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REVISE PLANT LIST AS DEEMED NECESSARY.
6. THE SHOWN UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL LOCATE ALL UTILITIES BEFORE WORK. LOCATE EXACT UTILITY LOCATIONS BY CONTACTING "CALL BEFORE YOU DIG" AT (800) 922-1987. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO UTILITIES.
7. AN EVENLY PLACED LAYER OF GRAVEL MULCH, COBBLE MULCH, OR BREEZE SHALL BE PLACED ON ALL AREAS DESIGNATED TO RECEIVE THE SPECIFIED MULCH. MINIMUM DEPTHS SHALL BE ACHIEVED IN ACCORDANCE TO THE SCHEDULE BY THE TYPE OF MULCH. WEED BARRIER FABRIC SHALL BE COMPLETELY COVERED AND PINNED.
8. INSTALL HIGH-QUALITY STEEL TROLLOP EDGING BETWEEN ALL PLANTING BEDS AND AREAS OF NATIVE SEED, UNDISTURBED EXISTING VEGETATION, BARE SOIL, OR OTHER TRANSITION AREAS. IF CONCRETE FLATWORK, ASPHALT SURFACING, OR CONCRETE CURBING EXISTS, TROLLOP EDGING SHALL NOT BE REQUIRED.
9. ALL SHRUBS AND TREES SHALL BE PLANTED A MINIMUM OF 12" INSIDE OF ALL EDGING AND AWAY FROM WALL AND OTHER PERMANENT STRUCTURES.
10. THE FINISH GRADES AS SHOWN ON CIVIL CONSTRUCTION DRAWINGS SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM WALLS AND BUILDINGS.

SOIL AMENDMENT PER CSU RECOMMENDATION FOLLOWING SOILS TEST:

15. FOR TURFGRASS AND SEED:
15.1. PH IS HIGH. PH 6 TO 7.2 IS THE PREFERRED PH RANGE FOR GROWTH OF MOST PLANTS, BUT MOST PLANTS TOLERATE THE HIGHER PH WITH LITTLE PROBLEM.
15.2. ELECTRICAL CONDUCTIVITY OR SALTS: 0.2NNGIS/CM. E.C. IS LOW. WHEN E.C. LESS THAN 2.0, SALINITY IS NOT A PROBLEM FOR PLANT GROWTH.
15.3. LIME CONTENT IS HIGH. LIME IS 2% - 5% IN THE SOIL. PLANTS CAN STILL GROW QUITE WELL IN SOIL WITH THIS LIME CONTENT.
15.4. SANDY CLAY LOAM SOIL. THE SOIL MAY DRAIN AT A LOW TO VERY LOW RATE. WATERING SCHEDULES MAY HAVE TO BE INCREASED TO ALLOW FOR BETTER WATER INFILTRATION INTO THE SOIL PROFILE.
15.5. ORGANIC MATERIAL (COMPOST) SHALL BE ADDED AT A RATE OF 3 CUBIC YARDS PER 1000 SQ. FT. PRIOR TO SEEDING.
15.6. NITRATE (N) IS LOW (2.0PPM). WHEN NITRATE-N IS LESS THAN 10 PPM, ADD N AT THESE RATES: FOR HIGH MAINTENANCE TURF: ADD 1 LB N/1000 SQ.FT IN EACH OF 4 APPLICATIONS: (1) MID-MARCH, (2) MAY-TO-MID-JUNE, (3) MID-AUG TO MID-SEPT., (4) AND EARLY OCT. TO EARLY NOV.FOR LOW MAINTENANCE TURF: REDUCE APPLICATIONS (1) AND (2) TO 1/2 LB N/1000 SQ.FT; APPLICATION (4) IS OPTIONAL. FOR EACH 1 LB OF N NEEDED, APPLY 2 LB UREA, OR 5 LB AMMONIUM SULFATE, OR 3 3/4 LB (27-3-4) LAWN FERTILIZER, OR 8 LB BLOODMEAL, OR 11 LB CORN GLUTEN MEAL, OR 50 LB ALFALFA MEAL/PELLETS, PER 1000 SQ.FT. THE NUMBER OF NITROGEN APPLICATIONS CAN BE REDUCED OR DELAYED IF TURF GROWTH IS VIGOROUS IN THE SPRING.
15.7. ZINC (ZN) IS LOW: ADD 2 OZ. OF ZN PER 1000 SQ. FT OR 5LBS ZN/ACRE
16. FOR PLANTINGS:
16.1. PH IS HIGH. PH 6 TO 7.2 IS THE PREFERRED PH RANGE FOR GROWTH OF MOST PLANTS, BUT MOST PLANTS TOLERATE THIS HIGHER PH WITH LITTLE PROBLEM.
16.2. ELECTRICAL CONDUCTIVITY OR SALTS: 0.2NNGIS/CM. E.C. IS LOW. WHEN E.C. LESS THAN 2.0, SALINITY IS NOT A PROBLEM FOR PLANT GROWTH.
16.3. LIME CONTENT IS HIGH. LIME IS 2% - 5% IN THE SOIL. PLANTS CAN STILL GROW QUITE WELL IN SOIL WITH THIS LIME CONTENT
16.4. SANDY CLAY LOAM SOIL. THE SOIL MAY DRAIN AT A LOW TO VERY LOW RATE. WATERING SCHEDULES MAY HAVE TO BE INCREASED TO ALLOW FOR BETTER WATER INFILTRATION INTO THE SOIL PROFILE.
16.5. ORGANIC MATTER IS LOW; A GOOD GOAL FOR LANDSCAPE IS TO GRADUALLY INCREASE THE OM CONTENT TO ABOUT 5% OVER A PERIOD OF YEARS. FOR 2-3 YEARS IN THE FALL, APPLY 2-3 INCHES DEPTH OF PLANT-BASED COMPOST, OR 1 INCH DEPTH OF ANIMAL-BASED COMPOST, AND INCORPORATE INTO THE TOP 6-8 INCHES OF THE SOIL.
16.6. NITRATE N IS LOW: APPLY 0.3 LB N/100 SQ FT TO THE SOIL. FOR EACH 0.1 LB OF N NEEDED, APPLY ABOUT 1/4 LB UREA, OR 1/2 LB AMMONIUM SULFATE, OR 3/4 LB BLOODMEAL, OR 1 LB CORN GLUTEN MEAL, OR 5 LB ALFALFA MEAL PELLETS PER 100 SQ.FT. OTHER FERTILIZERS CAN BE USED AS WELL. CHECK WITH YOUR LOCAL GARDEN CENTER OR HOME IMPROVEMENT STORE TO DETERMINE WHAT FERTILIZERS ARE AVAILABLE IN YOUR AREA. WHEN CALCULATING FERTILIZER RATES TAKE THE AMOUNT OF N NEEDED AND DIVIDE BY THE %N IN THE FERTILIZER. FOR EXAMPLE, IF YOUR FERTILIZER CONTAINS 30% N, TAKE 0.30 LBS (N NEEDED) DIVIDED BY 0.30 (N IN THE FERTILIZER) TO GET 1 LB OF THE 30% N FERTILIZER THAT IS NEEDED TO APPLY PER 100 SQ.FT. FOR RATES PER 1000 SQ. FT MULTIPLY THE QUANTITIES BY 10.
16.7. ZINC (ZN) IS LOW: ADD 2 OZ. OF ZN PER 1000 SQ. FT OR 5LBS ZN/ACRE

LANDSCAPE DETAILS

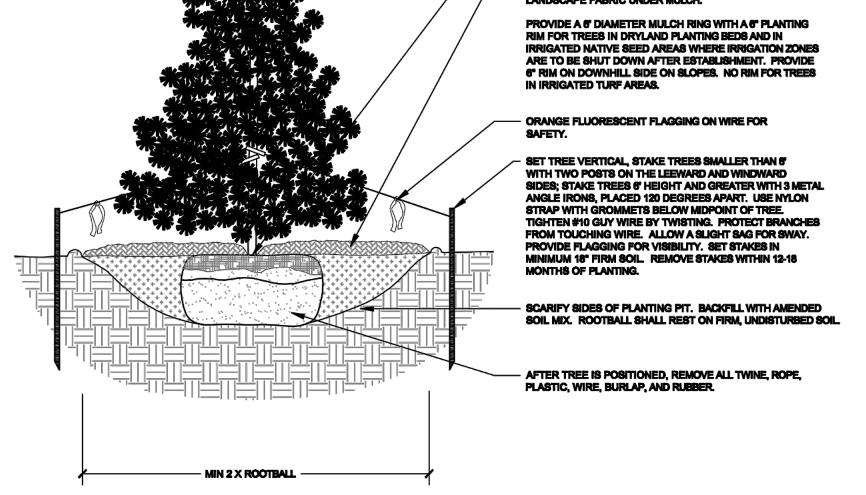
NOTES:
1. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
2. AT TIME OF PLANTING, DO NOT REMOVE OR CUT LEADER AND PRUNE ONLY DEAD OR BROKEN BRANCHES, CROSS OVER BRANCHES, AND WEAK OR NARROW CROTCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
3. STRUCTURAL PRUNING SHOULD NOT BEGIN UNTIL AFTER ESTABLISHMENT PERIOD, USUALLY TWO GROWING SEASONS.
4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
5. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
6. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
7. WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK. USE ELECTRICAL OR DUCT TAPE, NOT TWINE.
8. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
9. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



A1 DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

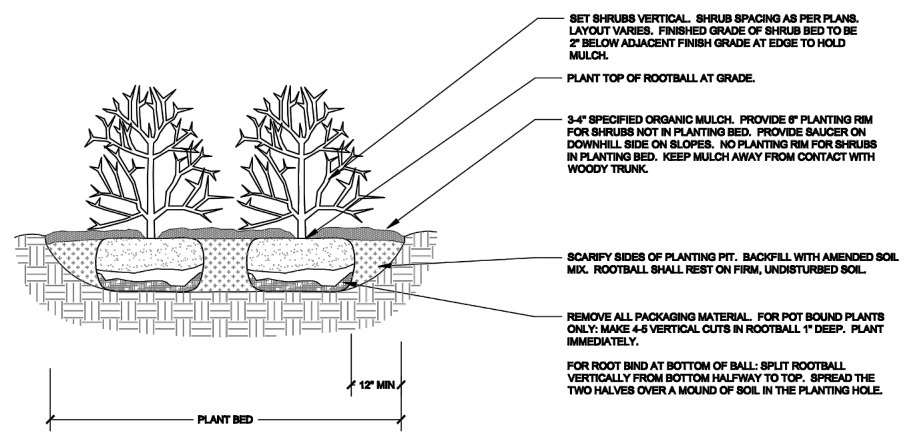
NOTES:
1. DO NOT REMOVE OR CUT LEADER.
2 PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.



B1 EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

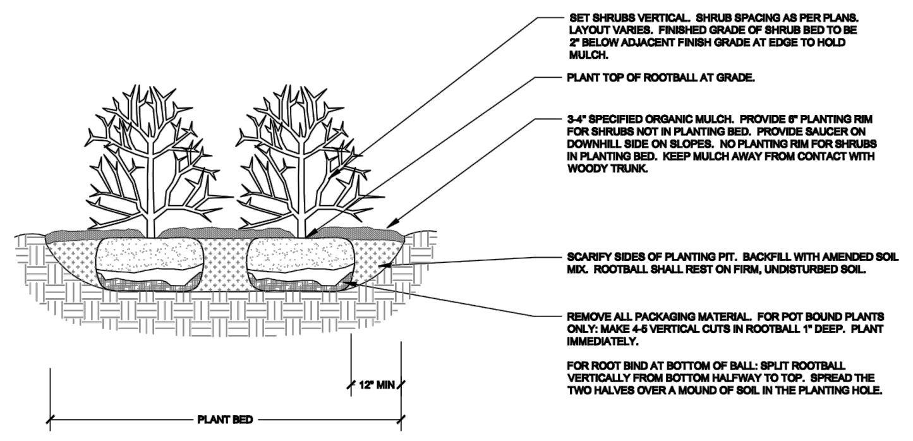
NOTES:
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



C1 ~~SHRUB PLANTING DETAIL~~

NOT TO SCALE

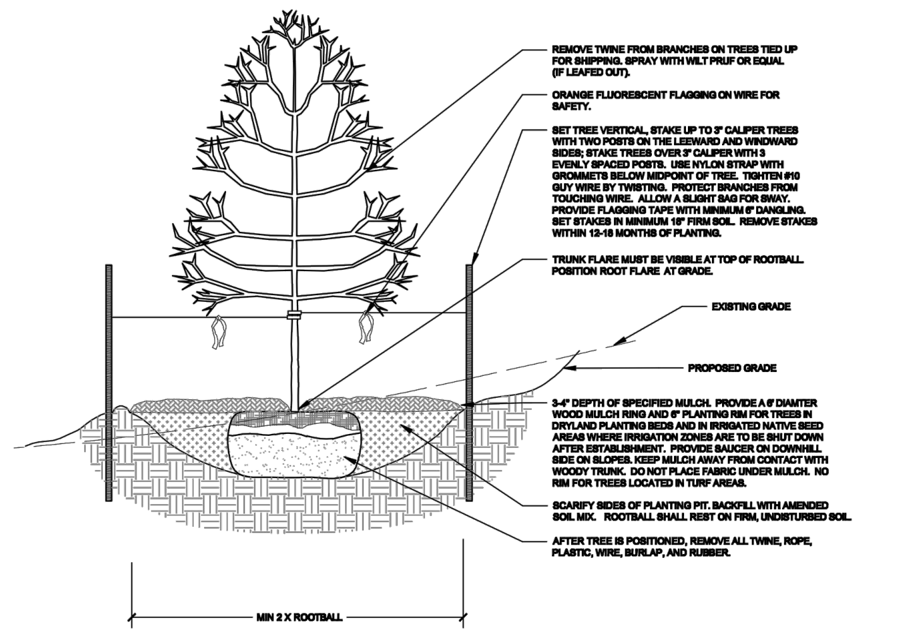
NOTES:
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



A2 PERENNIAL PLANTING DETAIL

NOT TO SCALE

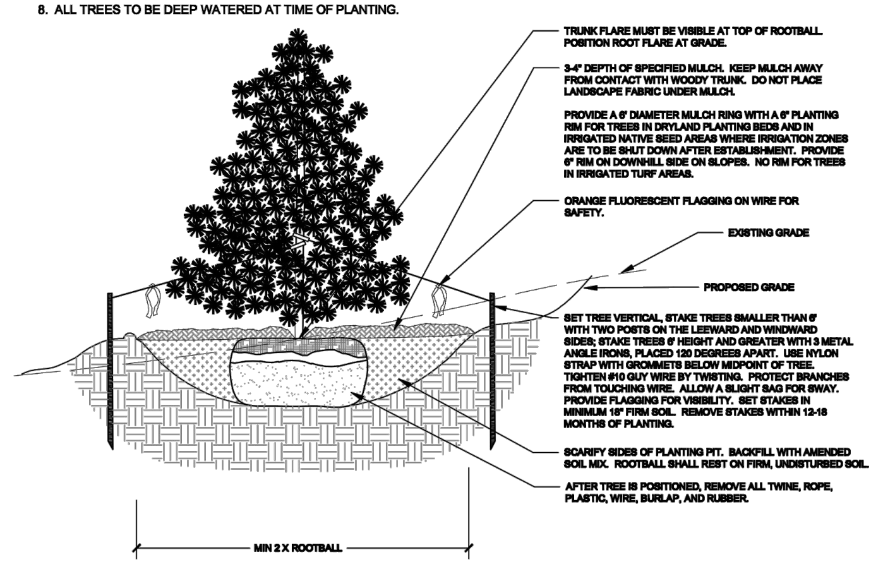
NOTES:
1. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
2. AT TIME OF PLANTING, DO NOT REMOVE OR CUT LEADER AND PRUNE ONLY DEAD OR BROKEN BRANCHES, CROSS OVER BRANCHES, AND WEAK OR NARROW CROTCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
3. STRUCTURAL PRUNING SHOULD NOT BEGIN UNTIL AFTER ESTABLISHMENT PERIOD, USUALLY TWO GROWING SEASONS.
4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
5. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
6. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
7. WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK. USE ELECTRICAL OR DUCT TAPE, NOT TWINE. OCTOBER 31 AND REMOVE MARCH 31 FOR THE PIKES PEAK REGION.
8. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
9. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



B2 DECIDUOUS TREE PLANTING ON SLOPE DETAIL

NOT TO SCALE

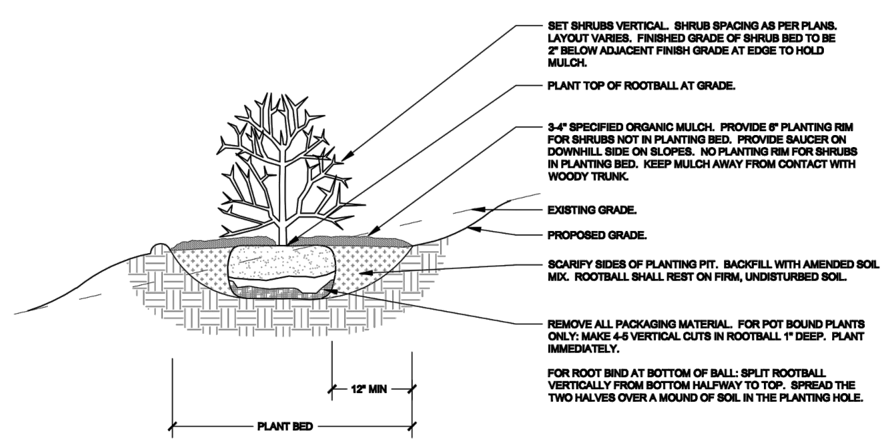
NOTES:
1. DO NOT REMOVE OR CUT LEADER.
2 PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.



C2 EVERGREEN TREE PLANTING ON SLOPE DETAIL

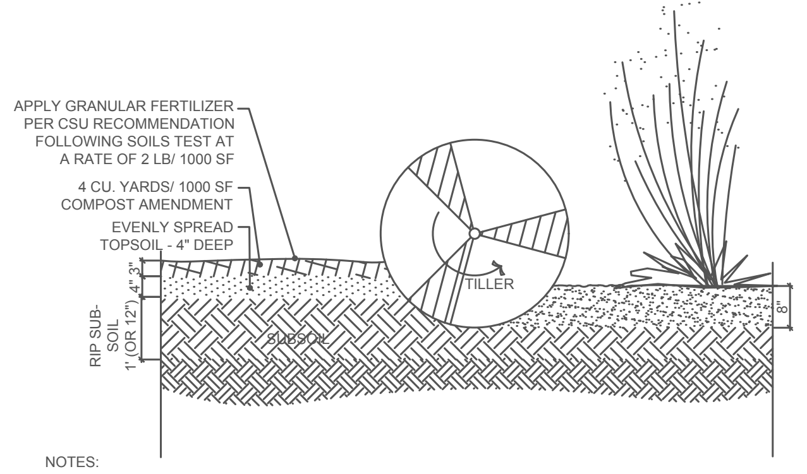
NOT TO SCALE

NOTES:
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



A3 SHRUB PLANTING ON SLOPE DETAIL

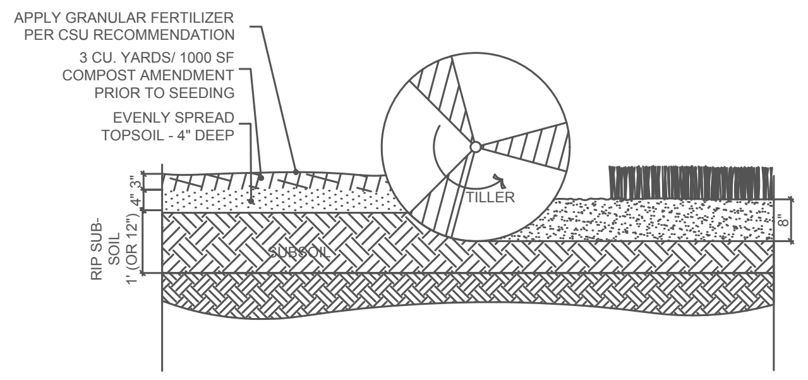
NOT TO SCALE



NOTES:
1. TOPSOIL TO CONSIST OF DARK, LIGHT LOAM SOIL FREE OF ROCKS, ROOTS, AND OTHER FOREIGN MATERIALS.
2. PROVIDE SOILS TEST AND RESULTS FROM COLORADO STATE UNIVERSITY LAB. SOIL AMENDMENT SHALL BE PROVIDED PER RECOMMENDATION FROM COLORADO STATE UNIVERSITY. THE FERTILIZER APPLICATION SHOULD BE DELAYED IF PLANTING DOES NOT OCCUR WITHIN 2-3 DAYS OF FERTILIZING.
3. THE FERTILIZER APPLICATION SHOULD BE DELAYED IF PLANTING DOES NOT OCCUR WITHIN 2-3 DAYS OF FERTILIZING.
4. COMPOST TO CONSIST OF 1-YEAR OLD PLANT-BASED ORGANIC MATERIAL.
5. FROZEN MATERIALS OR MATERIALS GREATER THAN 1" DIA. SHOULD BE REMOVED.
6. FINISH GRADE FOR ALL PLANTING BEDS ALONG WALKS OR CURBS SHOULD BE 4" LOWER THAN THE SURFACE.
7. LAWNS WITHIN THE BOUNDARIES OF EXISTING TREE DRIPLINES SHALL NOT BE ROTOTILLED AT ANY TIME. ROTOTILLING IS ONLY PERMITTED IN AREAS OUTSIDE OF EXISTING TREE DRIPLINES WHERE CONCRETE AND HARDSCAPE ARE REMOVED.

B3 SOIL PERPETRATION DETAIL

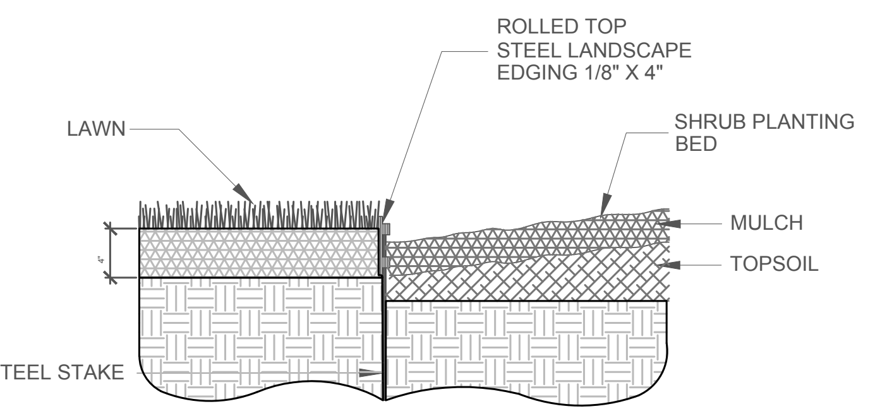
NOT TO SCALE



NOTES:
1. NOTES 1-5 FROM PLANT SOIL PREPARATION DETAIL.
2. FINISH GRADE FOR ALL SEED AREAS ALONG WALKS OR CURBS SHOULD BE JUST BELOW THE SURFACE OF THE WALK/CURB.

C3 NATIVE GRASS (SEED) PLANTING DETAIL

NOT TO SCALE



C4 STEEL EDGER DETAIL

NOT TO SCALE

CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

POPULUS
Planning & Design

9570 CANYON DRIVE
WOODLAND PARK, CO, 80906
208-284-6942
JEFFERYALLENWEBB@GMAIL.COM

NATIVE SUN CONSTRUCTION
PRELIMINARY/FINAL PLANNED UNIT DEVELOPMENT
LANDSCAPE CONSTRUCTION PLAN

REVISIONS:

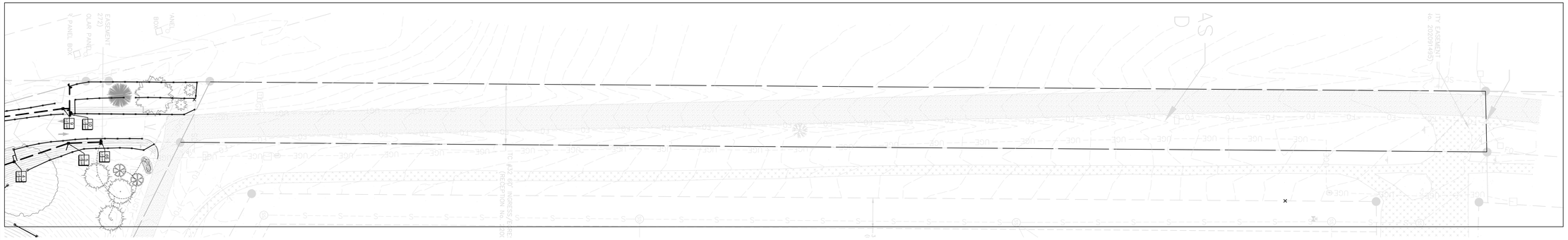
REVISION	DATE
#1	12.06.2021
#2	05.25.2022
#3	07.21.2022

SCALE:
NOTED

DATE:
MAY 25, 2022

PROJECT NO.:
21001

SHEET NO.:
C11
LA NOTES & DETAILS



Flag Lot Inset
Scale: 1" = 50'-0"

0' 25' 50' 100' 150'

GROUND COVER SCHEDULE

GROUND COVERS	QTY	NOTES
	29,580 sf	Low Grow Native Mix Grass Seed with Erosion Control (See Notes and Details for more information)
	40,365 sf	Low Grow Native Mix Grass Seed (See Notes and Details for more information)
	2,680 sf	Shredded Cedar Mulch - 3" Depth, Gorilla Hair or Equal
	3,140 sf	3" - 4" Cobble River Rock
	To be Finalize During Construction Phase	Existing, Undisturbed Landscape

IRRIGATION SCHEDULE

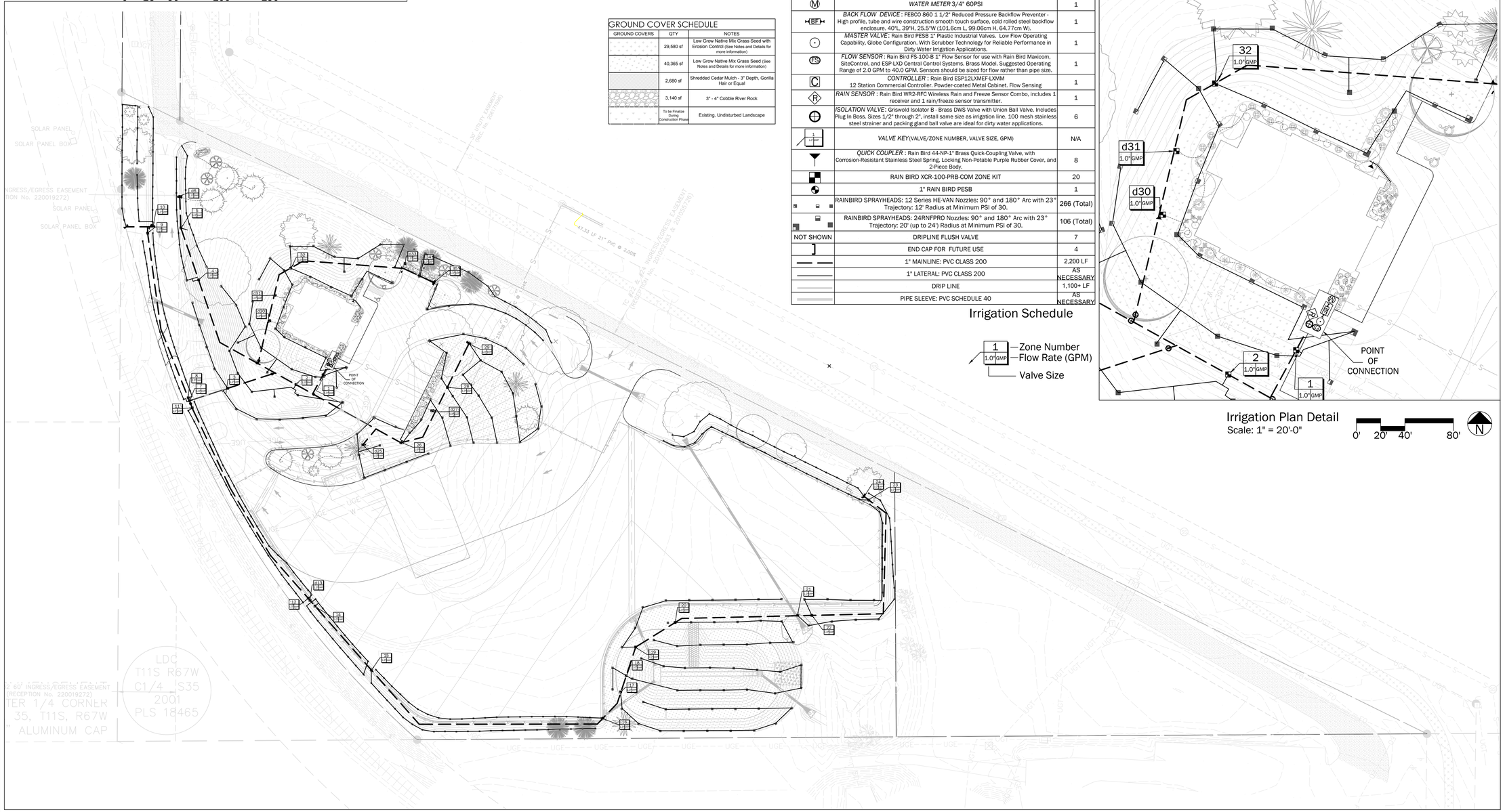
SYMBOL	DESCRIPTION	QTY
M	*WATER METER* 3/4" 60PSI	1
BF	*BACK FLOW DEVICE* : FEBCO 860 1 1/2" Reduced Pressure Backflow Preventer - High profile, tube and wire construction smooth touch surface, cold rolled steel backflow enclosure. 40"L, 39"H, 25.5"W (101.6cm L, 99.06cm H, 64.77cm W).	1
	MASTER VALVE : Rain Bird PESB 1" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	1
FS	*FLOW SENSOR* : Rain Bird FS-100-B 1" Flow Sensor for use with Rain Bird Maxicom, SiteControl, and ESP-LXD Central Control Systems. Brass Model. Suggested Operating Range of 2.0 GPM to 40.0 GPM. Sensors should be sized for flow rather than pipe size.	1
C	*CONTROLLER* : Rain Bird ESP12LXMEF-LXMM 12 Station Commercial Controller. Powder-coated Metal Cabinet. Flow Sensing	1
R	*RAIN SENSOR* : Rain Bird WR2-RFC Wireless Rain and Freeze Sensor Combo, includes 1 receiver and 1 rain/freeze sensor transmitter.	1
	ISOLATION VALVE: Griswold Isolator B - Brass DWS Valve with Union Ball Valve. Includes Plug In Boss. Sizes 1/2" through 2", install same size as irrigation line. 100 mesh stainless steel strainer and packing gland ball valve are ideal for dirty water applications.	6
1 1.0"GMP	*VALVE KEY*(VALVE/ZONE NUMBER, VALVE SIZE, GPM)	N/A
	QUICK COUPLER : Rain Bird 44-NP-1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Non-Potable Purple Rubber Cover, and 2-Piece Body.	8
	RAIN BIRD XCR-100-PRB-COM ZONE KIT	20
	1" RAIN BIRD PESB	1
	RAINBIRD SPRAYHEADS: 12 Series HE-VAN Nozzles: 90° and 180° Arc with 23° Trajectory: 12' Radius at Minimum PSI of 30.	266 (Total)
	RAINBIRD SPRAYHEADS: 24RNFPRO Nozzles: 90° and 180° Arc with 23° Trajectory: 20' (up to 24') Radius at Minimum PSI of 30.	106 (Total)
NOT SHOWN	DRIPLINE FLUSH VALVE	7
	END CAP FOR FUTURE USE	4
	1" MAINLINE: PVC CLASS 200	2,200 LF
	1" LATERAL: PVC CLASS 200	AS NECESSARY
	DRIP LINE	1,100+ LF
	PIPE SLEEVE: PVC SCHEDULE 40	AS NECESSARY

Irrigation Schedule

1 — Zone Number
1.0"GMP — Flow Rate (GPM)
Valve Size

Irrigation Plan Detail
Scale: 1" = 20'-0"

0' 20' 40' 80'



Irrigation Plan
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0' 25' 50' 100' 150'

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C12
IRRIGATION PLAN
12 OF: 17

IRRIGATION NOTES

1. CONTRACTOR SHALL MAKE HIM/HERSELF AWARE OF ALL EXISTING AND PROPOSED SITE CONDITIONS, INCLUDING PLANTING, GRADING, BUILDING CONSTRUCTION, WATER DEVELOPMENT, AND SUPPLY, PRIOR TO COMMENCEMENT OF WORK. NOTE ANY SLEEVES AND IRRIGATION STUBS FOR FUTURE WORK.
2. CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND UTILITIES, CONDUITS, AND STRUCTURES AND SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE INCURRED.
3. THE IRRIGATION CONTRACT INCLUDES SUPPLYING AND INSTALLING ALL MATERIALS AND EQUIPMENT FOR A COMPLETE AUTOMATIC IRRIGATION SYSTEM. ANY ITEMS REQUIRED TO CONFORM WITH SUCH INTENT ARE CONSIDERED TO BE INCIDENTAL TO THE WORK.
4. THE IRRIGATION PLAN IS SCHEMATIC. FIELD-VERIFY ALL DIMENSIONS, EXISTING, AND PROPOSED CONDITIONS, QUANTITIES, FLOW RATE, ETC. AS REQUIRED TO PROVIDE ONE COMPLETE AND OPERABLE SYSTEM.
5. DO NOT WILLFULLY INSTALL THE SYSTEM WHEN OBVIOUS OBSTRUCTIONS, GRADE CHANGES AND SITE GEOMETRY EXIST. SUCH DIFFERENCES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. IN THE EVENT NOTIFICATION IS NOT MADE, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.
6. CONTRACTOR SHALL REFER TO LANDSCAPE AND CIVIL PLANS WHEN LAYING OUT HEAD PLACEMENT AND TRENCHING.
7. ALL IRRIGATION INSTALLATION SHALL CONFORM TO LOCAL CODES.
8. SYSTEM DESIGN IS BASED UPON HAVING SUFFICIENT PRESSURE AND VOLUME OF WATER AVAILABLE AT THE FURTHEST HEAD AND DRIP EMITTER. CONTRACTOR SHALL VERIFY THE ACTUAL PSI AND GPM AVAILABILITY AND COMPATIBILITY WITH THE WATER SOURCE PRIOR TO INSTALLATION.
9. ALL PVC IRRIGATION PIPE, 2-1/2" SIZE OR SMALLER IS TO BE CLASS 200 I.P.S.; 3" SIZE PIPE TO BE SCHEDULE 40.
10. ALL DRIP IRRIGATION PIPE DOWNSTREAM FROM ELECTRIC VALVES IS TO BE 160 PSI 3408 POLYETHYLENE PIPE INSTALLED WITH INERT TYPE FITTINGS AND 'OETIKER' DOUBLE CLAMPS.
11. ALL ELECTRICAL AND IRRIGATION SLEEVES LOCATED UNDER PAVEMENT OR RETAINING WALLS SHALL BE IN 4" DIA. SCH. 40 PVC.
12. ALL DRIP LATERALS (1") SHALL BE BURIED TO HAVE A MIN. COVER OF 10" DEPTH. ALL DRIP TUBES WITH EMITTERS SHALL BE AT SURFACE OVER THE FABRIC BUT UNDER THE MULCH.
13. LOW VOLTAGE WIRE SHALL BE 14 GAUGE. RUNS OF LOW VOLTAGE WIRE IN EXCESS OF 800' SHALL BE 12 GAUGE WIRE.
14. ALL MAINLINE PIPING SHALL BE BURIED TO HAVE A MINIMUM COVER OF 18". ALL LATERAL PIPING SHALL BE BURIED TO HAVE A MINIMUM COVER OF 12". PULLING OF PIPE 2" DIA. OR LESS IS ACCEPTABLE.
15. SLOPE MAINLINE TO DRAIN.
16. LIMIT THE USE OF FITTINGS AND INSTALL LINE SIZE FITTINGS TO ENSURE MINIMUM FRICTION LOSS IN SYSTEM.
17. CONNECT ALL SPRAY HEADS TO LATERAL PIPES USING FUNNY PIPE, CONNECT ALL ROTORS TO LATERAL PIPES WITH SWING JOINTS.
18. LOCATE SPRINKLER HEADS TO AVOID OBSTRUCTIONS THAT WILL LIMIT RADIUS OF COVERAGE, CAUSE DRY SPOTS, OVER SPRAY ON BUILDINGS, STRUCTURES AND PAVEMENTS OR OTHER WATER DAMAGE.
19. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT WRITTEN CONSENT FROM THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE.
20. LOCATE HEADS APPROXIMATELY 2" FROM PROPOSED CURBS, WALKS AND MOWING EDGES.
21. ALL VALVES TO BE INSTALLED IN RECTANGULAR VALVE BOXES OF PROPER SIZE, DEPTH AND GRADE. PROVIDE VALVE BOX EXTENSIONS AS REQUIRED.
22. ALL WIRING FROM THE IRRIGATION CONTROLLER TO REMOTE CONTROL VALVES SHALL BE UF-14-1 DIRECT BURIAL CABLE. ALL WIRE SPLICES SHALL BE MADE IN VALVE BOXES. PROVIDE SLEEVES UNDER ALL PAVED AREAS.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL LOCATION OF THE CONTROLLER, BACKFLOW PREVENTER AND CONNECTION TO WATER SOURCE TO MEET FIELD CONDITIONS. COORDINATE INSTALLATION WITH OWNER'S REPRESENTATIVE AND OTHER TRADES.
24. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL BALANCING AND ADJUSTING THE COMPLETE IRRIGATION SYSTEM, INCLUDING SPRAY HEADS, ROTORS AND DRIP LINES.
25. CONTRACTOR IS RESPONSIBLE FOR PERFORMING FIRST-YEAR WINTERIZATION AND SPRING START-UP PRIOR TO MAY 1ST, DURING THE ONE-YEAR WARRANTY PERIOD
26. IRRIGATION WILL BE PROVIDED TO ALL TREES, SHRUBS AND PERENNIALS VIA DRIP IRRIGATION. IRRIGATION SHALL BE PROVIDED TO ALL AREAS OF TURFGRASS VIA SPRAY/ROTOR IRRIGATION. WHERE TREES ARE LOCATED WITHIN AREAS OF MEDIUM/HIGH WATER-USE TURFGRASS, ASSURE THAT THE TREES ARE PROVIDED ADEQUATE IRRIGATION. WHERE TREES ARE LOCATED WITHIN AREAS OF LOW WATER TURFGRASS, TREES SHALL BE IRRIGATED VIA DRIP IRRIGATION.
27. THE NATIVE SEED AREAS WILL HAVE AN UNDERGROUND IRRIGATION SYSTEM THAT WILL BE TEMPORARY UNTIL FULLY ESTABLISHED. THE SHRUBS AND TREES WITHIN THE NATIVE SEED AREA WILL HAVE A PERMANENT DRIP SYSTEM TO IRRIGATE THE PLANTS.
28. ALL PLANTS SHALL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM VIA DRIP IRRIGATION AT THE F OLLOWING RATES.

1.1. TREES: 3 - 1 GPH EMITTERS
1.2. SHRUBS: 2 - 1 GPH EMITTERS
1.3. PERENNIALS AND ORNAMENTAL GRASSES: 1 - 1 GPH EMITTER

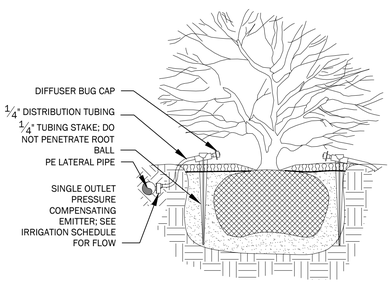
2. A RAIN SENSOR AND BACKFLOW DEVICE, SHALL BE INCLUDED IN THE IRRIGATION SYSTEM
3. LANDSCAPE IMPROVEMENTS SHALL BE MAINTAINED BY OWNER OR MANAGEMENT COMPANY
30. AN IRRIGATION PLAN SHALL BE SUBMITTED AT THE TIME OF BUILDING PERMIT APPLICATION AND APPROVED WITHIN THIRTY (30) DAYS SUBSEQUENT TO BUILDING PERMIT ISSUANCE OR PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, WHICHEVER COMES FIRST.
31. UPON REQUEST BY THE APPLICANT, AN IRRIGATION PLAN SHALL BE SUBMITTED WITHIN NINETY (90) DAYS SUBSEQUENT TO BUILDING PERMIT ISSUANCE AND APPROVED PRIOR TO THE INSTALLATION OF ANY IRRIGATION COMPONENTS AND PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
32. THE SHRUBS AND TREES WITHIN THE NATIVE SEED AREA WILL HAVE A PERMANENT DRIP SYSTEM TO IRRIGATE THE PLANTS.
33. FINAL INSPECTION: THE IRRIGATION CONTRACTOR SHALL DEMONSTRATE THE ENTIRE SYSTEM TO THE OWNER'S REPRESENTATIVE, PROVING THAT ALL REMOVE CONTROL VALVES ARE PROPERLY BALANCED, THAT ALL HEADS AND EMITTERS ARE PROPERTY ADJUSTED FOR RADIUS, ARC OF COVERAGE AND EMITTER LOCATION AS IT RELATES TO INDIVIDUAL PLANTS.
34. PRIOR TO FINAL PAYMENT THE CONTRACTOR SHALL PROVIDE TO THE OWNER'S REPRESENTATIVE AN AS-BUILT PLAN AND OWNER'S MANUALS. DURING THE COURSE OF THE INSTALLATION, THE CONTRACTOR MUST RECORD ALL CHANGES MADE TO THE IRRIGATION SYSTEM. THE CHANGES MUST BE MADE IN RED ON THE ORIGINAL PLAN.
35. THE CONTRACTOR WILL WARRANTY THE IRRIGATION SYSTEM FOR A PERIOD OF ONE-YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. ANY SETTLEMENT THAT OCCURS DURING THIS TIME WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
36. ALL PLACES WHERE A SLEEVE IS PROVIDED, AN ADDITIONAL 2" SLEEVE SHALL BE PROVIDED FOR FUTURE USE.
37. LOCKABLE CAGE SHALL BE PROVIDED FOR THE BACKFLOW PREVENTER
38. FLOW RATES PROVIDED ARE ESTIMATES AND SHALL BE FIELD VERIFIED PRIOR TO INSTALLATION.

ZONE NUMBER	IRRIGATION TYPE	FLOW GPM	RUN TIME MINUTES	PRECIPTATION RATE IN/HR (per emitter)	NOTES
1	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
2	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
3	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
4	DRIP EMITTERS	0.7	30	.50	PLANTING BED
5	SPRAY IRRIGATION	3.1	20	1.58	SEED ESTABLISHMENT
d6	DRIP EMITTERS	5.9	30	.50	PLANTING BED
7	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
8	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
9	SPRAY IRRIGATION	5.9	20	.61	SEED ESTABLISHMENT
10	SPRAY IRRIGATION	5.9	20	.61	SEED ESTABLISHMENT
11	SPRAY IRRIGATION	5.9	20	.61	SEED ESTABLISHMENT
12	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
d13	DRIP EMITTERS	5.9	30	.50	PLANTING BED
14	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
15	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
16	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
17	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
18	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
19	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
20	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
21	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
22	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
23	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
24	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
d25	DRIP EMITTERS	5.9	30	.50	PLANTING BED
26	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
d27	DRIP EMITTERS	5.9	30	.50	PLANTING BED
28	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
29	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
d30	DRIP EMITTERS	5.9	30	.50	PLANTING BED
d31	DRIP EMITTERS	5.9	30	.50	PLANTING BED
d32	DRIP EMITTERS	5.9	30	.50	PLANTING BED
33	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
34	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT
35	SPRAY IRRIGATION	5.9	20	1.58	SEED ESTABLISHMENT

*Total Square Footage of Irrigated Area = 86,890 sq. ft. (DRIP = 9,090 sq. ft.: SPRAY = 77,800 sq. ft.)

IRRIGATION SCHEDULE

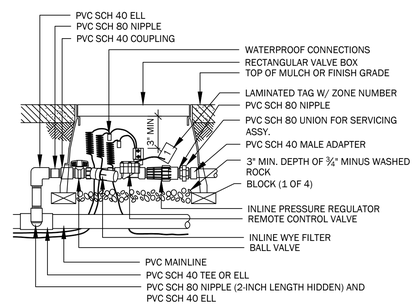
SYMBOL	DESCRIPTION	QTY
M	*WATER METER* 3/4" 60PSI	1
BF	*BACK FLOW DEVICE* : FEBCO 860 1 1/2" Reduced Pressure Backflow Preventer - High profile, tube and wire construction smooth touch surface, cold rolled steel backflow enclosure. 40"L, 39"H, 25.5"W (101.6cm L, 99.06cm H, 64.77cm W).	1
	MASTER VALVE: Rain Bird PESB 1" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	1
FS	*FLOW SENSOR* : Rain Bird FS-100-B 1" Flow Sensor for use with Rain Bird Maxicom, SiteControl, and ESP-LXD Central Control Systems. Brass Model. Suggested Operating Range of 2.0 GPM to 40.0 GPM. Sensors should be sized for flow rather than pipe size.	1
C	*CONTROLLER* : Rain Bird ESP12LXMEF-LXMM 12 Station Commercial Controller. Powder-coated Metal Cabinet. Flow Sensing	1
R	*RAIN SENSOR* : Rain Bird WR2-RFC Wireless Rain and Freeze Sensor Combo, includes 1 receiver and 1 rain/freeze sensor transmitter.	1
	ISOLATION VALVE: Griswold Isolator 8 - Brass DWS Valve with Union Ball Valve. Includes Plug In Boss. Sizes 1/2" through 2", install same size as irrigation line. 100 mesh stainless steel strainer and packing gland ball valve are ideal for dirty water applications.	6
1 / GPM	*VALVE KEY*(VALVE/ZONE NUMBER, VALVE SIZE, GPM)	N/A
	QUICK COUPLER : Rain Bird 44-NP-1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Non-Potable Purple Rubber Cover, and 2-Piece Body.	8
	RAIN BIRD XCR-100-PRB-COM ZONE KIT	20
	1" RAIN BIRD PESB	1
	RAINBIRD SPRAYHEADS: 12 Series HE-VAN Nozzles: 90° and 180° Arc with 23° Trajectory: 12' Radius at Minimum PSI of 30.	266 (Total)
	RAINBIRD SPRAYHEADS: 24RNFPRO Nozzles: 90° and 180° Arc with 23° Trajectory: 20' (up to 24') Radius at Minimum PSI of 30.	106 (Total)
NOT SHOWN	DRIPLINE FLUSH VALVE	7
	END CAP FOR FUTURE USE	4
	1" MAINLINE: PVC CLASS 200	2,200 LF
	1" LATERAL: PVC CLASS 200	AS NECESSARY
	DRIP LINE	1,100+ LF
	PIPE SLEEVE: PVC SCHEDULE 40	AS NECESSARY



NOTES:
1. PLACE EMITTER(S)AT THE BASE OF THE ROOTBALL. SEE SCHEDULE FOR THE TOTAL NUMBER OF EMITTERS AND FLOW PER PLANT.
2. SPACE MULTIPLE EMITTERS EVENLY AROUND THE ROOTBALL.

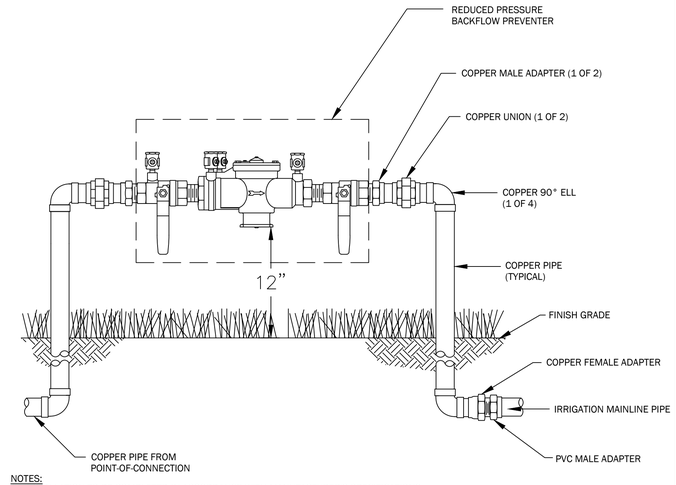
2 DRIP EMITTER PLACEMENT

NOT TO SCALE



3 DRIP ZONE CONTROL

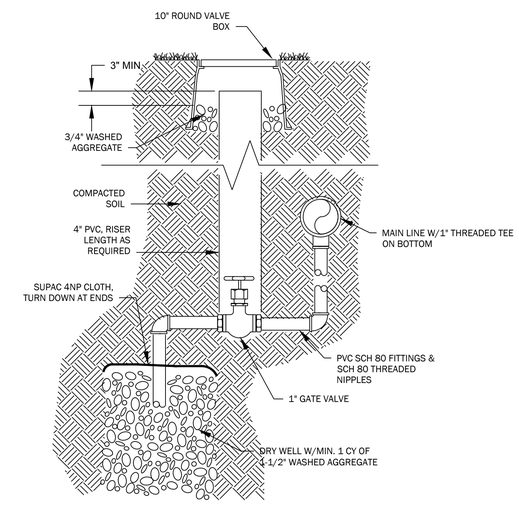
NOT TO SCALE



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.
4. REFERENCE NUMBER 045-055
5. INSTALL - HIGH PROFILE, TUBE AND WIRE CONSTRUCTION SMOOTH TOUCH SURFACE, COLD ROLLED STEEL BACKFLOW ENCLOSURE. 40"L, 39"H, 25.5"W (101.6CM L, 99.06CM H, 64.77CM W).
6. PROVIDE A COLD ROLLED STEEL ENCLOSURE (40"L, 39"H, 25.5"W) THAT IS LOCKABLE FOR THE BACKFLOW PREVENTER.

1 REDUCED PRESSURE BACKFLOW PREVENTER

NOT TO SCALE



4 MAIN LINE DRAIN

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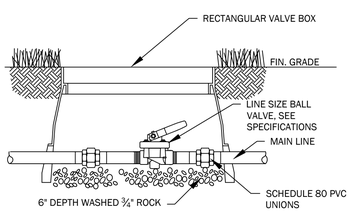
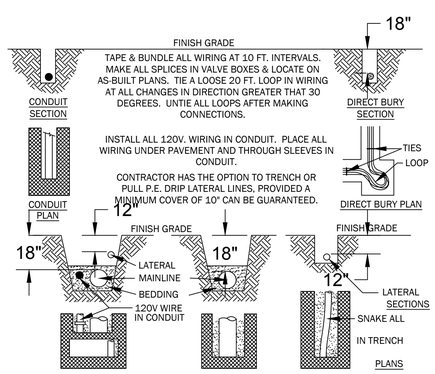


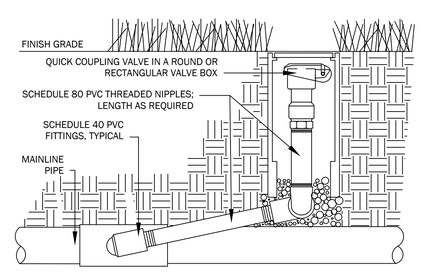
5 ISOLATION BALL VALVE

NOT TO SCALE



6 TRENCH & BEDDING

NOT TO SCALE



7 QUICK COUPLING VALVE

NOT TO SCALE

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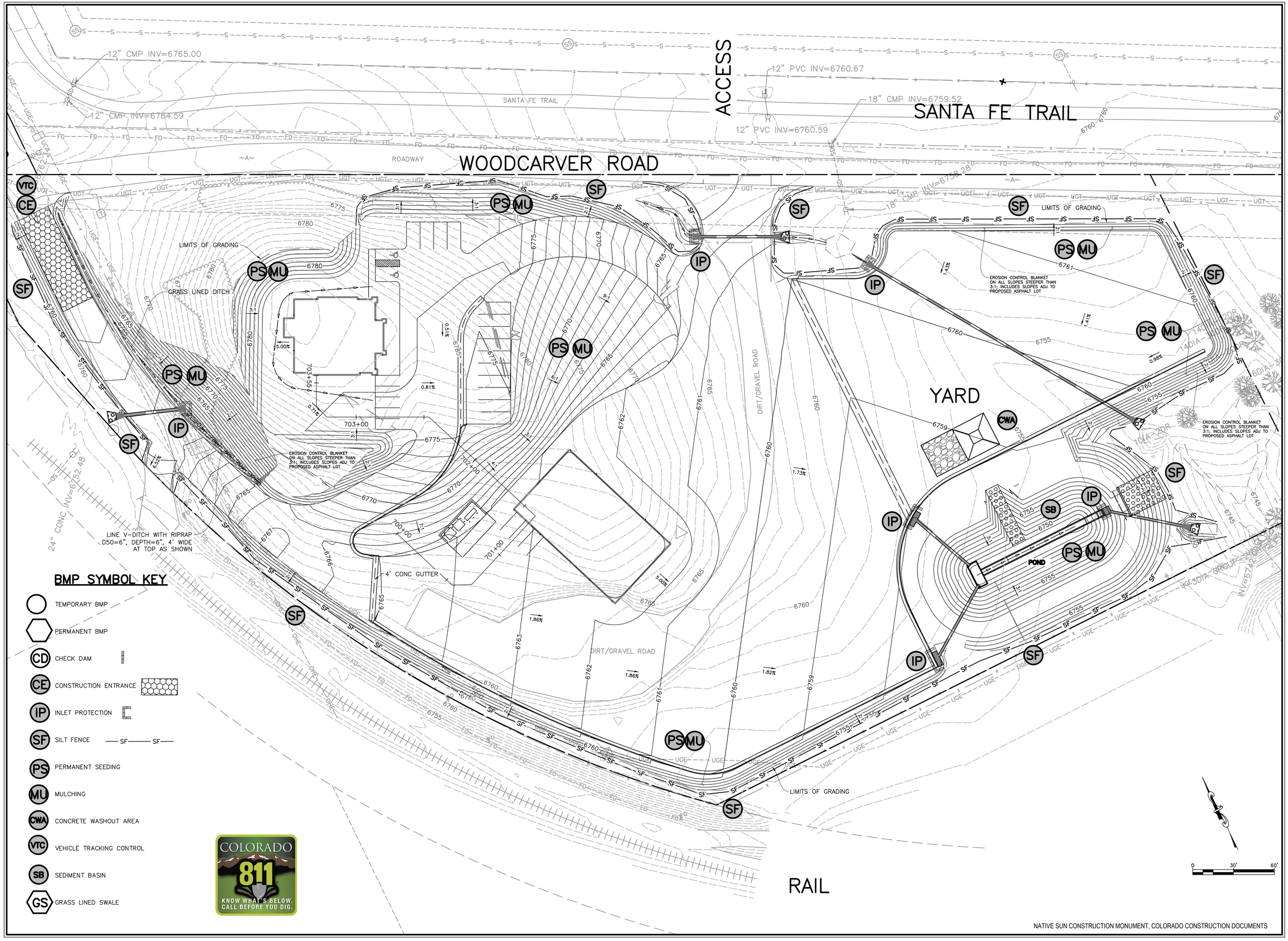

BMP SYMBOL KEY

- TEMPORARY BMP
- PERMANENT BMP
- CD — CHECK DAM
- CE — CONSTRUCTION ENTRANCE
- IP — INLET PROTECTION
- SF — SILT FENCE
- PS — PERMANENT SEEDING
- MU — MULCHING
- CWA — CONCRETE WASHOUT AREA
- VTC — VEHICLE TRACKING CONTROL
- SB — SEDIMENT BASIN
- GS — GRASS LINED SWALE

COLORADO 811 KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

NATIVE SUN CONSTRUCTION MONUMENT, COLORADO CONSTRUCTION DOCUMENTS

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NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS
GRADING AND EROSION CONTROL

REVISIONS:

CD REVIEW SET
7/21/2022 4:47 PM

SCALE:
NOTED

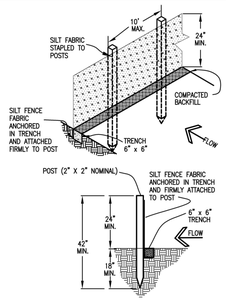
DATE:
MARCH 2021

PROJECT NO.:
21001

SHEET NO.:

C-14

OF: 17



SILT FENCE

SILT FENCE NOTES

INSTALLATION REQUIREMENTS

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.

3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.

4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.

5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.

6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.

7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.

2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.

3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

SF

City of Colorado Springs Stormwater Quality	Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements

MULCHING NOTES

INSTALLATION REQUIREMENTS

1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.

2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.

3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.

4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.

5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.

6. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

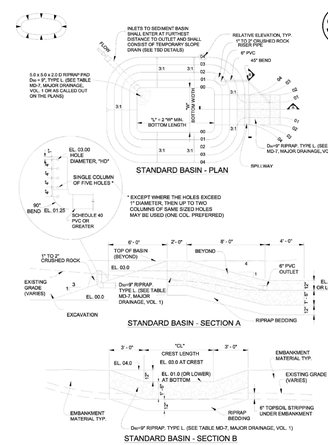
MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.

2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

MU

City of Colorado Springs Stormwater Quality	Figure MU-1 Mulching Construction Detail and Maintenance Requirements



DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY, COLORADO

Figure C5-12—Standardized Temporary Sediment Basin

(Sheet 1 of 2)

SB

SB

SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	9/32
2	21	3	13/16
3	28	5	1/2
4	33 1/2	6	9/16
5	38 1/2	8	21/32
6	43	9	21/32
7	47 1/4	11	25/32
8	51	12	27/32
9	55	13	7/8
10	58 1/4	15	15/16
11	61	16	31/32
12	64	18	1
13	67 1/2	19	1 1/16
14	70 1/2	21	1 1/8
15	73 1/4	22	1 3/16

Minimum Bottom Width and diameter of outlet plate holes based on 2,700 cu. ft. / acre of tributary area and 72 hour drain time.

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW AND SECTIONS FOR:
   - LOCATION OF SEDIMENT BASIN.
   - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
   - FOR STANDARD BASIN, BOTTOM WIDTH, "W", CREST LENGTH, "CL", AND HOLE DIAMETER, "HD".
   - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT, "H", NUMBER OF COLUMNS, "N", HOLE DIAMETER, "HD", AND PIPE DIAMETER "D".
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS INDICATED ON INITIAL SWMP PLAN SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D 698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) IDENTIFIED ON THE SWMP PLAN VIEW DRAWINGS USED FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

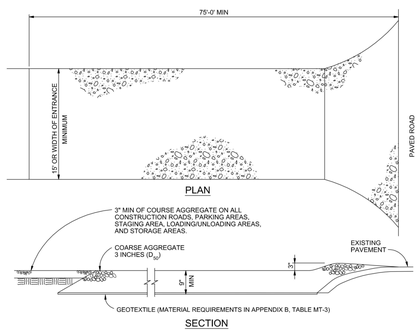
SEDIMENT BASIN MAINTENANCE NOTES

1. THE SWMP MANAGER SHALL INPSECT SEDIMENT BASIN WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
2. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED WHEN SEDIMENT DEPTH IS ONE FOOT (I.E., 2-FEET BELOW THE SPILLWAY CREST).
3. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
4. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY, COLORADO

Figure C5-12—Standardized Temporary Sediment Basin
(Sheet 2 of 2)

SB



VEHICLE TRACKING

NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.

2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.

3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.

4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.

5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.

2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.

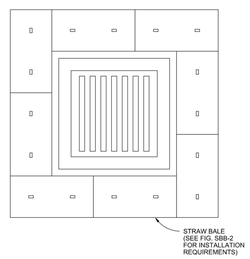
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.

4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.

5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

CE

City of Colorado Springs Stormwater Quality	Figure VT-2 Vehicle Tracking Application Examples



STRAW BALE INLET PROTECTION

NTS

STRAW BALE INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.

2. BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.

3. SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.

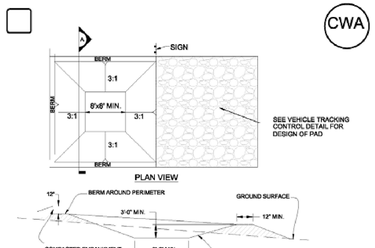
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

IP

City of Colorado Springs Stormwater Quality	Figure IP-2 Straw Bale Inlet Protection Construction Detail and Maintenance Requirements

CWA



CONCRETE WASHOUT AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA.
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

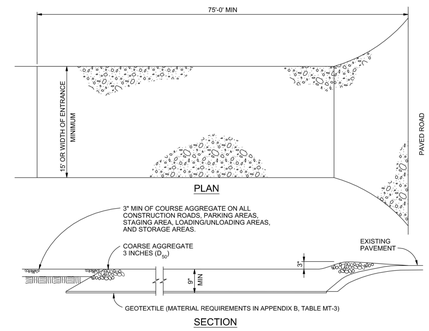
CONCRETE WASHOUT AREA MAINTENANCE NOTES

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT WHEN ⅔ FULL OR AS NECESARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, DRILL SEED AND CRIMP MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY

Figure C3-2—Concrete Washout Area

CWA


VEHICLE TRACKING

NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.

2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.

3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.

4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.

5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.

2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.

3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.

4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.

5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

VTC

City of Colorado Springs Stormwater Quality | Figure VT-2 Vehicle Tracking Application Examples

3-54

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

1. CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT AND A PRECONSTRUCTION CONFERENCE IS HELD WITH PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS.
2. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON–SITE OR OFF SITE WATERS, INCLUDING WETLANDS.
3. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
4. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
5. ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPS AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY PCD INSPECTIONS STAFF.
6. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPS SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
7. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.
8. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPS IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP). APPENDIX E CHECKLISTS AND PERMITS ADOPTED: 12/23/2004 REVISED: 12/13/2016 REVISION 6.
9. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPS AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.
10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
11. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON–EROSIVE VELOCITY.
12. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
13. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
14. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
15. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF–SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
18. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ONSITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS. APPENDIX E CHECKLISTS AND PERMITS ADOPTED: 12/23/2004 REVISED: 12/13/2016 REVISION 6.
19. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
20. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
21. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
22. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
23. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
24. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
25. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
26. THE OWNER HAS HAD A PAVEMENT EVALUATION REPORT PREPARED BY PARTNER ASSESSMENT CORPORATION/AMERICAN GEOSERVICES LLC DATED 11–17–16 AND PERTINENT RECCOMENDATIONS CONTAINED THEREIN HAVE BEEN FOLLOWED IN THE PREPARATION OF THIS GEC PLAN. ADDITIONALLY, SOILS INFORMATION WAS DERIVED FROM THE NATURAL RESOURCES CONSERVATION SERVICE.
27. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT: COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION WQCD – PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246–1530 ATTN: PERMITS UNIT.

CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION

CONSTRUCTION PLANS

GRADING & EROSION CONTROL DETAILS

REVISIONS:

CD REVIEW SET
5/28/2022 9:48 AM

SCALE:
NOTED

DATE:
MARCH 2021

PROJECT NO.:
21001

SHEET NO.:

C-15

OF: 17

SHEET NOTES:

1. PARKING LOT AND ACCESSES WILL NOT BE PAVED AT THIS POINT. PAINT SYMBOLS AND PARKING LINES ARE SHOWN FOR ILLUSTRATIVE PURPOSES.

COORDINATE GEOMETRY ALIGNMENT ACS 1

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L1000	10+00.00	10+93.68	93.683	S0° 25' 10.00"W						15049.74	10647.95	10554.27	15049.06
C1000	10+93.68	12+12.44	118.760	S8° 05' 09.96"E	11+53.50	400.00'	17.01°	162.99°	4.40'	15049.06	10554.27		
C1001	12+12.44	13+99.13	186.692	S22° 35' 36.37"E	13+06.13	891.12'	12.00°	168.00°	4.88'	15065.70	10437.12		
C1002	13+99.13	15+42.69	143.553	S69° 43' 12.09"E	14+86.45	100.00'	82.25°	97.75°	24.67'	15137.30	10265.07		
L1001	15+42.69	17+42.33	199.643	N69° 09' 18.65"E						15260.68	10219.48	10290.52	15447.26
C1003	17+42.33	17+94.81	52.480	N47° 40' 38.77"E	17+69.87	70.00'	42.96°	137.04°	4.86'	15447.26	10290.52		
L1002	17+94.81	18+92.31	97.504	N26° 11' 58.90"E						15485.16	10325.03	10412.52	15528.21

COORDINATE GEOMETRY ALIGNMENT ACS 2

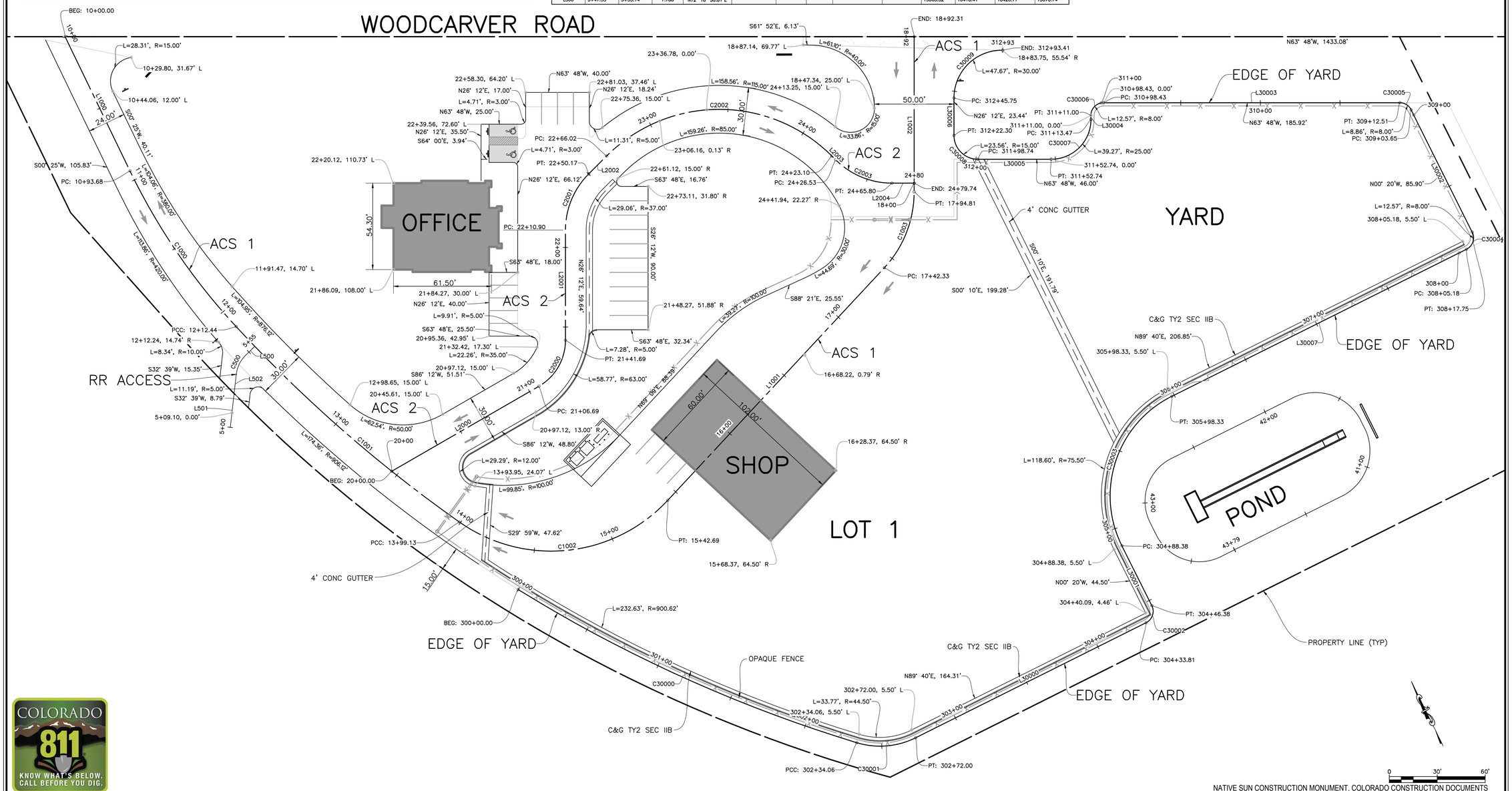
NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L2000	20+00.00	21+06.69	106.690	N86° 11' 58.90"E						15113.28	10312.43	10319.50	15219.74
C2000	21+06.69	21+41.69	35.000	N56° 11' 58.90"E	21+25.99	33.42'	60.00°	120.00°	4.48'	15219.74	10319.50		
L2001	21+41.69	22+10.90	69.206	N26° 11' 58.90"E						15247.51	10338.10	10400.19	15278.06
C2001	22+10.90	22+50.17	39.270	N48° 41' 59.45"E	22+31.61	50.00'	45.00°	135.00°	3.81'	15278.06	10400.19		
L2002	22+50.17	22+66.02	15.856	N71° 12' 00.00"E						15306.81	10425.45	10430.56	15321.82
C2002	22+66.02	24+23.10	157.080	S63° 48' 00.00"E	23+66.02	100.00'	90.00°	90.00°	29.29'	15321.82	10430.56		
L2003	24+23.10	24+26.53	3.428	S18° 48' 00.00"E						15448.72	10368.12	10364.88	15449.82
C2003	24+26.53	24+65.80	39.270	S41° 18' 00.55"E	24+47.24	50.00'	45.00°	135.00°	3.81'	15449.82	10364.88		
L2004	24+65.80	24+79.74	13.942	S63° 48' 01.10"E						15475.08	10336.13	10329.97	15487.59

COORDINATE GEOMETRY ALIGNMENT EDGE OF YARD

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
C30000	300+00.00	302+34.06	234.055	S39° 27' 10.37"E	301+17.68	906.12'	14.80°	165.20°	7.55'	15151.73	10210.70		
C30001	302+34.06	302+72.00	37.945	S68° 35' 37.30"E	302+53.99	50.00'	43.48°	136.52°	3.56'	15300.05	10030.47		
L30000	302+72.00	304+33.81	161.809	N89° 39' 55.40"E						15334.53	10016.95	10017.90	15496.34
C30002	304+33.81	304+46.38	12.566	N44° 39' 55.40"E	304+41.81	8.00'	90.00°	90.00°	2.34'	15496.34	10017.90		
L30001	304+46.38	304+88.38	42.000	N0° 20' 04.60"W						15504.29	10025.95	10067.94	15504.05
C30003	304+88.38	305+98.33	109.956	N44° 39' 55.40"E	305+58.38	70.00'	90.00°	90.00°	20.50'	15504.05	10067.94		
L30007	305+98.33	308+05.18	206.851	N89° 39' 55.40"E						15573.64	10138.35	10139.56	15780.48
C30004	308+05.18	308+17.75	12.566	N44° 39' 55.40"E	308+13.18	8.00'	90.00°	90.00°	2.34'	15780.48	10139.56		
L30002	308+17.75	309+03.65	85.897	N0° 20' 04.60"W						15788.44	10147.61	10233.50	15787.94
C30005	309+03.65	309+12.51	8.861	N32° 04' 02.85"W	309+08.59	8.00'	63.47°	116.53°	1.20'	15787.94	10233.50		
L30003	309+12.51	310+98.43	185.923	N63° 48' 01.10"W						15783.47	10240.63	10322.72	15616.65
C30006	310+98.43	311+11.00	12.566	S71° 11' 58.90"W	311+06.43	8.00'	90.00°	90.00°	2.34'	15616.65	10322.72		
L30004	311+11.00	311+13.47	2.473	S26° 11' 58.90"W						15605.94	10319.07	10316.85	15604.84
C30007	311+13.47	311+52.74	39.270	S71° 11' 58.90"W	311+38.47	25.00'	90.00°	90.00°	7.32'	15604.84	10316.85		
L30005	311+52.74	311+98.74	46.000	N63° 48' 01.10"W						15571.38	10305.46	10325.77	15530.10
C30008	311+98.74	312+22.30	23.562	N18° 48' 01.10"W	312+13.74	15.00'	90.00°	90.00°	4.39'	15530.10	10325.77		
L30006	312+22.30	312+45.75	23.445	N26° 11' 58.90"E						15523.26	10345.85	10366.89	15533.62
C30009	312+45.75	312+93.41	47.667	N71° 43' 05.03"E	312+76.29	30.00'	91.04°	88.96°	8.98'	15533.62	10366.89		

COORDINATE GEOMETRY ALIGNMENT RR ACCESS

NUMBER	START STATION	END STATION	LENGTH	LINE/CHORD DIRECTION	PI STATION	RADIUS	DELTA	PI INCLUDED ANGLE	MID ORDINATE	START EASTING	START NORTHING	END NORTHING	END EASTING
L501	5+00.00	5+21.46	21.462	N32° 39' 00.54"E						15034.48	10381.93	10400.00	15046.06
L502	5+21.46	5+33.51	12.049	N32° 39' 00.54"E						15046.06	10400.00	10410.14	15052.56
C500	5+33.51	5+47.35	13.843	N52° 28' 45.67"E	5+40.72	20.00'	39.66°	140.34°	1.19'	15052.56	10410.14		
L500	5+47.35	5+55.14	7.788	N72° 18' 30.81"E						15063.32	10418.41	10420.77	15070.74



NATIVE SUN CONSTRUCTION MONUMENT, COLORADO CONSTRUCTION DOCUMENTS

COLORADO 811
KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

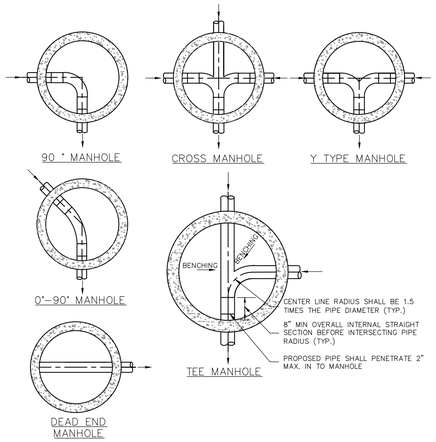
NATIVE SUN CONSTRUCTION
CONSTRUCTION PLANS
LAYOUT & COORDINATE GEOMETRY

REVISIONS:
CD REVIEW SET
5/28/2022 9:51 AM

SCALE:
NOTED
DATE:
MARCH 2021
PROJECT NO.:
21001

SHEET NO.:
C-16
OF: 17

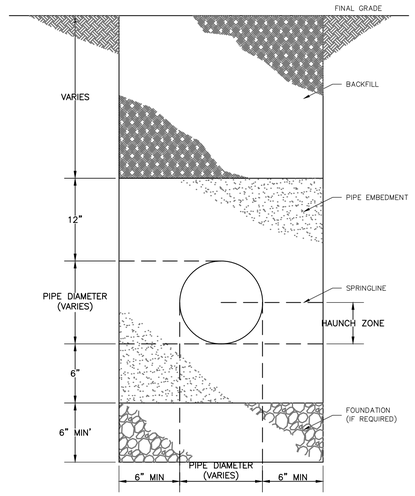
TYPICAL INTERSECTING PIPE MANHOLE LAYOUTS



NOTES:

1. SEE DETAIL DRAWING **C3–1** FOR MANHOLE REQUIREMENTS.
2. LAYOUTS SHOWN ARE FOR 8"–12" PIPES; LAYOUTS FOR LARGER DIAMETER PIPELINES AND MANHOLES SHALL BE DESIGNED BY THE DESIGN ENGINEER AND APPROVED BY COLORADO SPRINGS UTILITIES.
3. TO BE READ IN CONJUNCTION WITH CHAPTER **2**, MANHOLE SIZES.

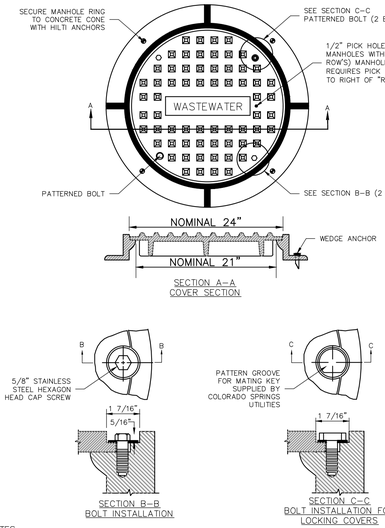
Colorado Springs Utilities — It's how we're all connected | TYPICAL MANHOLE LAYOUTS AND INTERSECTIONS | C3–2 | DATED 5/2015



NOTE:

1. TRENCH BACKFILL SHALL CONFORM TO THE SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION AND ASTM D2321.

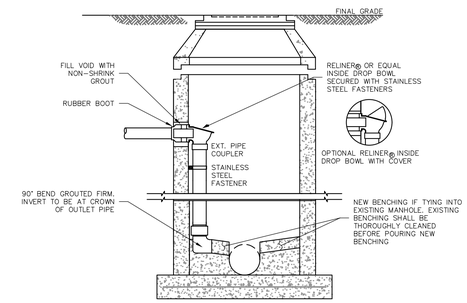
Colorado Springs Utilities — It's how we're all connected | TYPICAL TRENCH SECTION | C2–1 | DATED 5/2015



NOTES:

1. SEE CHAPTER 4 FOR ADDITIONAL INFORMATION AND SPECIFIC DIMENSIONS.
2. BOLT DOWN AND LOCKING MANHOLE RING AND COVERS SHALL ONLY BE INSTALLED IN LOCATIONS APPROVED BY COLORADO SPRINGS UTILITIES.
3. LOCKDOWN BOLTS PROVIDED BY COLORADO SPRINGS UTILITIES.

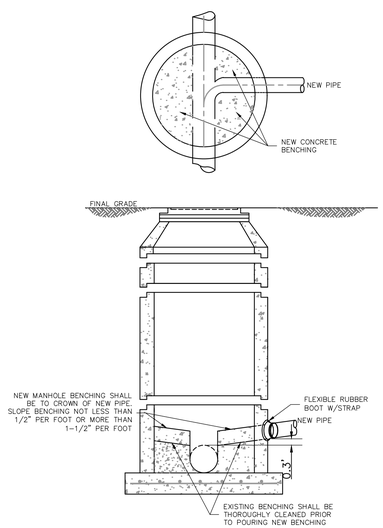
Colorado Springs Utilities — It's how we're all connected | BOLT DOWN AND LOCKING MANHOLE RING AND COVER IN TRAFFIC AREAS | C3–10 | DATED 5/2015



NOTES:

1. SEE DETAIL DRAWING **C3–1** FOR MANHOLE REQUIREMENTS.
2. DROP MANHOLES ARE NOT ALLOWED ON 10" AND LARGER PIPELINES. DROP MANHOLES SHALL BE REVIEWED AND APPROVED ON A CASE BY CASE BASIS BY WASTEWATER PLANNING AND ENGINEERING STAFF.
3. ALL INTERIOR CONCRETE SURFACES SHALL BE EPOXY COATED.
4. MINIMUM SIZE FOR A DROP MANHOLE IS 5' DIAMETER MANHOLE.
5. MANHOLES WITH 8' OR LESS OF INTERNAL DROP SHALL HAVE ONE STRAP AT THE TOP AND ONE AT THE BOTTOM OF THE DROP SECTION.
6. 1/4" – 2" STRAPS TO BE ANCHORED WITH 1/2" GALVANIZED LUG BOLTS IN TO WALL (TYP).

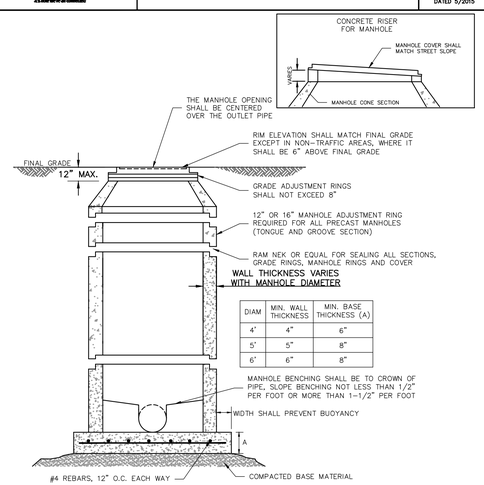
Colorado Springs Utilities — It's how we're all connected | INTERNAL DROP MANHOLE WITH DROP GREATER THAN 24" | C3–6 | DATED 5/2015



NOTES:

1. SEE DETAIL DRAWING **C3–1** FOR MANHOLE REQUIREMENTS.

Colorado Springs Utilities — It's how we're all connected | CORE DRILLING INTO AN EXISTING MANHOLE | C3–3 | DATED 5/2015

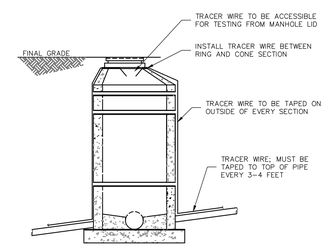


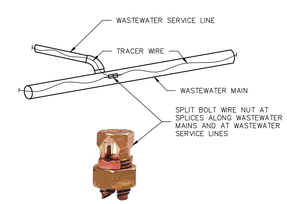
DIAM	MIN. WALL THICKNESS	MIN. BASE THICKNESS (A)
4'	4"	6"
5'	5"	8"
6'	6"	8"

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4000 PSI @ 28 DAYS AND DESIGNED FOR HS–20 LOADING CONDITIONS.
2. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
3. FOR CAST IN PLACE MANHOLES, DO NOT DROP CONCRETE A DISTANCE OF MORE THAN 5' UNLESS APPROVED BY COLORADO SPRINGS UTILITIES.
4. 3/4" CRUSHED ROCK REQUIRED UNDER BASE TO A DEPTH OF 6" UP TO SPRINGLINE OF PIPE, 2'–3' RADIUS AROUND BASE.
5. ALL STEPS SHALL BE REMOVED FOLLOWING CONSTRUCTION.
6. STRUCTURAL REINFORCEMENT SHALL COMPLY TO ASTM C–478. ASTM C–478 SHALL BE STAMPED ON THE OUTSIDE OF THE MANHOLE.

Colorado Springs Utilities — It's how we're all connected | STANDARD CONCRETE MANHOLE | C3–1 | DATED 5/2015





Colorado Springs Utilities — It's how we're all connected | TRACER WIRE ON PVC OR HDPE PIPE | C2–3 | DATED 5/2015

Please confirm details are for appropriate water/sewer district(s). Sheet 1 indicates Forest Lakes, which may use Donala water & sanitation design stds.

CIVIL
CD CIVIL DESIGN LLC
2013 STONELEIGH TRAIL
MONUMENT, CO 80132
CDX2@GMAIL.COM 719.271.1175

NATIVE SUN CONSTRUCTION

NATIVE SUN CONSTRUCTION
CONSTRUCTION PLANS
UTILITY DETAILS

REVISIONS:

CD REVIEW SET
7/22/2022 8:42 AM

SCALE:
NOTED

DATE:
MARCH 2021

PROJECT NO.:
21001

SHEET NO.:
C-17
OF: 17