

LEGEND:

PROPOSED #" SANITARY SEWER W/ MH & C.O. EXISTING #" SANITARY SEWER W/ MH & C.O. PROPOSED #" WATER PIPE PROPOSED GV, FH & CS

EXISTING WATER **EXISTING GV & FH**

PROPOSED STORM/CULVERT, INLET, MH, END SECTION WITH RIPRAP EXIST #" STORM/CULVERT, INLET, MH, END SECTION WITH RIPRAP PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR EXISTING MAJOR CONTOUR — — — (6910)— — — — — EXISTING MINOR CONTOUR

PROBABLE LIMITS OF GRADING (SUBJECT TO CHANGE BASED ON ENCOUNTERED CONDITIONS AND CONTRACTOR MEANS/METHODS)

00.10 PROPOSED SPOT ELEVATION EXISTING SPOT ELEVATION 00.10 X PROPOSED OVERLAND FLOW DIRECTION W/SLOPE EXISTING OVERLAND FLOW DIRECTION W/SLOPE

PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE EXISTING CHANNELIZED FLOW DIRECTION

NOTES:

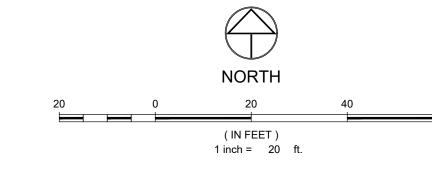
- 1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
- 2. EXISTING UNDERGROUND AND OVERHEAD PUBLIC AND PRIVATE UTILITIES AS SHOWN ARE INDICATED ACCORDING TO THE BEST INFORMATION MADE AVAILABLE TO THE ENGINEER. THE ENGINEER DOES NOT GUARANTEE NOR IS RESPONSIBLE FOR THE ACCURACY OF SUCH INFORMATION. EXISTING UTILITY MAINS AND SERVICES MAY NOT BE STRAIGHT LINES OR AS INDICATED ON THESE DRAWINGS. CONTRACTOR TO VERIFY EXISTING HORIZONTAL AND VERTICAL LOCATIONS PRIOR TO CONSTRUCTION.
- 3. ALL SEWER CONSTRUCTION SHALL BE PER MOUNT WERNER WATER STANDARD SPECIFICATIONS, LATEST EDITION.
- 4. MAINTAIN 10' HORIZONTAL AND 18" VERTICAL MINIMUM SEPARATION BETWEEN ALL SANITARY SEWER MAINS, WATER MAINS & SERVICES.
- 5. MANHOLES LOCATED OUTSIDE OF PAVEMENTS SHALL PROTRUDE 1' ABOVE EXISTING GRADE TO REDUCE INFILTRATION. GRADE SURFACE TO DRAIN AROUND/AWAY FROM MANHOLE RIMS.
- 6. ALL MANHOLES LOCATED IN PAVEMENTS SHALL HAVE RIM ELEVATIONS ADJUSTED TO ¼" BELOW FINISHED GRADE. IF NECESSARY, CONE SECTIONS SHALL BE ROTATED TO PREVENT LIDS BEING LOCATED WITHIN VEHICLE OR BICYCLE WHEEL PATHS.
- 7. SEWER SERVICE SHALL HAVE A MINIMUM OF 4-FT OF COVER.
- 8. WATER SERVICE SHALL HAVE A MINIMUM OF 7-FT OF COVER.
- 9. ALL WATER PIPE SHALL BE INSTALLED WITH A #10 SOLID COPPER WIRE COATED WITH 45 MIL POLYETHYLENE FOR LOCATING PURPOSES. "GLENN TEST STATIONS" BY VALVCO, INC TRACER WIRE TEST STATIONS SHALL BE INSTALLED ADJACENT TO ALL FIRE HYDRANTS. ADDITIONAL LOCATIONS MAY BE REQUIRED.
- 10. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE FROM REFUSE ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES OR FROZEN SOILS GREATER THAN 6-INCHES IN DIAMETER.
- 11. ALL TRENCHES SHALL BE COMPACTED TO 95% AS DETERMINED BY ASTM D698 (STANDARD PROCTOR) OR AS SPECIFIED BY GEOTECHNICAL ENGINEER.
- 12. BEDDING AND SHADING MATERIALS SHALL ONLY BE 3/4-INCH WASHED OR SCREENED ROCK. 3/4-INCH MINUS, SQUEEGEE OR REJECT SAND, OR CLASS 6 AGGREGATE BASE COURSE IS NOT ALLOWED.
- 13. ALL PROJECT DATA IS ON VERTICAL DATUM; NAVD 88. SEE NOTES SHEET FOR BENCHMARK REFERENCES.
- 14. ELEVATIONS FOR IMPROVEMENTS THAT ARE CONTROLLED BY ADJACENT EXISTING FACILITIES (SUCH AS PROPOSED GUTTERS ALONG EXISTING ASPHALT) MAY REQUIRE ADJUSTMENT BASED ON ACTUAL CONDITIONS. COORDINATE WITH ENGINEER TO ENSURE A CONSISTENT SECTION WITH SMOOTH TRANSITIONS WHERE NECESSARY.
- 15. SEE SOILS REPORT FOR PAVEMENT, SUBGRADE AND MATERIAL PREPARATION, DESIGN AND RECOMMENDATIONS.

CALL UTILITY NOTIFICATION CENTER OF









LEGEND:

EXISTING STORM SEWER PROPOSED STORM SEWER PROPOSED STORM INLET (CURB & AREA) PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR PROPOSED SWALE PROPOSED CURB & GUTTER PROPERTY BOUNDARY PROPOSED LOT LINE EXISTING RIGHT OF WAY FLOOD HAZARD LIMITS 00.10 PROPOSED SPOT ELEVATION EXISTING SPOT ELEVATION 00.10 X PROPOSED OVERLAND FLOW DIRECTION W/SLOPE PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE \Leftrightarrow EXISTING CHANNELIZED FLOW DIRECTION

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- ALL PROJECT DATA IS ON VERTICAL DATUM; NAVD 88. SEE NOTES SHEET FOR
- 3. ELEVATIONS FOR IMPROVEMENTS THAT ARE CONTROLLED BY ADJACENT EXISTING FACILITIES (SUCH AS PROPOSED GUTTERS ALONG EXISTING ASPHALT) MAY REQUIRE ADJUSTMENT BASED ON ACTUAL CONDITIONS. COORDINATE WITH ENGINEER TO
- 5. ALL CURB SPOTS SHOWN ARE FLOWLINE ELEVATIONS, UNLESS NOTED OTHERWISE. ALL OTHER SPOTS ARE FINISHED GRADE ELEVATIONS.

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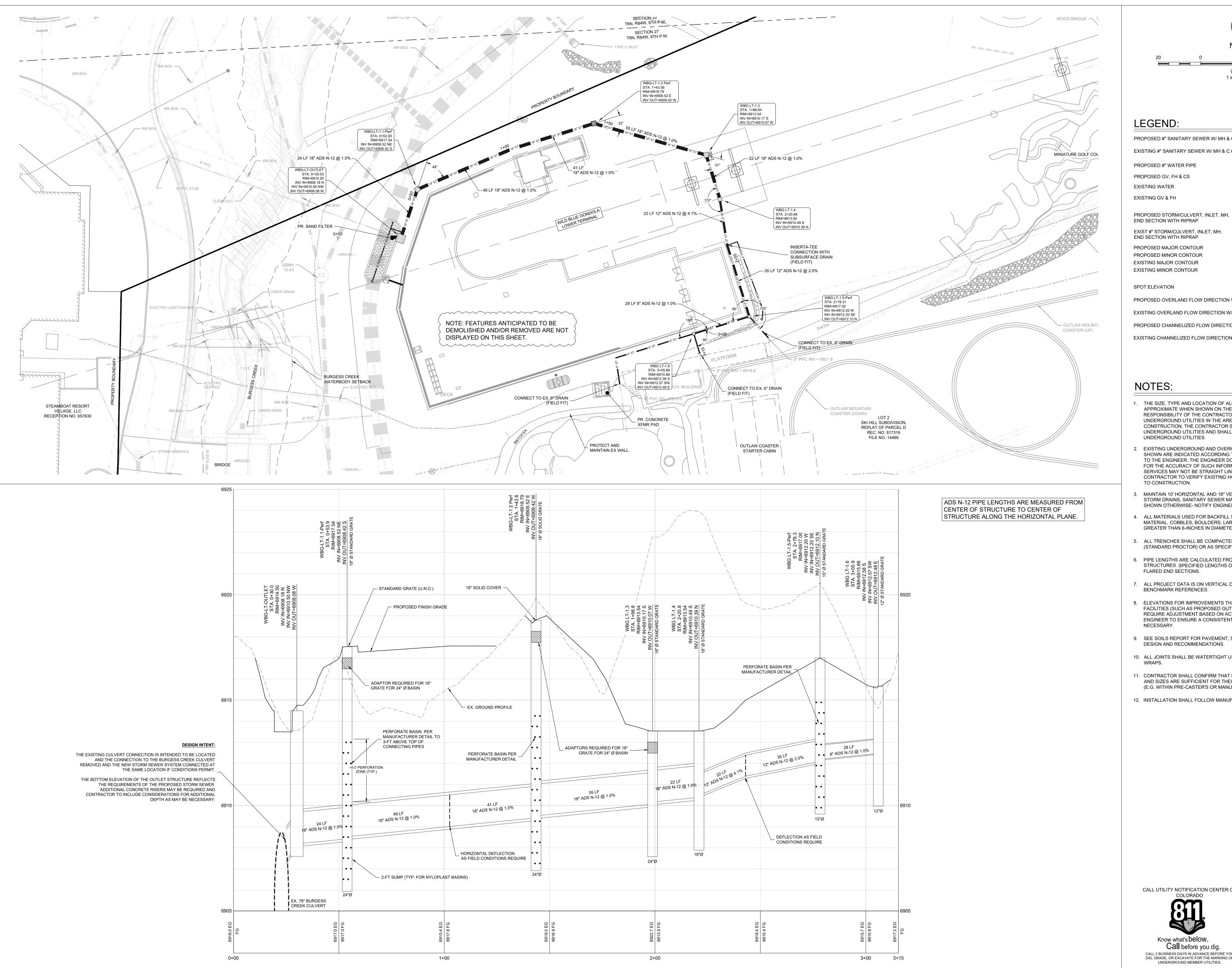
Know what's below.

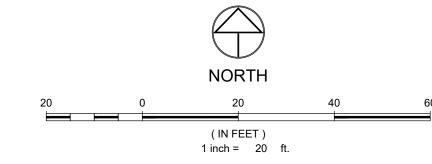
Call before you dig.

RESPONSIBLE FOR FOR ALL UNKNOWN UNDERGROUND UTILITIES.

- BENCHMARK REFERENCES.
- ENSURE A CONSISTENT SECTION WITH SMOOTH TRANSITIONS WHERE NECESSARY.
- AND RECOMMENDATIONS.







LEGEND:

PROPOSED #" SANITARY SEWER W/ MH & C.O. 8" XS — XS — 8" XS — ©— EXISTING #" SANITARY SEWER W/ MH & C.O. PROPOSED #" WATER PIPE PROPOSED GV, FH & CS **H** ... • EXISTING WATER 8" XW ——— EXISTING GV & FH PROPOSED STORM/CULVERT, INLET, MH, END SECTION WITH RIPRAP EXIST #" STORM/CULVERT, INLET, MH, END SECTION WITH RIPRAP

PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR EXISTING MAJOR CONTOUR — — — (6910)— — — — — EXISTING MINOR CONTOUR SPOT ELEVATION

00.10

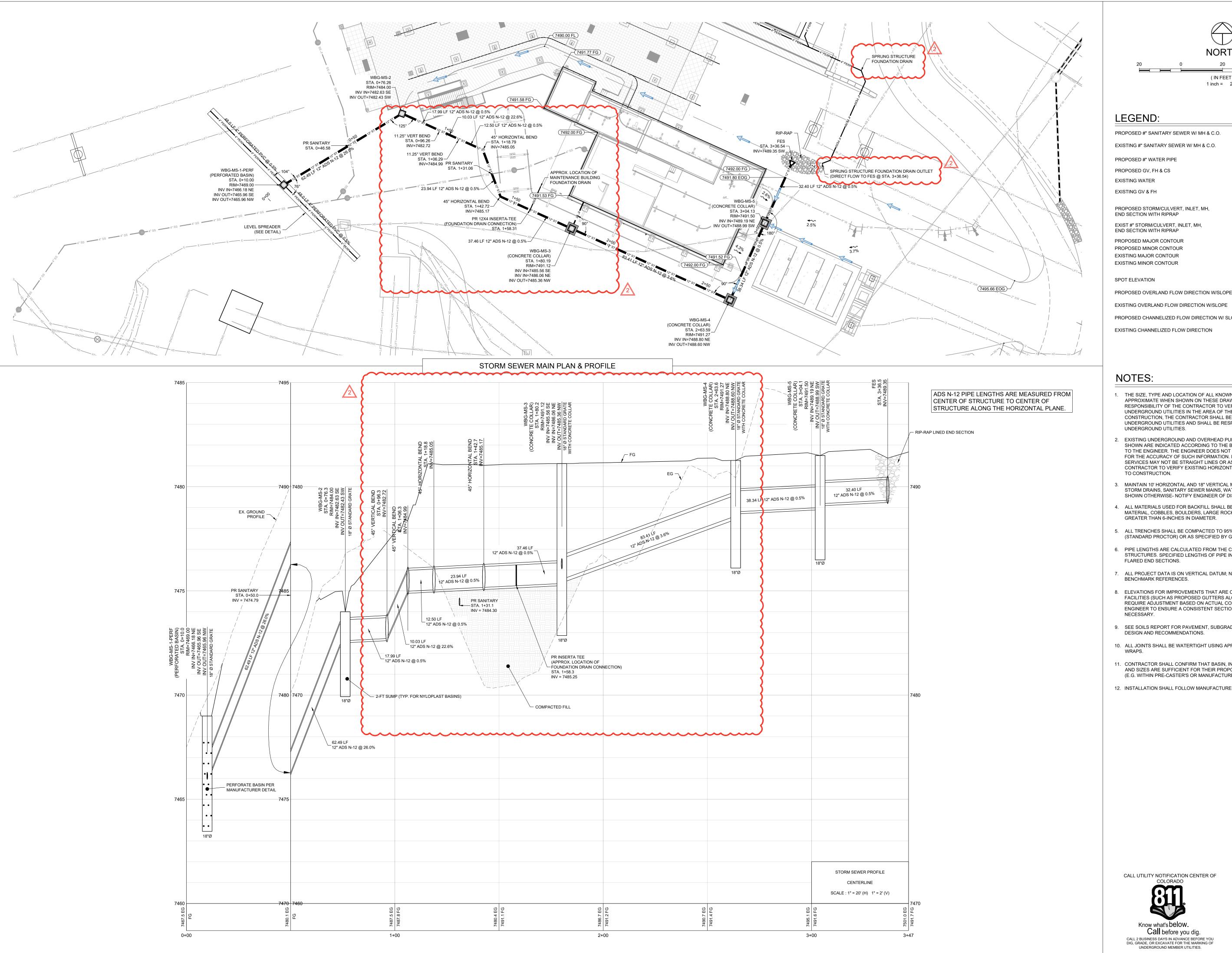
PROPOSED OVERLAND FLOW DIRECTION W/SLOPE EXISTING OVERLAND FLOW DIRECTION W/SLOPE PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE

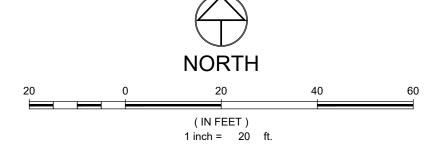
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- MAINTAIN 10' HORIZONTAL AND 18" VERTICAL MINIMUM SEPARATION BETWEEN ALL STORM DRAINS, SANITARY SEWER MAINS, WATER MAINS & SERVICES UNLESS SHOWN OTHERWISE- NOTIFY ENGINEER OF DISCOVERED CONFLICTS.
- 4. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE FROM REFUSE ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES OR FROZEN SOILS GREATER THAN 6-INCHES IN DIAMETER.
- 5. ALL TRENCHES SHALL BE COMPACTED TO 95% AS DETERMINED BY ASTM D698 (STANDARD PROCTOR) OR AS SPECIFIED BY GEOTECHNICAL ENGINEER.
- 6. PIPE LENGTHS ARE CALCULATED FROM THE CENTER OF MANHOLES AND STRUCTURES. SPECIFIED LENGTHS OF PIPE INCLUDES THE LAYING LENGTH OF FLARED END SECTIONS.
- 7. ALL PROJECT DATA IS ON VERTICAL DATUM; NAVD 88. SEE NOTES SHEET FOR BENCHMARK REFERENCES.
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- 9. SEE SOILS REPORT FOR PAVEMENT, SUBGRADE AND MATERIAL PREPARATION, DESIGN AND RECOMMENDATIONS.
- 10. ALL JOINTS SHALL BE WATERTIGHT USING APPROPRIATE GASKETS OR JOINT
- 11. CONTRACTOR SHALL CONFIRM THAT BASIN, INLET, AND/OR MANHOLES DIAMETER AND SIZES ARE SUFFICIENT FOR THEIR PROPOSED METHODS OF INSTALLATION (E.G. WITHIN PRE-CASTER'S OR MANUFACTURER'S TOLERANCES).
- 12. INSTALLATION SHALL FOLLOW MANUFACTURER RECOMMENDATIONS.









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00.10

PROPOSED STORM/CULVERT, INLET, MH, END SECTION WITH RIPRAP EXIST #" STORM/CULVERT, INLET, MH, END SECTION WITH RIPRAP

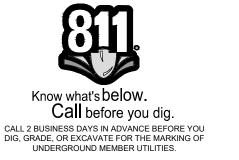
PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR SPOT ELEVATION

EXISTING OVERLAND FLOW DIRECTION W/SLOPE PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE

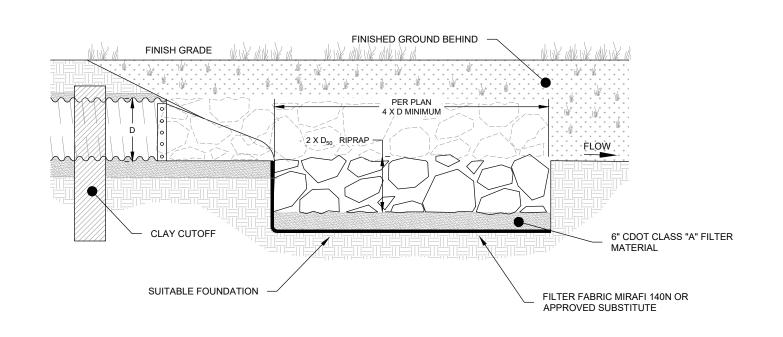
EXISTING CHANNELIZED FLOW DIRECTION

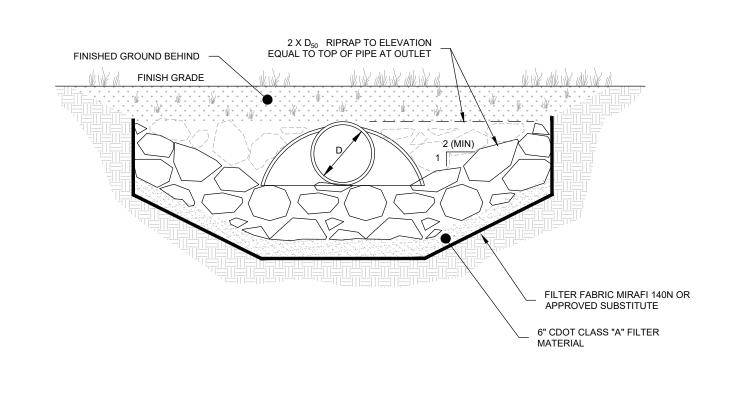
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RIP RAP OUTFALL N.T.S.

490 East 76th Ave., Unit A Denver, Colorado 80229 Toll Free (888) 577-5650 Fax (888) 695-5450

QUOTE

Invoice Number: 3-47767

(please show this invoice number on all payments)

Project: New Mountain Mix

Steamboat Ski Resort 2305 Mt. Werner Steamboat Springs, CO 80487

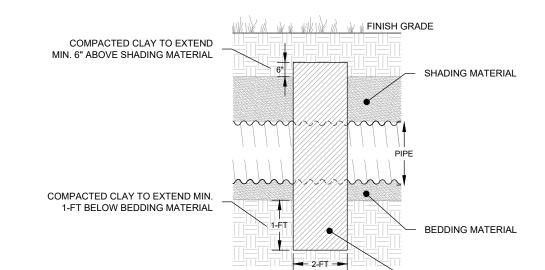
Steamboat Ski Resort 3150 Burgess Creek Road Steamboat Springs, CO 80487

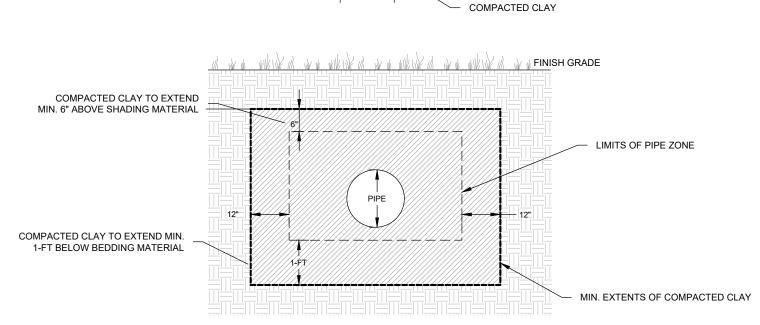
Invoice Date: 15-Jun-20

Terms: Net 30	Customer P.O.	Ordered By:	Phone Number: 970-871-5604	Customer Number: CO155663
Shipper:	Freight: Prepaid/Collect	FOB:	Sales Rep:	Date Shipped:
UPS	Prepaid	Origin	Miranda McCutchen	

	Quantity Sh	nipped				
Pricing	PLS	Bulk	Description	Variety	Price	Total
*** MIX # 20	07563 New N	Nountain N	Mix ***			
PLS#	2.50	2.75	Poa sandbergii Bluegrass, Sandberg	High Plains		
PLS#	1.00	1.00	Koeleria macrantha Prairie junegrass	UP Sims Mesa		
PLS#	11.00	11.00	Elymus elymoides Bottlebrush squirreltail	Pueblo		
PLS#	20.00	20.00	Pascopyrum smithii Western wheatgrass	Arriba		
PLS#	15.50	15.50	Pseudoroegneria spicata ssp. spicata Bluebunch wheatgrass	Columbia		
PLS#	40.00	40.00	Triticum aestivum x Secale cereale Triticale	Quickguard		

REVEGETATION SEED MIX





CLAY CUTOFF WALL NOTES CLAY CUTOFFS SHALL BE INSTALLED ON STORM SEWERS AND CULVERTS ±10-FEET UPSTREAM OF ALL INLETS AND JUNCTIONS AND IN NO CASE MORE THAN 200-FEET APART. CUTOFF SHALL ALSO BE CONSTRUCTED AT CONDUIT JUNCTIONS AND IN NO CASE MORE THAN 200-FEET APART. CUTOFF SHALL ALSO BE CONSTRUCTED AT CONDUIT OUTLETS WHERE NO CONCRETE TOE WALL IS REQUIRED.

2. CLAY CUTOFFS SHALL BE INSTALLED ON WATER AND SEWER LINES PER THE REQUIREMENTS OF THE UTILITY OWNER.

3. INSTALL AT TRANSITIONS BETWEEN PERFORATED AND SOLID PIPES.

4. COMPACT IMPERVIOUS CLAY (COEFFICIENT OF PERMEABILITY < 5 X 10 CM/S) TO NO LESS THAN 95% DENSITY AND BETWEEN -1% AND +3% OF THE OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698 STANDARD PROCTOR.

5. EXTEND THE BOTTOM OF THE CLAY CUTOFF NO LESS THAN 12-INCHES BEYOND THE EXCAVATION OF THE PIPE ZONE.

CLAY CUTOFF DETAIL

N.T.S.

METAL END SECTION NOTES

1. DIMENSIONS OF END SECTIONS MAY VARY SLIGHTLY FROM THOSE SHOWN ON THE TABLES DUE TO DIFFERENT MANUFACTURER'S

2. END SECTIONS FOR CMP ARCH CULVERT SHALL MATCH THE DIMENSIONS OF THE CULVERT SHOWN ON THE PLANS.

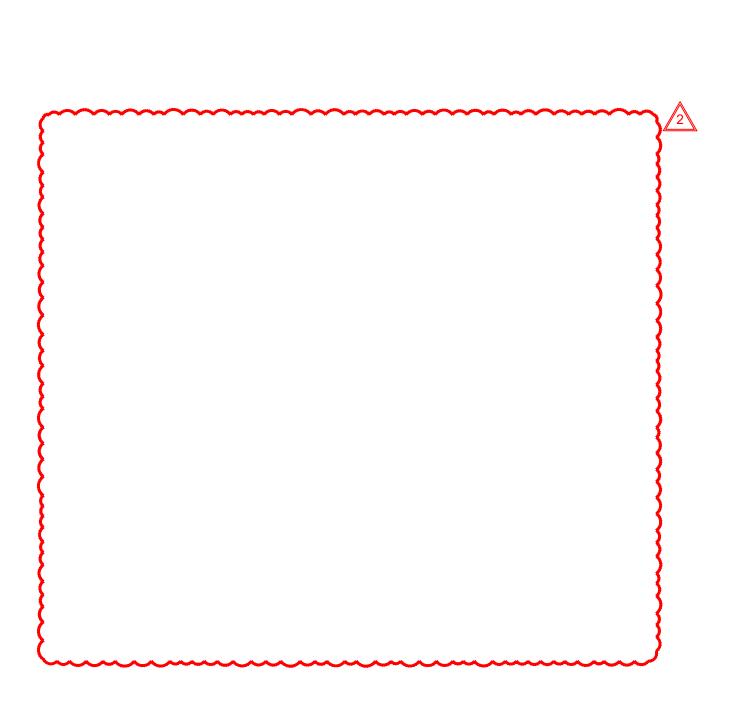
3. GALVANIZED TOE PLATE, AS SHOWN, REQUIRED ON END SECTIONS FOR ALL THIN WALL PIPE AND SHALL BE THE SAME THICKNESS AS END SECTIONS. TOE PLATE SHALL BE FIELD-BOLTED TO END SECTION WITH 3/8" GALVANIZED BOLTS, NUTS AND WASHERS.

4. GALVANIZED STEEL SHALL BE IN CONFORMANCE WITH AASHTO M 111, M 218 OR M 232.

<u> </u>	THIN-WALL R	OUND I	PIPE					
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36	0.079	14	19	9	60	72	94	// L
42 48	0.109 0.109	16 18	22 27	11 12	69 78	84 90	106 112	
54 60	0.109 0.109	18 18	30 33	12 12	84 87	102 114	124 136	
66	0.109	18	36	12	87	120	142	
72 78	0.109 0.109	18 18	39 42	12 12	87 87	126 132	148 154	A W A
84	0.109	18	45	12	87	138	160	PLAN HORIZONTAL & VERTICAL
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	RRUGATED		HEL	ICALLY	-FORMI	ED PIPE	UNLES	S 2"
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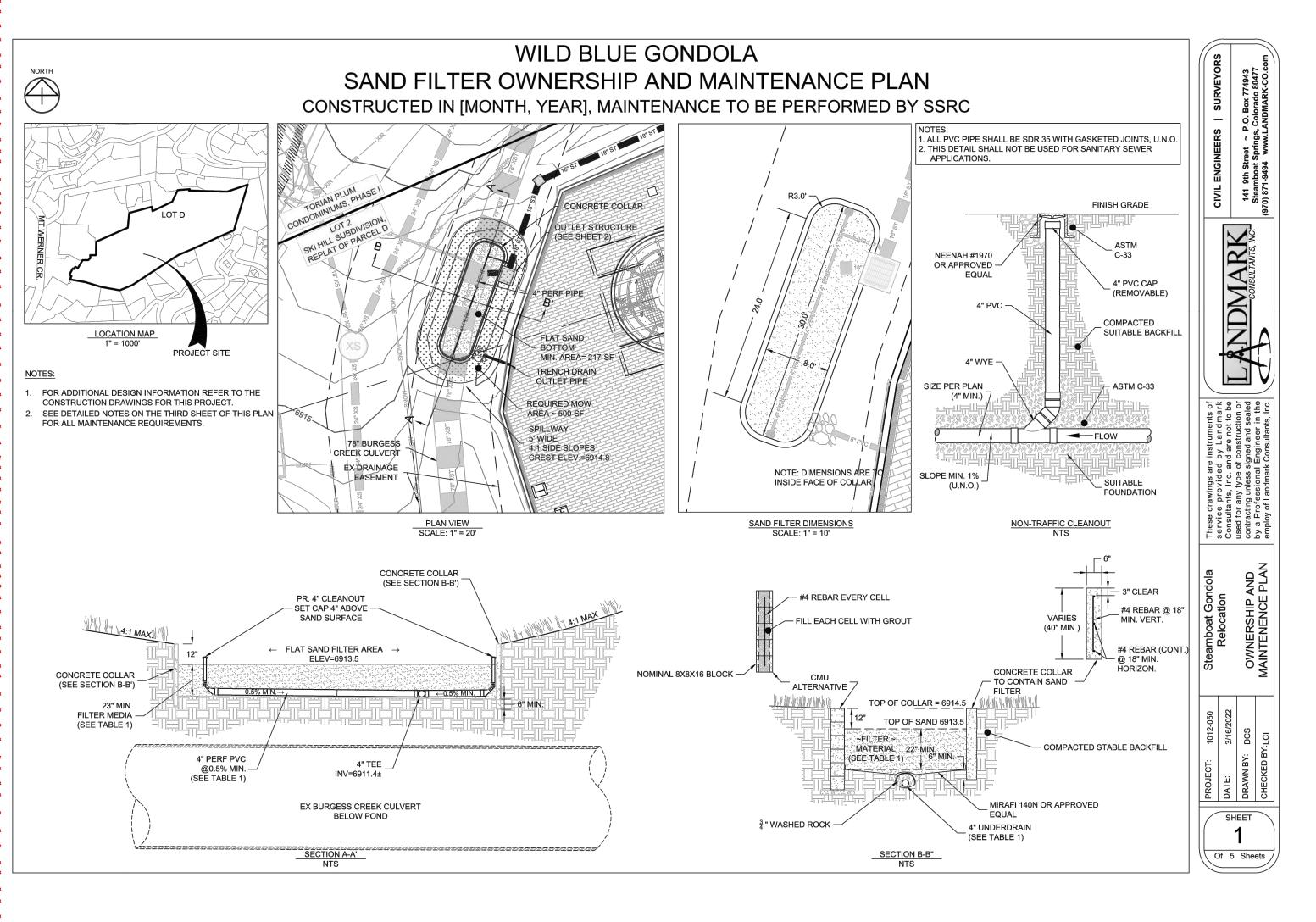
END SECTION AND CONNECTION DETAILS FOR THIN WALL PIPE CULVERTS

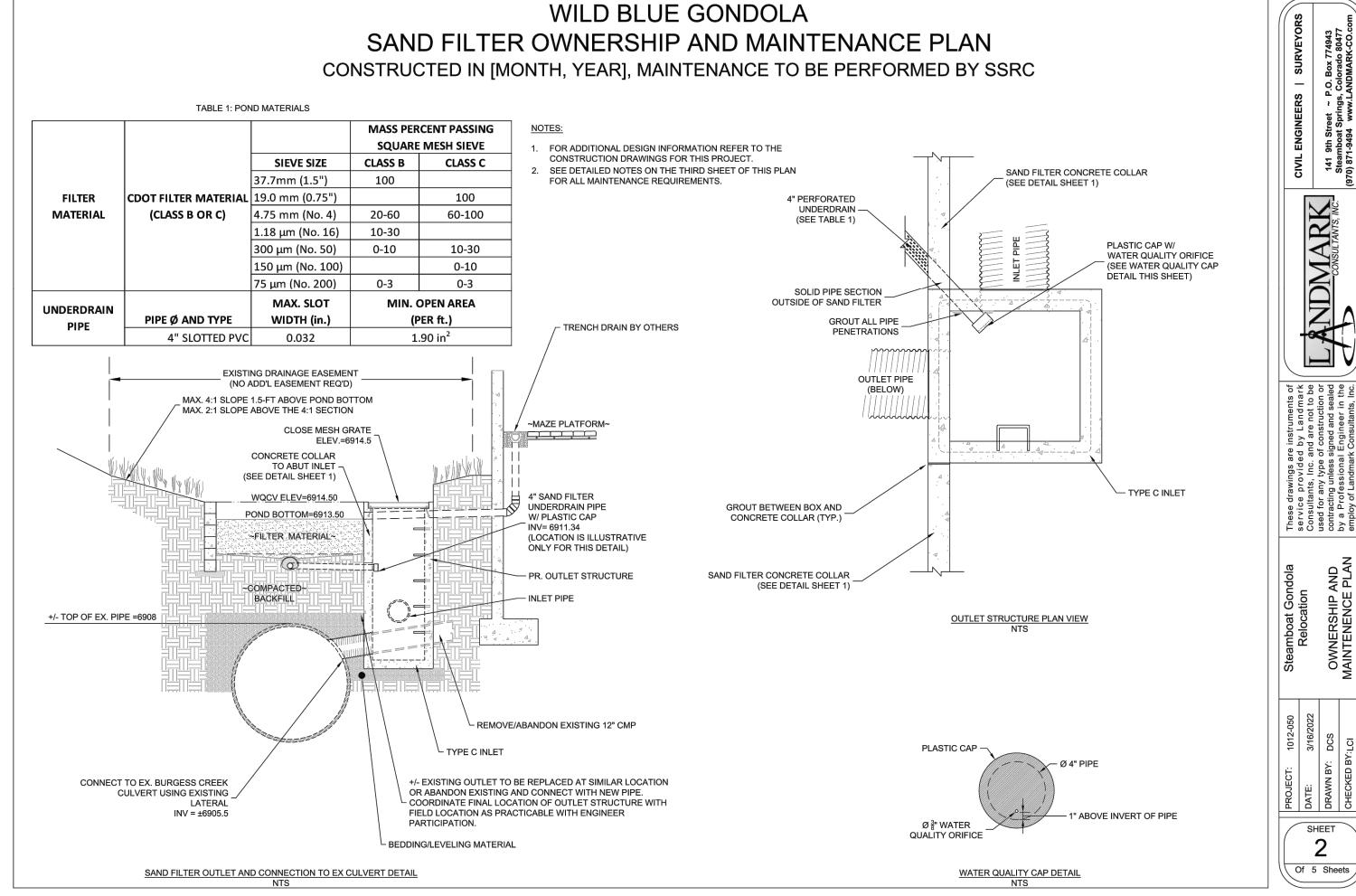
FLARED END SECTION

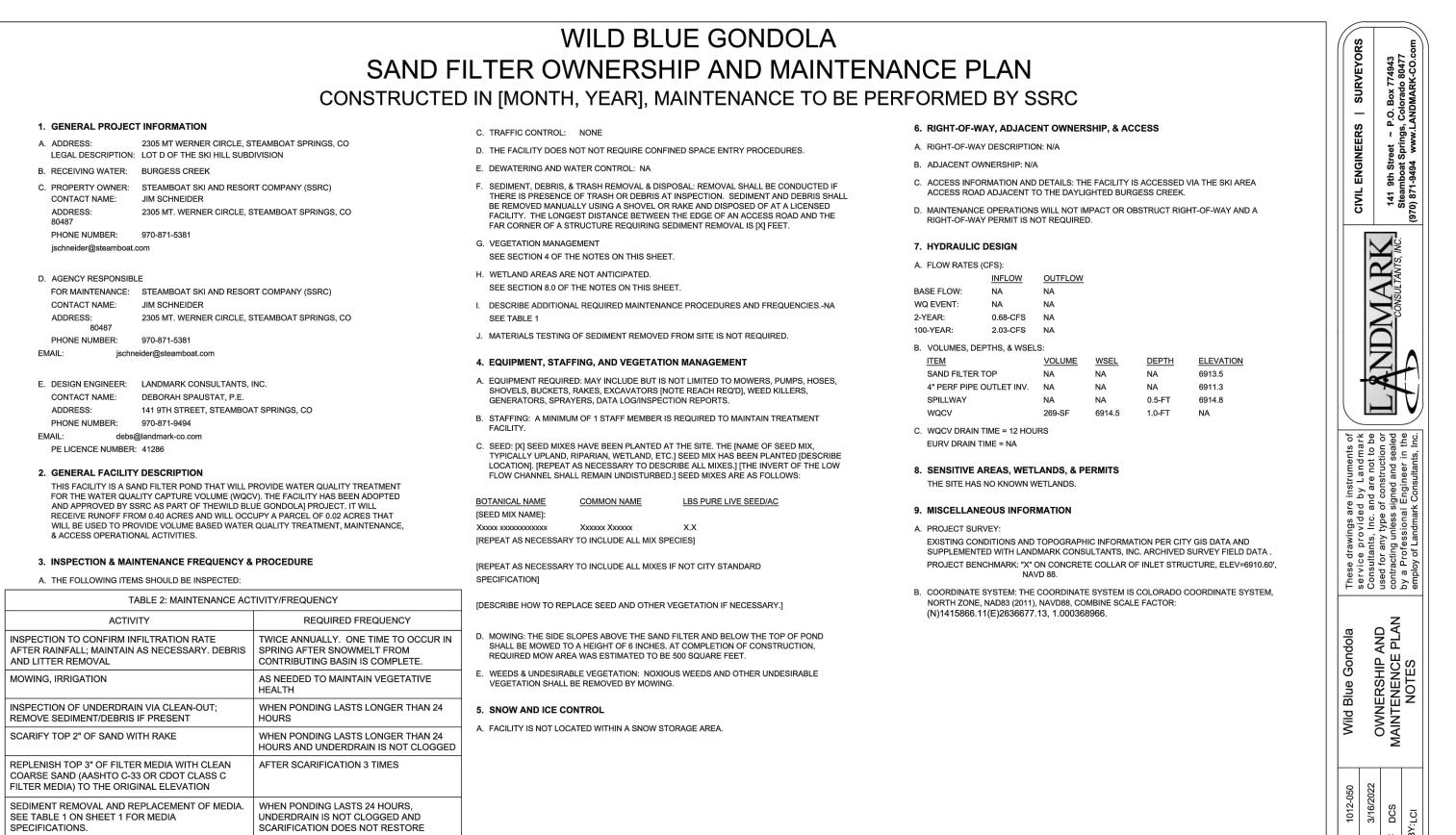












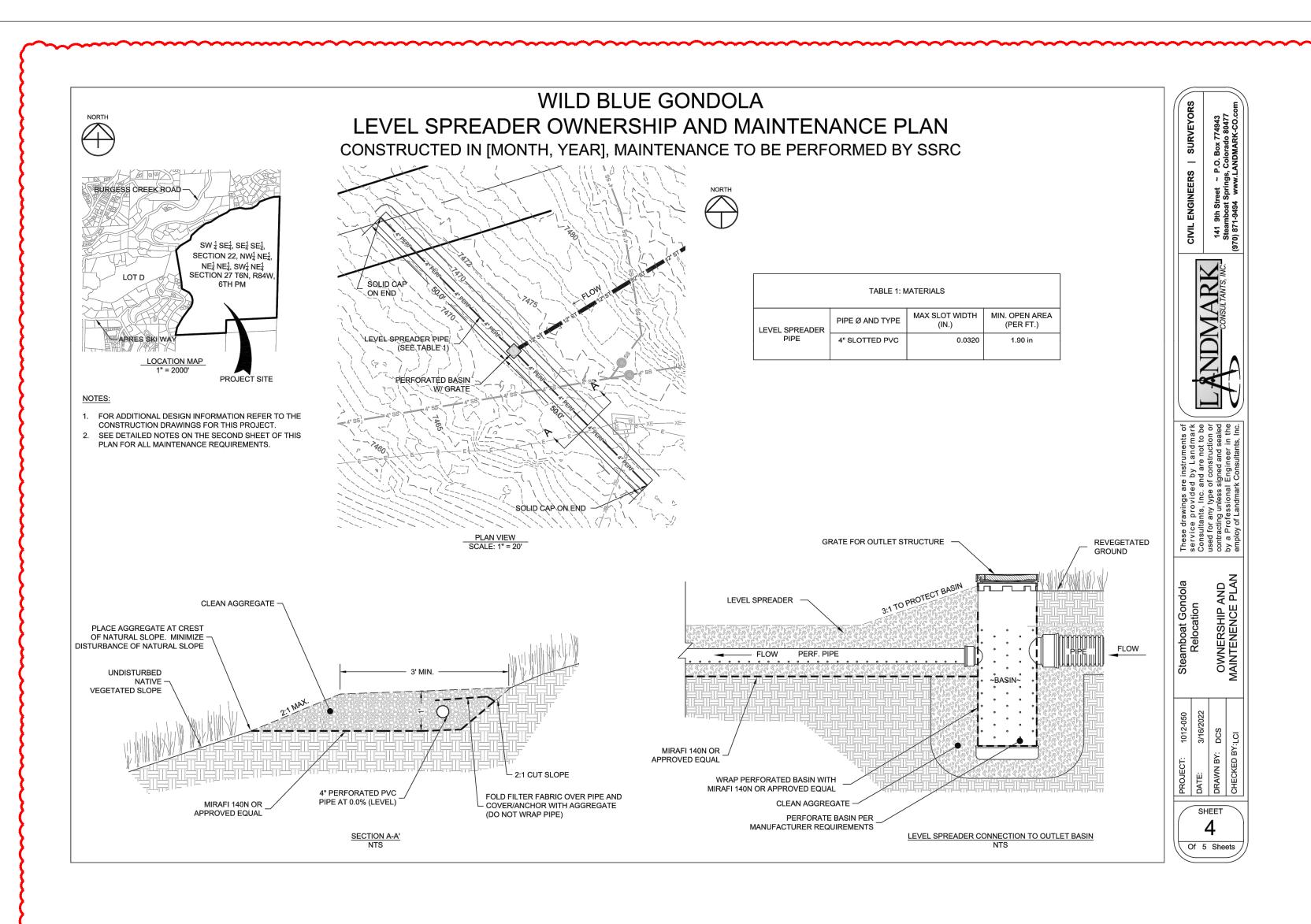
B. REVISIONS TO MAINTENANCE FREQUENCY:

2

Of 5 Sheets

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TION DETAILS
EMAIL:

GRIEPINS SONAL ENGRADO LICENS SONAL ENGRADO LICENS SONAL ENGRAPHICA SONAL



WILD BLUE GONDOLA LEVEL SPREADER OWNERSHIP AND MAINTENANCE PLAN CONSTRUCTED IN [MONTH, YEAR], MAINTENANCE TO BE PERFORMED BY SSRC

1. GENERAL PROJECT INFORMATION

A. ADDRESS: 2305 MT WERNER CIRCLE, STEAMBOAT SPRINGS, CO LEGAL DESCRIPTION: LOT D OF THE SKI HILL SUBDIVISION

B. RECEIVING WATER: BURGESS CREEK C. PROPERTY OWNER: STEAMBOAT SKI AND RESORT COMPANY (SSRC)

CONTACT NAME: JIM SCHNEIDER 2305 MT. WERNER CIRCLE, STEAMBOAT SPRINGS, CO ADDRESS:

PHONE NUMBER: 970-871-5381 jschneider@steamboat.com

D. AGENCY RESPONSIBLE FOR MAINTENANCE: STEAMBOAT SKI AND RESORT COMPANY (SSRC)

CONTACT NAME: JIM SCHNEIDER ADDRESS: 2305 MT. WERNER CIRCLE, STEAMBOAT SPRINGS, CO PHONE NUMBER: 970-871-5381

jschneider@steamboat.com E. DESIGN ENGINEER: LANDMARK CONSULTANTS, INC.

CONTACT NAME: DEBORAH SPAUSTAT, P.E. ADDRESS: 141 9TH STREET, STEAMBOAT SPRINGS, CO PHONE NUMBER: 970-871-9494 debs@landmark-co.com

PE LICENCE NUMBER: 41286 2. GENERAL FACILITY DESCRIPTION

THIS FACILITY IS A LEVEL SPREADER THAT WILL PROVIDE WATER QUALITY TREATMENT FOR USING RUNOFF REDUCTION. THE FACILITY HAS BEEN ADOPTED AND APPROVED BY SSRC AS PART OF THEWILD BLUE GONDOLA] PROJECT. IT WILL RECEIVE RUNOFF FROM 1.39 ACRES AND WILL OCCUPY A PARCEL OF 0.02 ACRES THAT WILL BE USED TO PROVIDE DISTRIBUTION TO CONCENTRATED RUNOFF FLOW, MAINTENANCE, & ACCESS OPERATIONAL ACTIVITIES.

A. THE FOLLOWING ITEMS SHOULD BE INSPECTED:				
TABLE 1: MAINTENANCE AC	TIVITY/FREQUENCY			
ACTIVITY	REQUIRED FREQUENCY			
INSPECT PERFORATED BASIN AND RECORD DEPTH OF SEDIMENT	TWICE ANNUALLY. ONE TIME TO OCCUR IN SPRING AFTER SNOWMELT FROM CONTRIBUTING BASIN IS COMPLETE.			
REMOVE TRASH AND DEBRIS FROM GRATE	WHEN PRESENT AT INSPECTION			
REMOVE ACCUMULATED SEDIMENT	WHEN DEPTH OF SEDIMENT IS GREATER THAN 12"			
INSPECTION OF AGGREGATE AND PIPE TO ENSURE SYSTEM IS NOT CLOGGED AND PIPE IS LEVEL	TWICE ANNUALLY. ONE TIME TO OCCUR IN SPRING AFTER SNOWMELT FROM CONTRIBUTING BASIN IS COMPLETE.			
REMOVAL OF TRASH AND DEBRIS FROM AGGREGATE AND AT END SECTION	WHEN PRESENT AT INSPECTION			
REMOVE END CAP AND JET OUT PIPE	WHEN CLOGGING IS DETECTED			
REPLENISH AGGREGATE TO DEPTH OF 1' B. REVISIONS TO MAINTENANCE FREQUENCY:	WHEN DEPTH OF AGGREGATE IS LESS THAN 10" OR PIPE IS EXPOSED.			
VISUALLY INSPECT OR USE SURVEYS LEVEL TO ENSURE PIPE IS AT A 0% SLOPE	AT TWICE ANNUAL INSPECTION.			
REPLACE 4" PERF PIPE	WHEN PIPE IS CRACKED OR BROCKEN OR OTHERWISE DETERIORATED			

C. TRAFFIC CONTROL: NONE

D. THE FACILITY DOES NOT NOT REQUIRE CONFINED SPACE ENTRY PROCEDURES.

E. DEWATERING AND WATER CONTROL: NA

F. SEDIMENT, DEBRIS, & TRASH REMOVAL & DISPOSAL: REMOVAL SHALL BE CONDUCTED IF THERE IS PRESENCE OF TRASH OR DEBRIS AT INSPECTION. SEDIMENT AND DEBRIS SHALL BE REMOVED MANUALLY USING A SHOVEL OR RAKE AND DISPOSED OF AT A LICENSED FACILITY. THE LONGEST DISTANCE BETWEEN THE EDGE OF AN ACCESS ROAD AND THE

FAR CORNER OF A STRUCTURE REQUIRING SEDIMENT REMOVAL IS 150 FEET. G. VEGETATION MANAGEMENT

SEE SECTION 4 OF THE NOTES ON THIS SHEET. H. WETLAND AREAS ARE NOT ANTICIPATED. SEE SECTION 8.0 OF THE NOTES ON THIS SHEET.

I. DESCRIBE ADDITIONAL REQUIRED MAINTENANCE PROCEDURES AND FREQUENCIES.-NA SEE TABLE 1 J. MATERIALS TESTING OF SEDIMENT REMOVED FROM SITE IS NOT REQUIRED.

4. EQUIPMENT, STAFFING, AND VEGETATION MANAGEMENT A. EQUIPMENT REQUIRED: MAY INCLUDE BUT IS NOT LIMITED TO PUMPS, HOSES, SHOVELS, BUCKETS, RAKES, EXCAVATORS, GENERATORS, SPRAYERS, DATA LOG/INSPECTION

B. STAFFING: A MINIMUM OF 1 STAFF MEMBER IS REQUIRED TO MAINTAIN TREATMENT SEED: NO SEED MIXES HAVE BEEN PLANTED AT THE SITE.

C. MOWING: NONE REQUIRED. D. WEEDS & UNDESIRABLE VEGETATION: NOXIOUS WEEDS AND OTHER UNDESIRABLE

VEGETATION SHALL BE REMOVED BY- NA.

5. SNOW AND ICE CONTROL A. FACILITY IS NOT LOCATED WITHIN A SNOW STORAGE AREA. 6. RIGHT-OF-WAY, ADJACENT OWNERSHIP, & ACCESS A. RIGHT-OF-WAY DESCRIPTION: N/A B. ADJACENT OWNERSHIP: N/A C. ACCESS INFORMATION AND DETAILS: THE FACILITY IS ACCESSED VIA THE SKI AREA ACCESS ROAD FROM THE THUNDERHEAD EXPRESS LIFT. D. MAINTENANCE OPERATIONS WILL NOT IMPACT OR OBSTRUCT RIGHT-OF-WAY AND A RIGHT-OF-WAY PERMIT IS NOT REQUIRED. DMARK CONSULTANTS, INC.

7. HYDRAULIC DESIGN A. FLOW RATES (CFS): 1.88-CFS NA B. VOLUMES, DEPTHS, & WSELS: VOLUME WSEL C. WQCV DRAIN TIME = NA EURV DRAIN TIME = NA

8. SENSITIVE AREAS, WETLANDS, & PERMITS THE SITE HAS NO KNOWN WETLANDS.

WQ EVENT:

ITEM

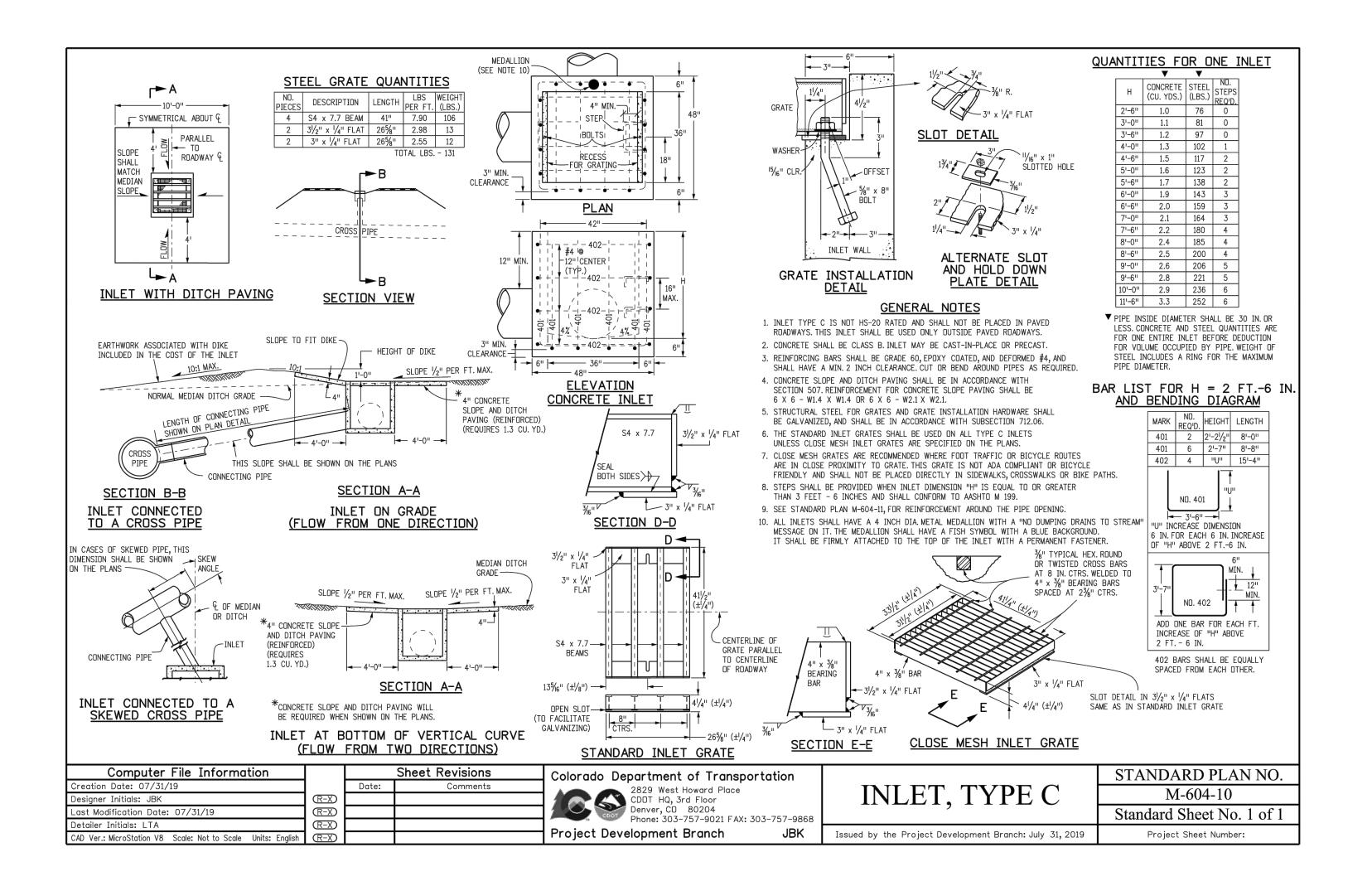
2-YEAR:

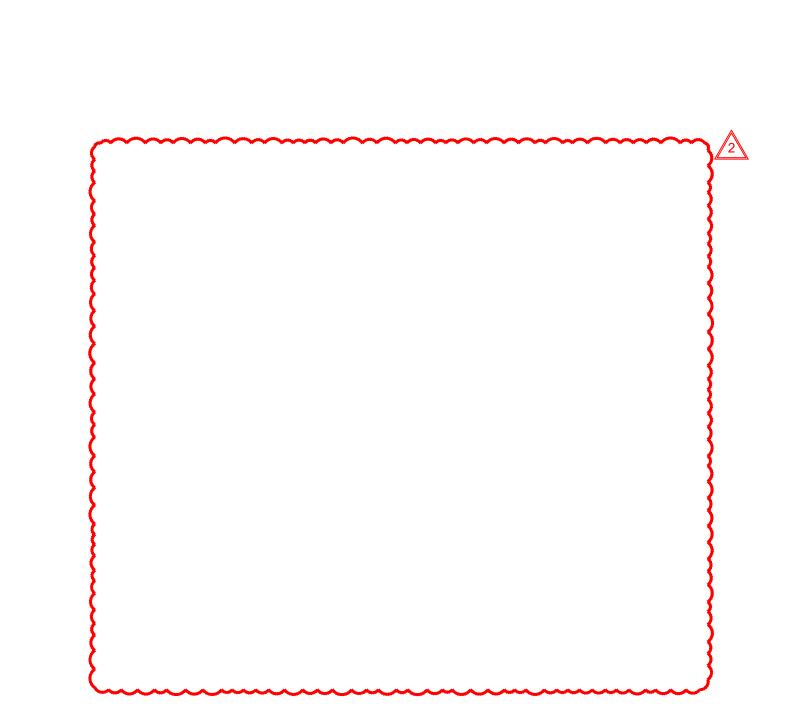
9. MISCELLANEOUS INFORMATION A. PROJECT SURVEY:

EXISTING CONDITIONS AND TOPOGRAPHIC INFORMATION PER CITY GIS DATA AND SUPPLEMENTED WITH LANDMARK CONSULTANTS, INC. ARCHIVED SURVEY FIELD DATA. PROJECT BENCHMARK: "X" ON CONCRETE COLLAR OF INLET STRUCTURE, ELEV=6910.60',

B. COORDINATE SYSTEM: THE COORDINATE SYSTEM IS COLORADO COORDINATE SYSTEM, NORTH ZONE, NAD83 (2011), NAVD88, COMBINE SCALE FACTOR: (N)1415866.11(E)2636677.13, 1.000368966.







VIL ENGINEERS | SURVEYORS
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eamboat Springs, Colorado 80477
(970) 871-9494
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	Consultants, Inc. and are not
	to be used for any type of
	construction or contracting
	unless signed and sealed by a
	Professional Engineer in the
	employ of Landmark
	Constitants

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DATE:	3 16 22	3-10-5				
Ö.	c	٧				
PROJECT: 1012-050			DATE: 2/3/22	CONTACT: Grip		EMAIL: erikg@landmark-co.com

LD BLUE GONDOLA

GRIEPENS 33280 G

ENGINEERED SURFACE DRAINAGE PRODUCTS

GENERAL

PVC SURFACE DRAINAGE INLETS SHALL BE OF THE CURB INLET STRUCTURE TYPE AS INDICATED ON THE CONTRACT DRAWINGS AND REFERENCED WITHIN THE CONTRACT SPECIFICATIONS. THE **DUCTILE IRON FRAME**, **GRATE AND HOOD** FOR EACH OF THESE STRUCTURES ARE TO BE CONSIDERED AN INTEGRAL PART OF THE SURFACE DRAINAGE INLET AND SHALL BE FURNISHED BY THE SAME MANUFACTURER. THE CURB INLET STRUCTURE SHALL BE AS MANUFACTURED BY NYLOPLAST A DIVISION OF ADVANCED DRAINAGE SYSTEMS, INC. OR PRIOR APPROVED EQUAL.

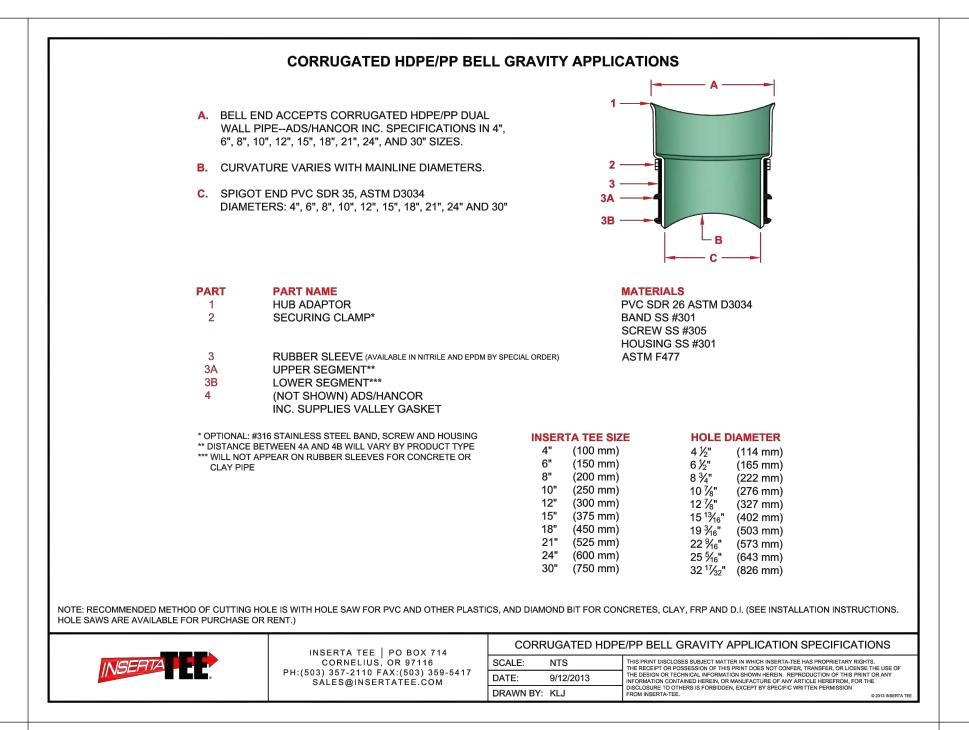
MATERIALS
THE CURB IN

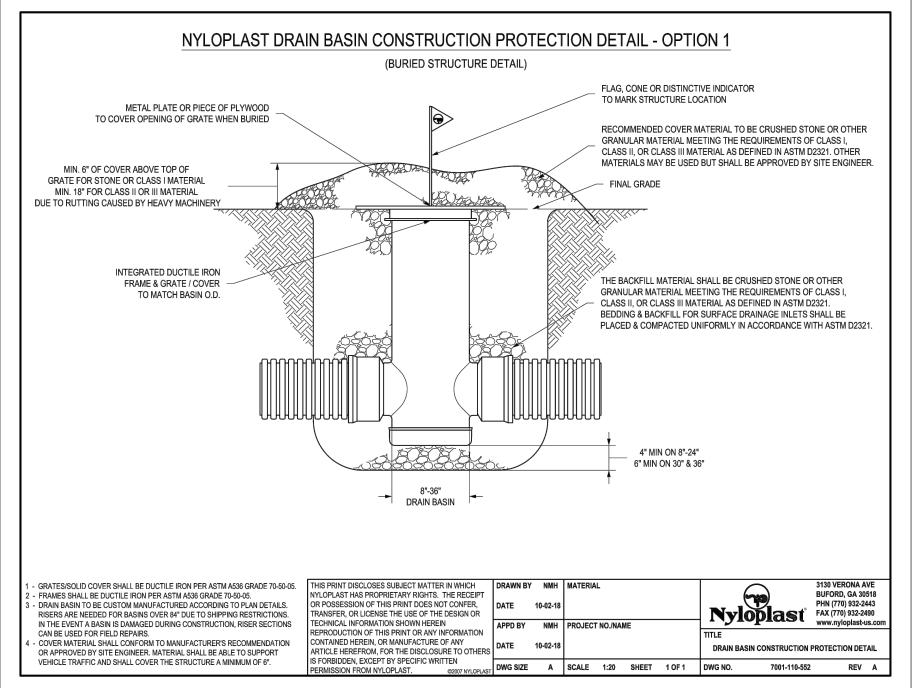
THE CURB INLET STRUCTURE REQUIRED FOR THIS CONTRACT SHALL BE MANUFACTURED FROM PVC PIPE STOCK, UTILIZING A THERMO-MOLDING PROCESS TO REFORM THE PIPE STOCK TO THE SPECIFIED CONFIGURATION. THE DRAINAGE PIPE CONNECTION STUBS SHALL BE MANUFACTURED FORM PVC PIPE STOCK AND FORMED TO PROVIDE A WATERTIGHT CONNECTION WITH THE SPECIFIED PIPE SYSTEM. THIS JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR JOINTS FOR DRAIN AND SEWER PLASTIC PIPE USING FLEXIBLE ELASTOMERIC SEALS. THE FLEXIBLE ELASTOMERIC SEALS SHALL CONFORM TO ASTM F477. THE PIPE BELL SPIGOT SHALL BE JOINED TO THE MAIN BODY OF THE STRUCTURE. THE RAW MATERIAL USED TO MANUFACTURE THE PIPE STOCK THAT IS USED TO MANUFACTURE THE MAIN BODY AND PIPE STUBS OF THE SURFACE DRAINAGE INLETS SHALL CONFORM TO ASTM D1784 CELL CLASS 12454.

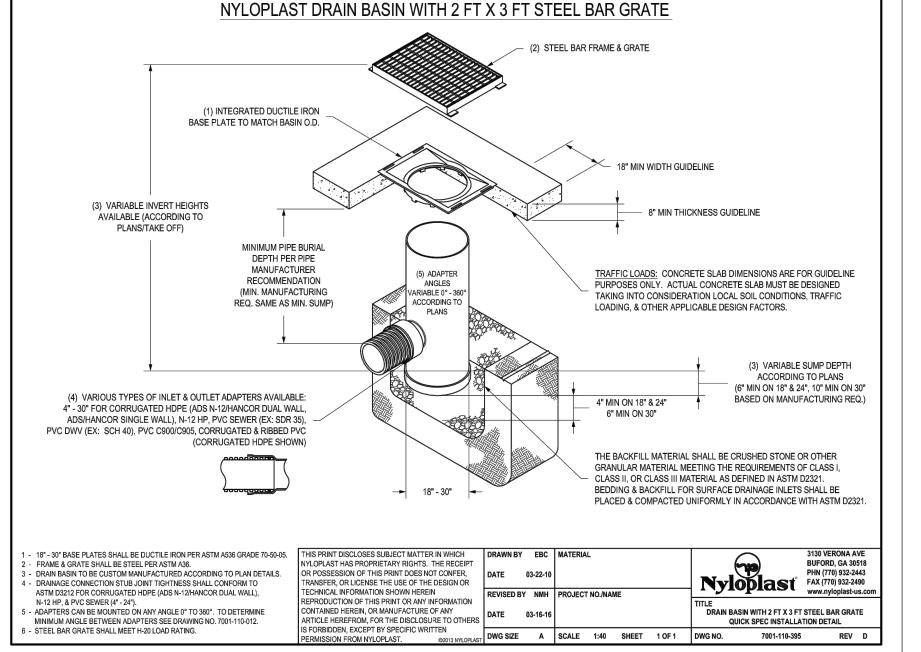
THE GRATE, FRAME AND HOOD FOR ALL CURB INLET STRUCTURES SHALL BE DUCTILE IRON AND SHALL BE MADE SPECIFICALLY FOR EACH SO AS TO PROVIDE A ROUND BOTTOM FLANGE THAT CLOSELY MATCHES THE DIAMETER OF THE PVC STRUCTURE BODY. THE GRATE, FRAME AND HOOD SHALL BE CAPABLE OF SUPPORTING H-20 WHEEL LOADING FOR TRAFFIC AREAS. THE HOOD SECTION WILL HAVE A SOLID BACK AND BE ADJUSTABLE BY USE OF THREE (3) LOCKING HEX HEAD BOLTS. THE METAL USED IN THE MANUFACTURE OF THE CASTINGS SHALL CONFORM TO ASTM A536 GRADE 70-50-05 FOR DUCTILE IRON.

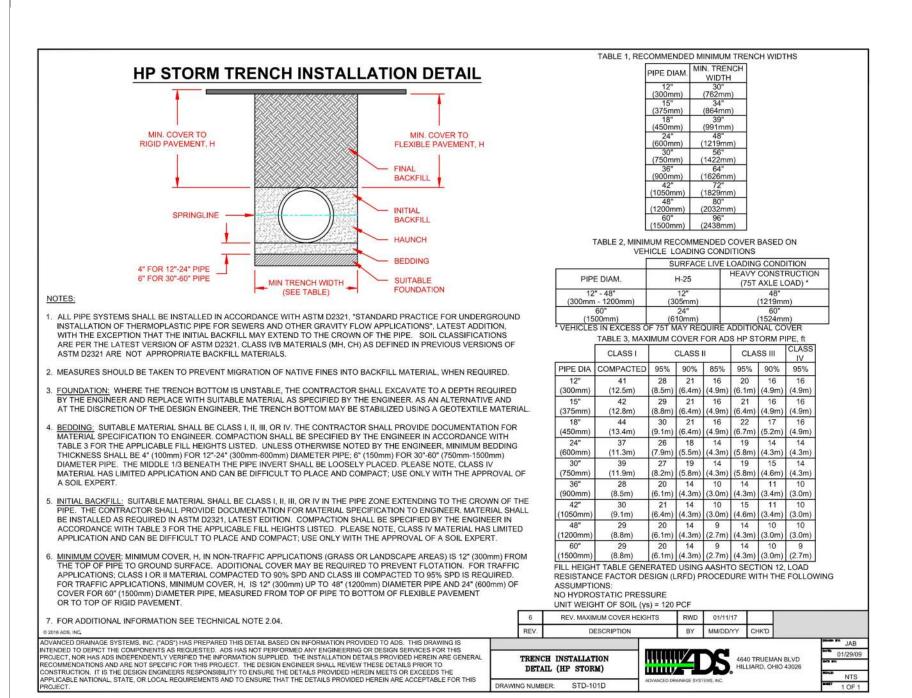
INSTALLATION

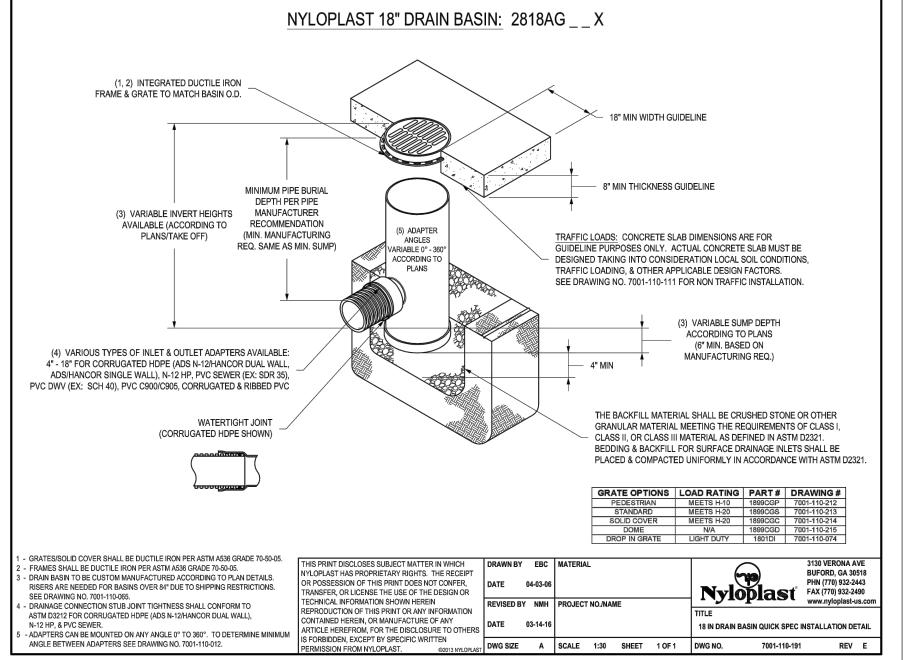
THE SPECIFIED PVC SURFACE DRAINAGE INLET SHALL BE INSTALLED USING CONVENTIONAL FLEXIBLE PIPE BACKFILL MATERIALS AND PROCEDURES. THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS 1, CLASS 2, OR CLASS 3 MATERIAL AS DEFINED IN <u>ASTM D2321</u>. BEDDING AND BACKFILL FOR THE CURB INLET STRUCTURE SHALL BE PLACED AND COMPACTED UNIFORMLY IN ACCORDANCE WITH <u>ASTM D2321</u>. THE CURB INLET STRUCTURE BODY WILL BE CUT AT THE TIME OF THE FINAL GRADE. NO BRICK, STONE OR CONCRETE BLOCK WILL BE REQUIRED TO SET THE GRATE TO THE FINAL GRADE HEIGHT. FOR H-20 LOAD RATED INSTALLATIONS, A CONCRETE RING WILL BE POURED UNDER THE FRAME, GRATE, AND HOOD. THE CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, AND OTHER APPLICABLE DESIGN FACTORS. FOR OTHER INSTALLATION CONSIDERATIONS SUCH AS MIGRATION OF FINES, GROUND WATER, AND SOFT FOUNDATIONS REFER TO ASTM D2321 GUIDELINES.

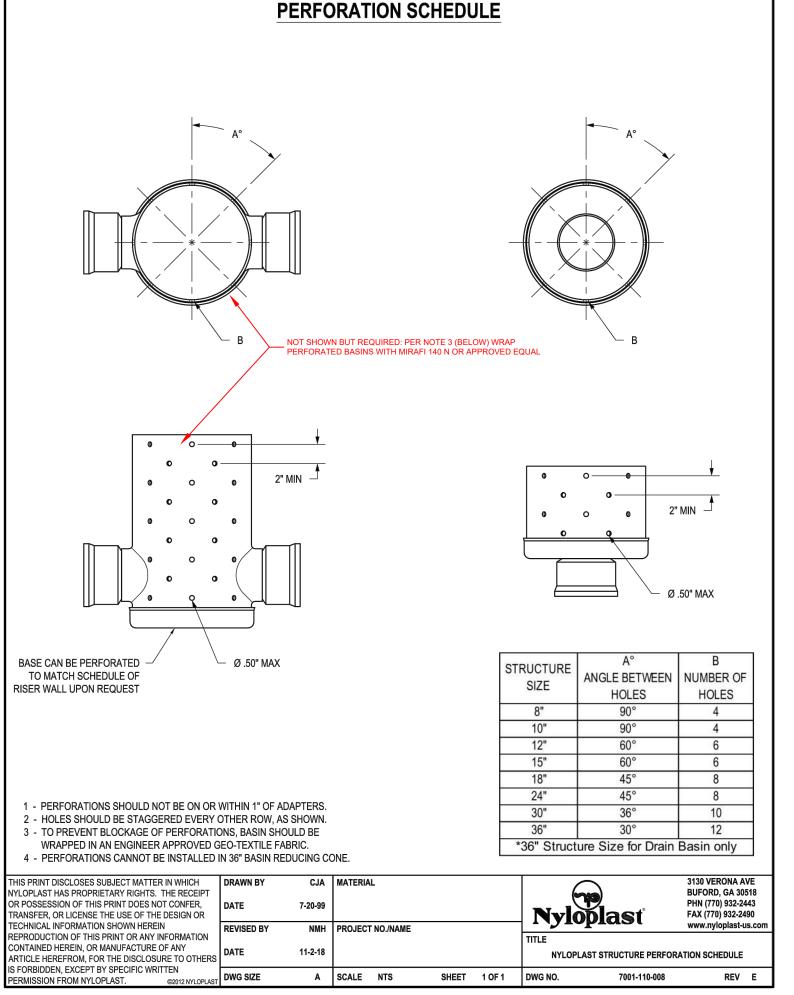












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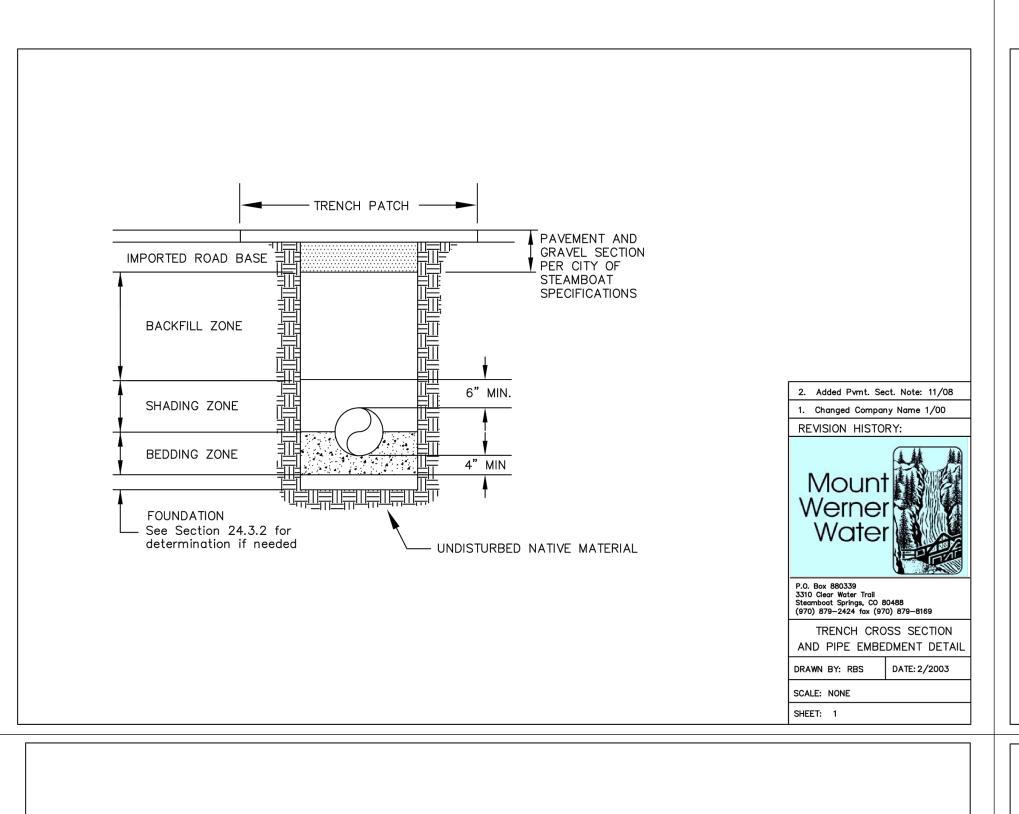
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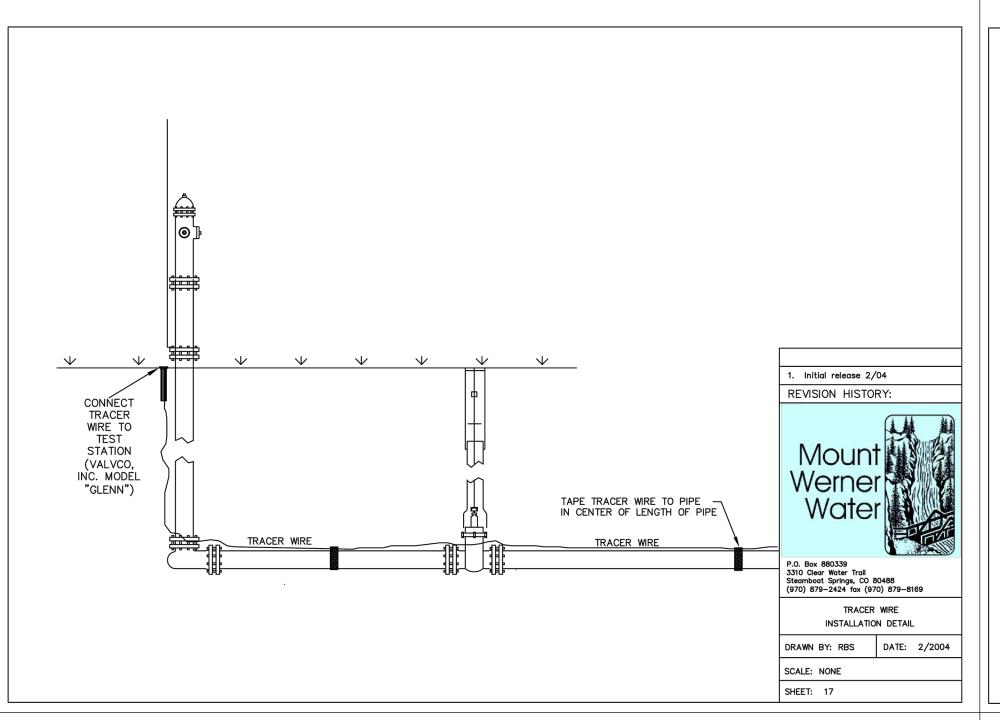
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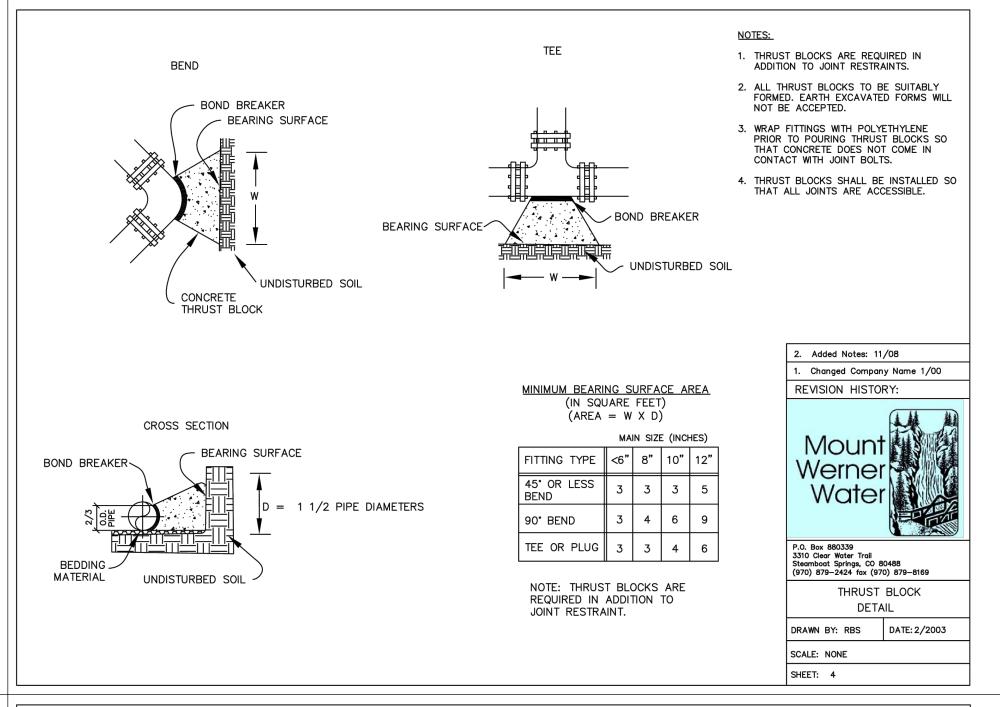
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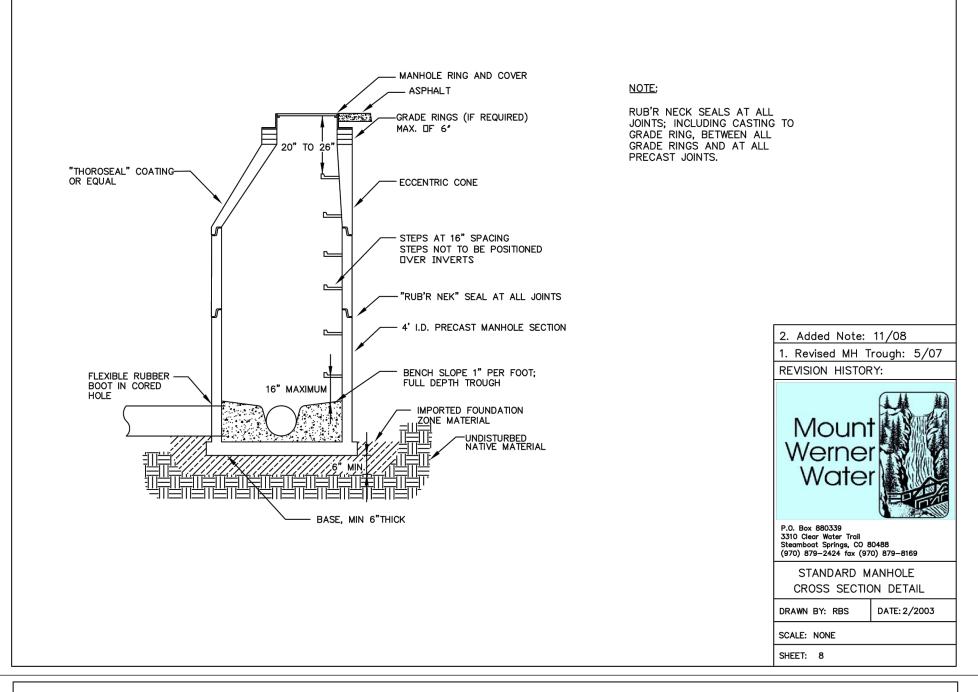
YLOPLAST DETAILS

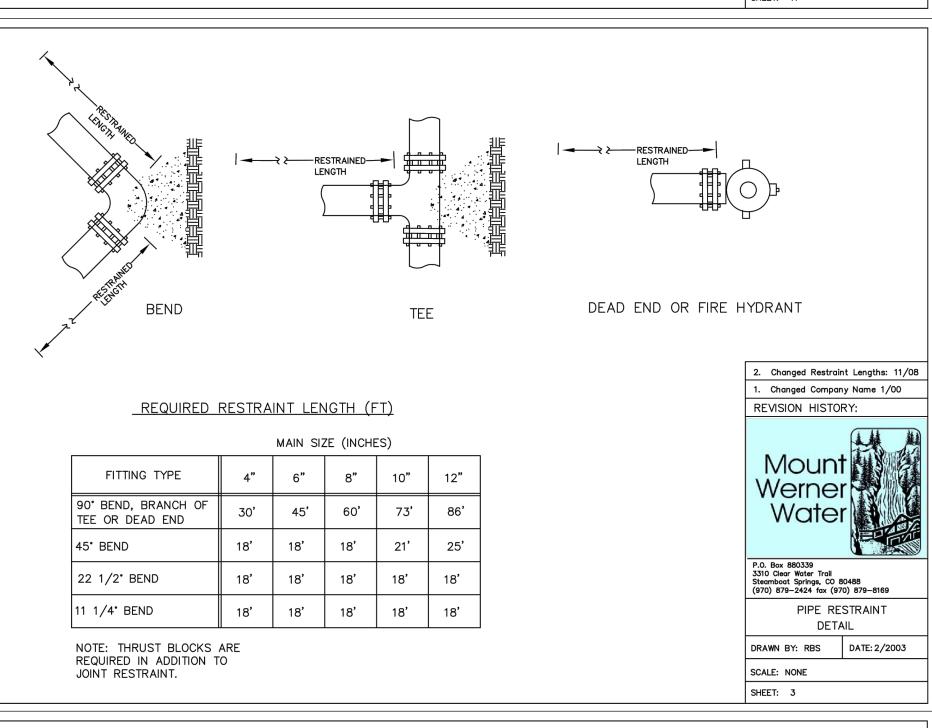
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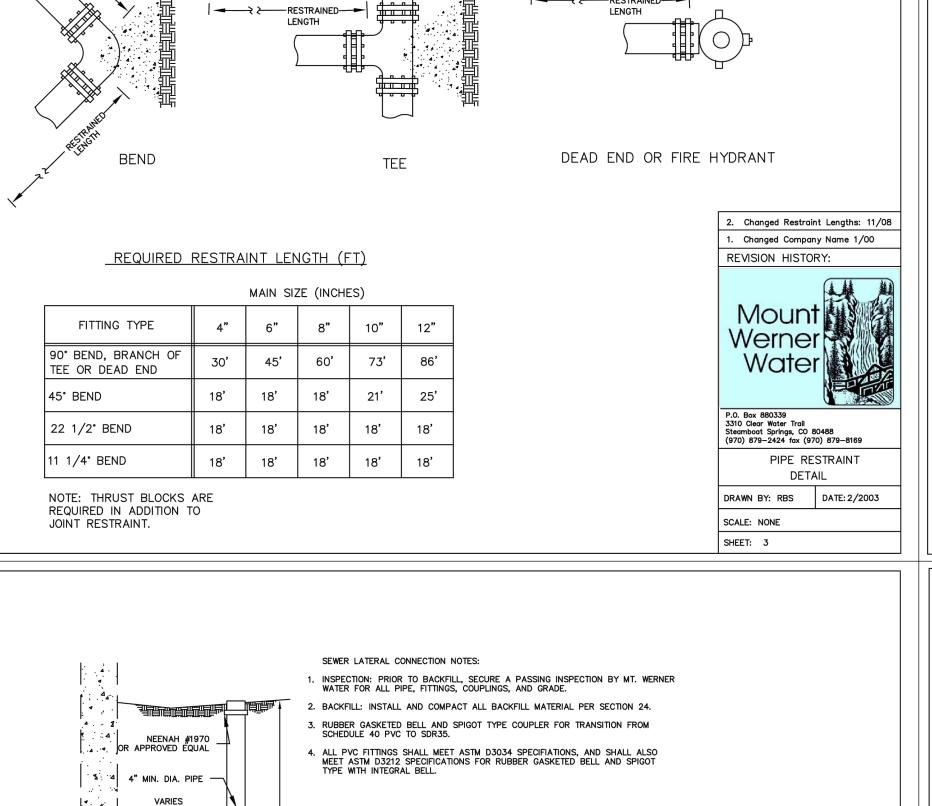


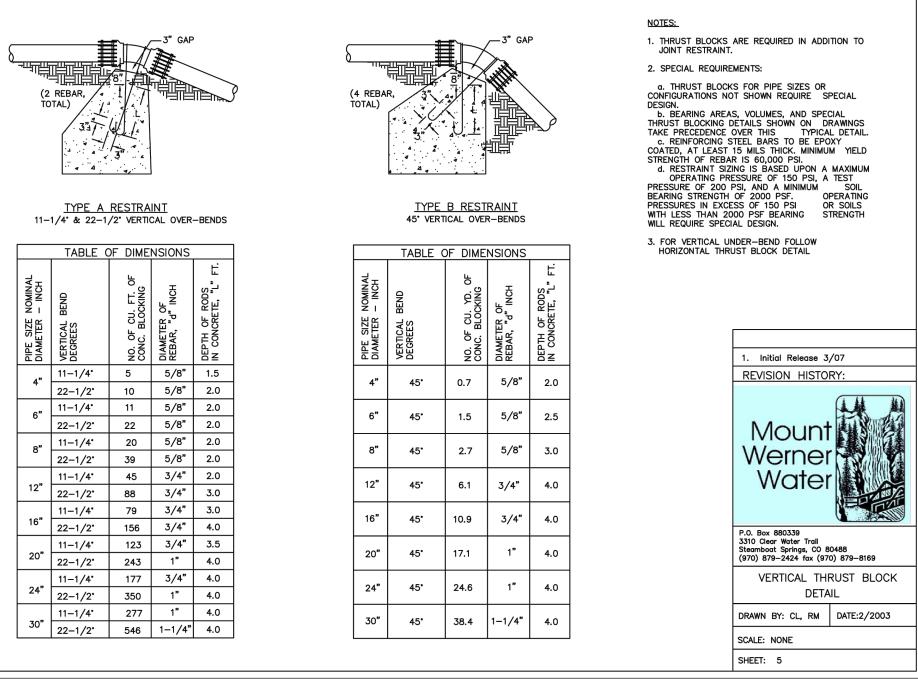


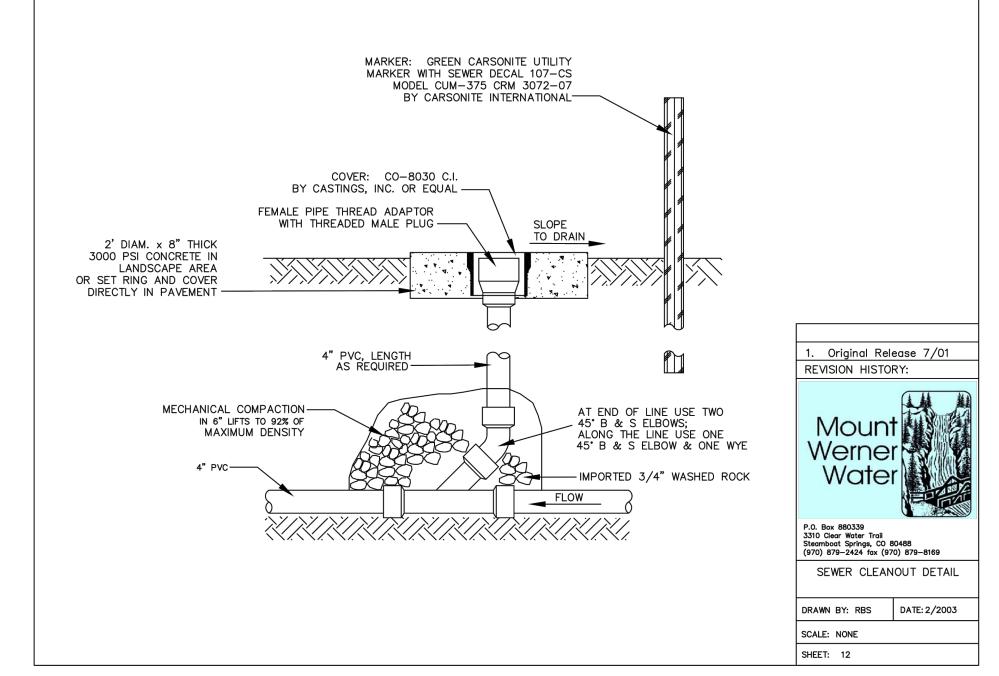


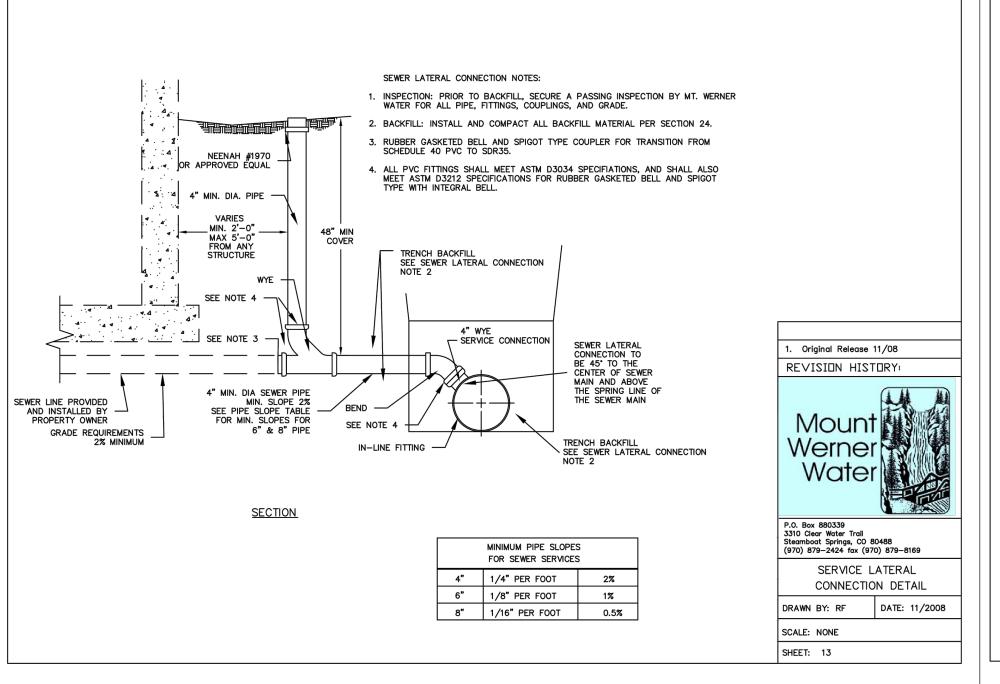


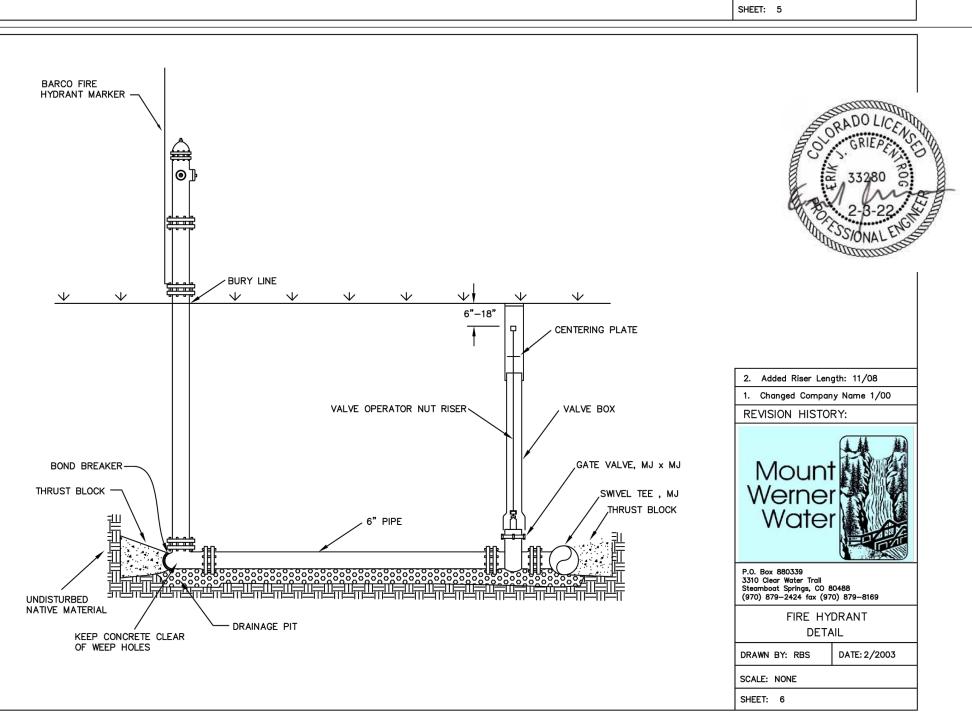












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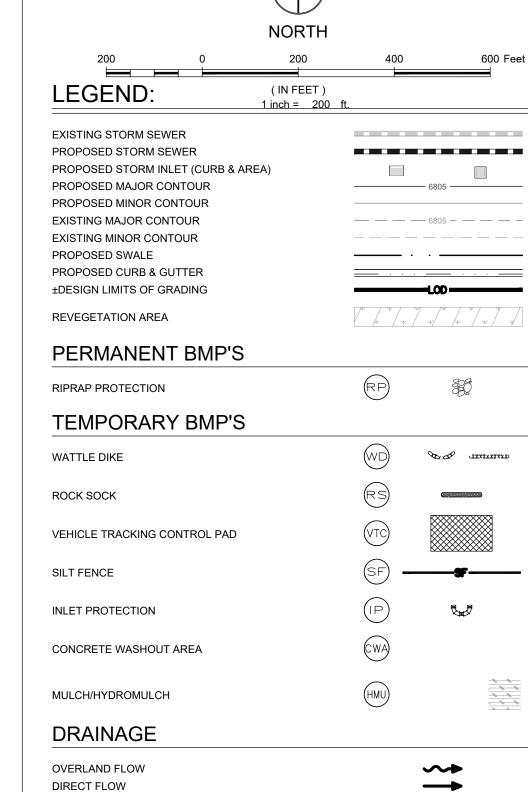
LANDINARK

CONSULTANTS, INC.

| NO. DATE: BY: DESCRIPTION: in str i

WILD BLUE GUNDULA
MONITORING MANHOLE DI





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- EROSION CONDITION/SOIL FACTOR-EROSION CONDITION OF THE RECLAIMED AREA IS EQUAL TO OR IN BETTER CONDITION THAN THAT MEASURED FOR THE REFERENCE TRANSECT.
- . PHOTOGRAPHS SHOULD BE TAKEN EACH YEAR AT ESTABLISHED POINTS TO DOCUMENT THE RECLAMATION EFFORT AND MAINTAIN A CONSISTENT PHOTOGRAPHIC RECORD.
- 32. CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS. IMPLEMENT WHATEVER MEASURES ARE DETERMINED NECESSARY PER THE PROJECT STORMWATER MANAGEMENT PLAN. STANDARD CHECK DAM SPACING CRITERIA

FLOW LINE GRADIENT	2%	3%	4%	5%	6%					
SPACING (FEET)	100	67	50	40	33					
STANDARD EROSION LOG SPACING CRITERIA										

MAXIMUM CHECK DAM SPACING BASED ON FLOW LINE GRADIENT NOMINAL LOG DIAMETER (FEET) 8 - 9 INCHES 12 INCHES 18 - 20 INCHES 0% - 2% 2% - 5% 5% - 10% 10% - 33%

CALL UTILITY NOTIFICATION CENTER OF

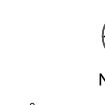
33% - 50%



DIG. GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.



10



(IN FEET) LEGEND: 1 inch = 200 ft. EXISTING STORM SEWER PROPOSED STORM SEWER PROPOSED STORM INLET (CURB & AREA) PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR **EXISTING MAJOR CONTOUR** EXISTING MINOR CONTOUR PROPOSED SWALE PROPOSED CURB & GUTTER **±DESIGN LIMITS OF GRADING** REVEGETATION AREA PERMANENT BMP'S RIPRAP PROTECTION **TEMPORARY BMP'S** WATTLE DIKE ROCK SOCK VEHICLE TRACKING CONTROL PAD SILT FENCE INLET PROTECTION CONCRETE WASHOUT AREA MULCH/HYDROMULCH

OVERLAND FLOW DIRECT FLOW

NOTES:

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- 25. THE FOLLOWING PERFORMANCE STANDARDS SHOULD BE USED TO DETERMINE WHETHER THE OBJECTIVES OF THE EROSION CONTROL AND REVEGETATION PLAN HAVE BEEN MET AT A GIVEN TIME. A REFERENCE TRANSECT SHOULD BE ESTABLISHED FOR BASELINE CONDITIONS. • PERCENT COVER-75% OF THE TOTAL VEGETATION COVER MEASURED FOR THE REFERENCE TRANSECT.
- DOMINANT SPECIES-90% OF THE REVEGETATION CONSISTS OF SPECIES CONTAINED IN THE APPLIED SEED MIX AND THAT OCCUR IN THE REFERENCE TRANSECT. • SEEDLING DENSITY-THE DENSITY AND ABUNDANCE OF SEEDLINGS IS AT LEAST 3 TO 4 SEEDLINGS PER SQUARE
- EROSION CONDITION/SOIL FACTOR-EROSION CONDITION OF THE RECLAIMED AREA IS EQUAL TO OR IN BETTER CONDITION THAN THAT MEASURED FOR THE REFERENCE TRANSECT. 1. PHOTOGRAPHS SHOULD BE TAKEN EACH YEAR AT ESTABLISHED POINTS TO DOCUMENT THE RECLAMATION EFFORT
- AND MAINTAIN A CONSISTENT PHOTOGRAPHIC RECORD. 32. CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS. IMPLEMENT WHATEVER MEASURES ARE DETERMINED NECESSARY PER THE PROJECT STORMWATER MANAGEMENT PLAN.

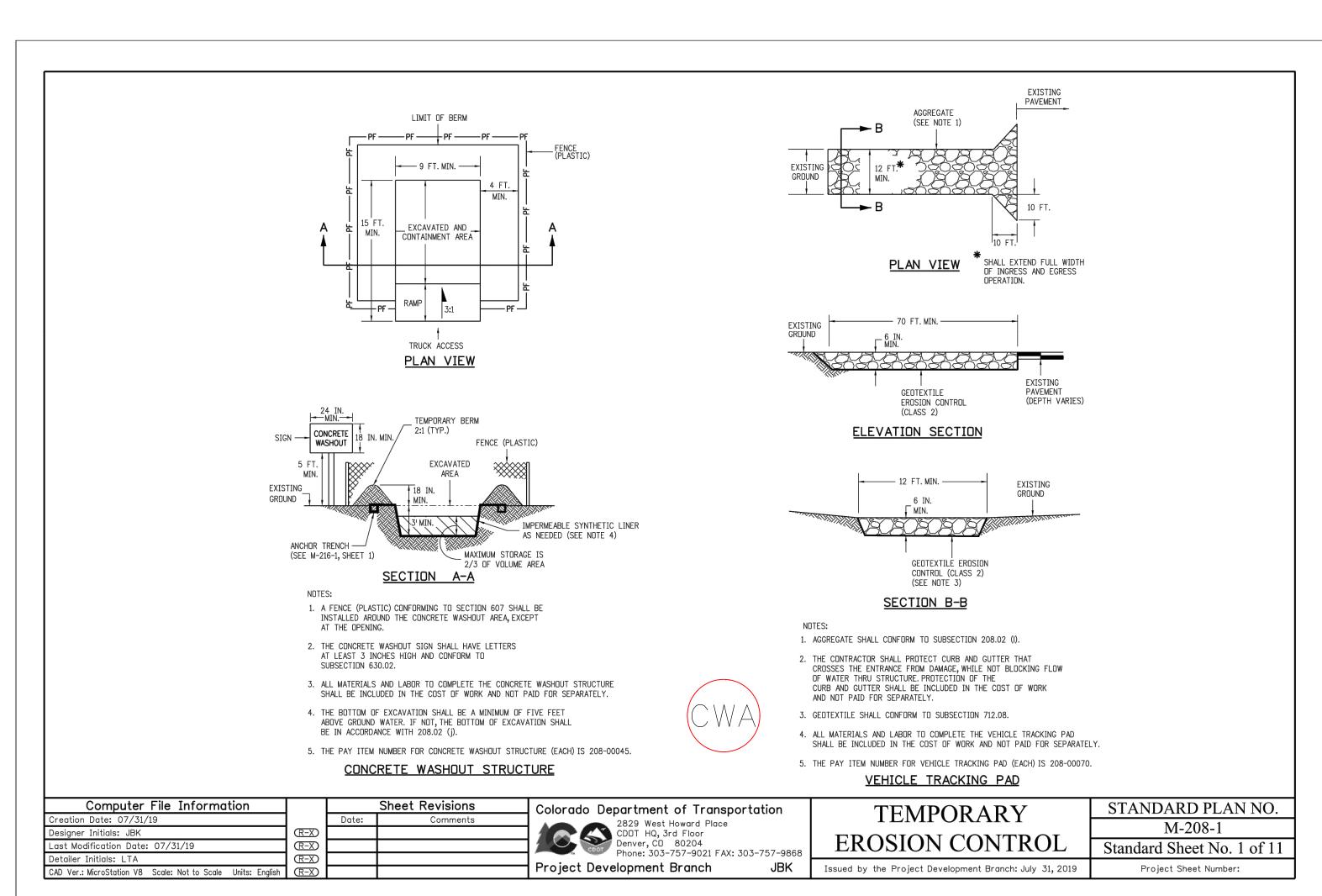
STANDARD CHECK DAM SPACING CRITERIA
 FLOW LINE GRADIENT
 2%
 3%
 4%
 5%
 SPACING (FEET) 100 67 50 40

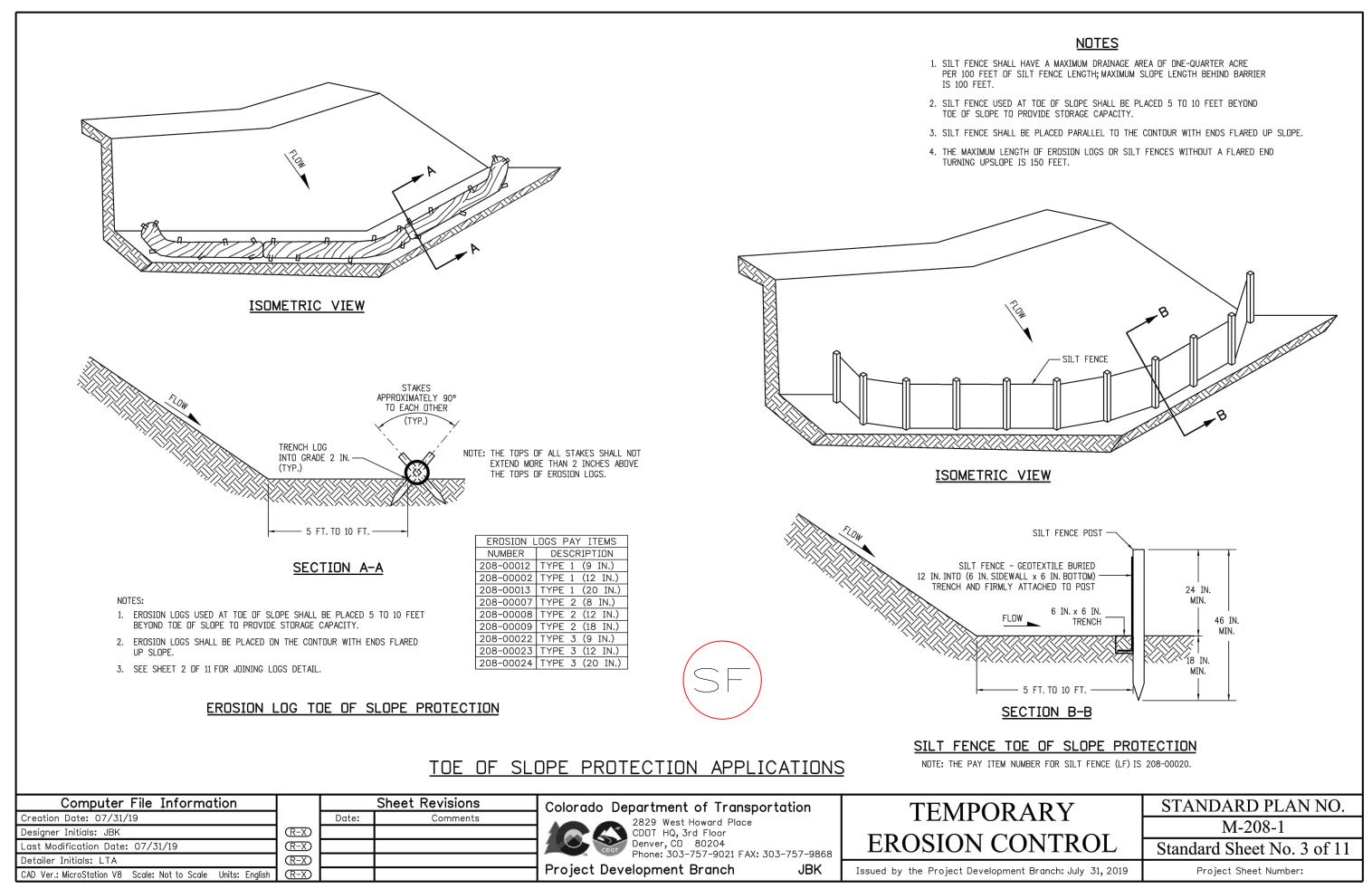
STANDARD EROSION LOG SPACING CRITERIA MAXIMUM CHECK DAM SPACING BASED ON FLOW LINE GRADIENT NOMINAL LOG DIAMETER (FEET) 8 - 9 INCHES 12 INCHES 18 - 20 INCHES 2% - 5% 5% - 10% 10% - 33% 33% - 50% 10

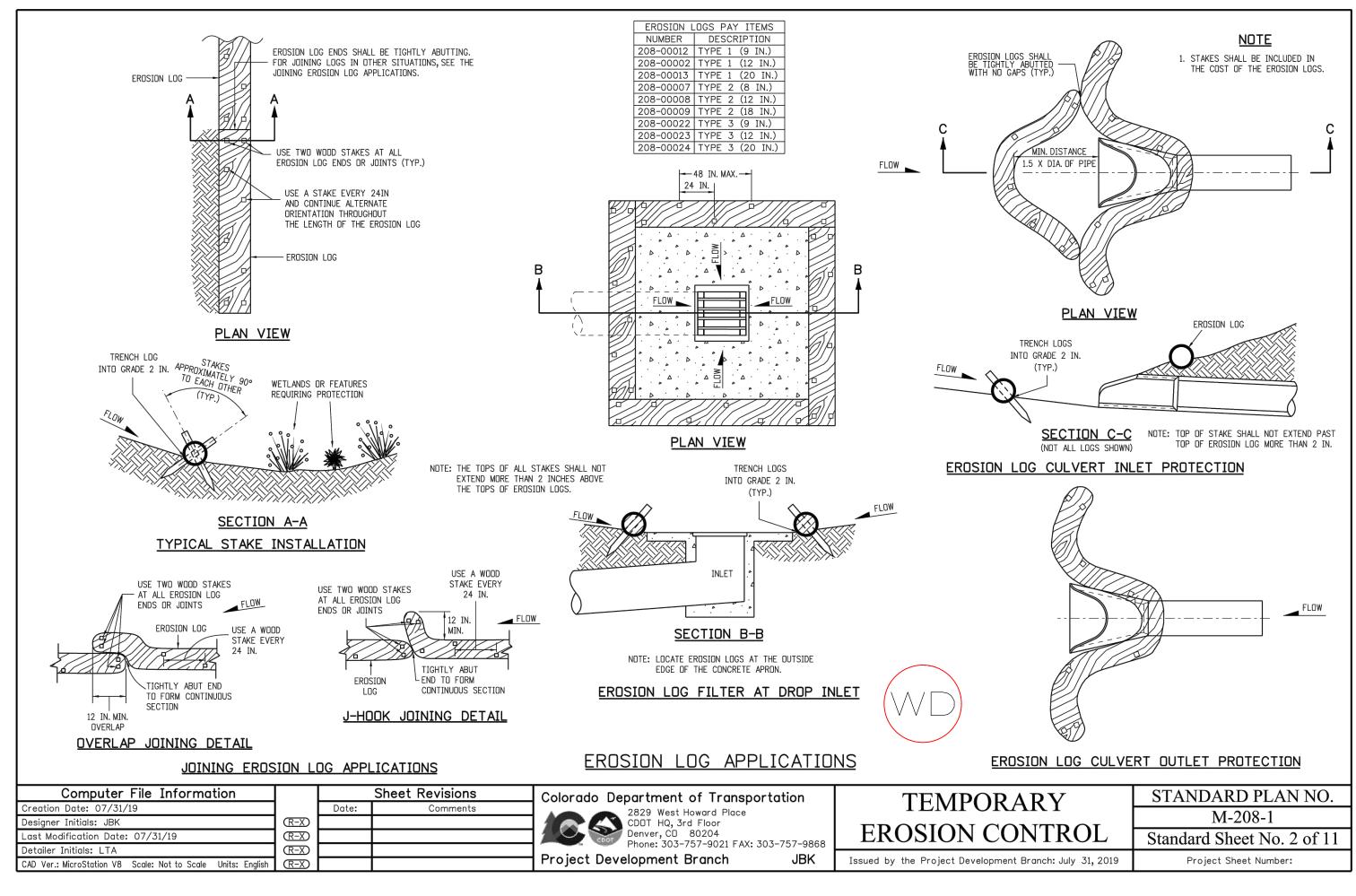
CALL UTILITY NOTIFICATION CENTER OF

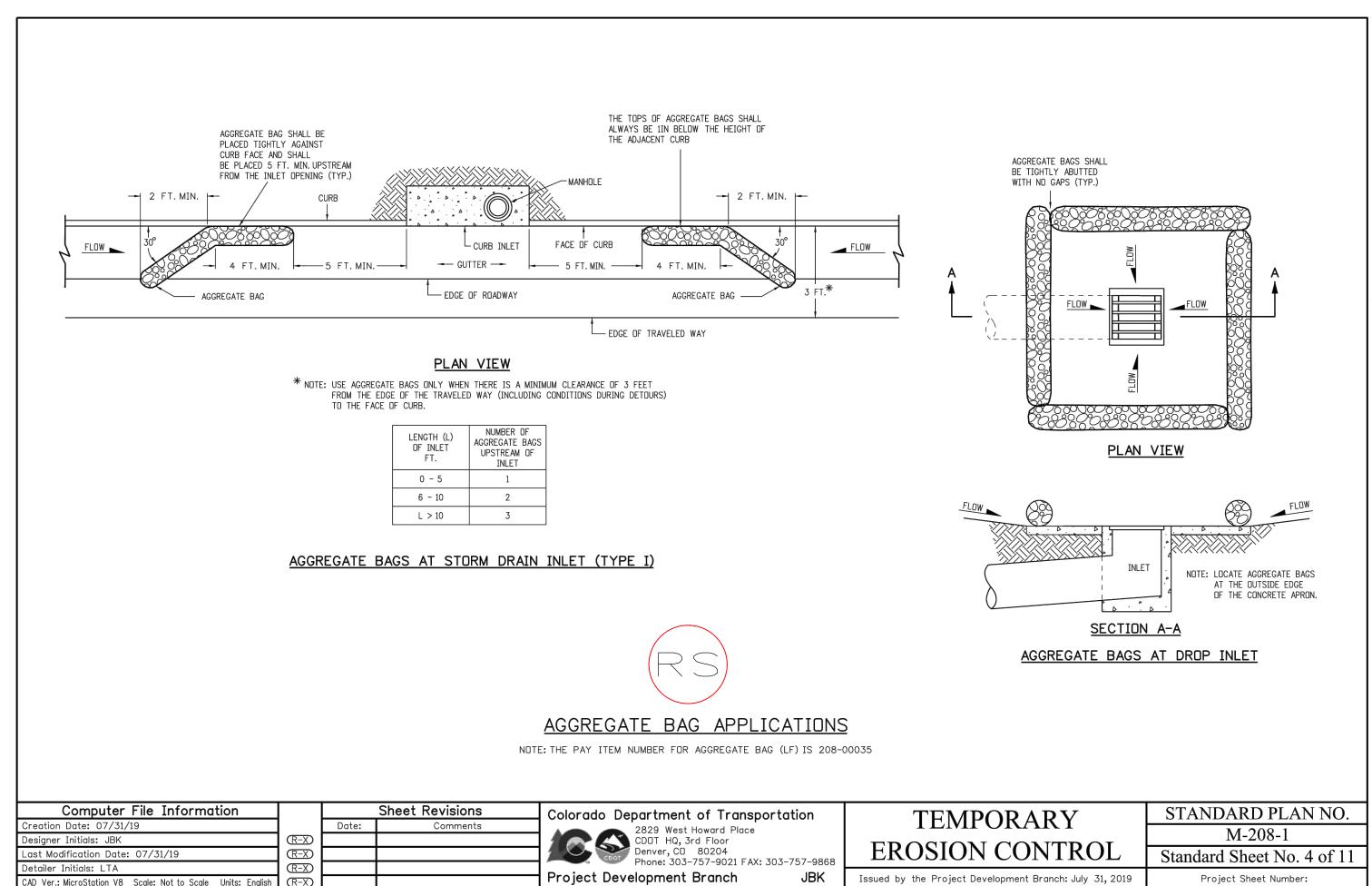


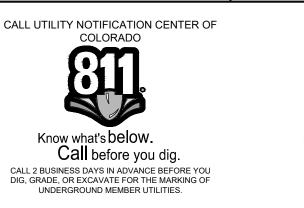
Call before you dig. CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG. GRADE, OR EXCAVATE FOR THE MARKING OF













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1 IN. X 1 IN. X 18 IN NOMINAL PINF OR

SECURE BLANKET WITH

(TRIANGULAR SPACING)

STAPLES 1.5 FT. D.C.

BACKFILL LEADING

EDGE FLAP WITH 2 IN. OF TOPSOIL

6 IN. X 6 IN.

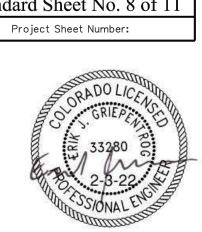
ANCHOR TRENCH

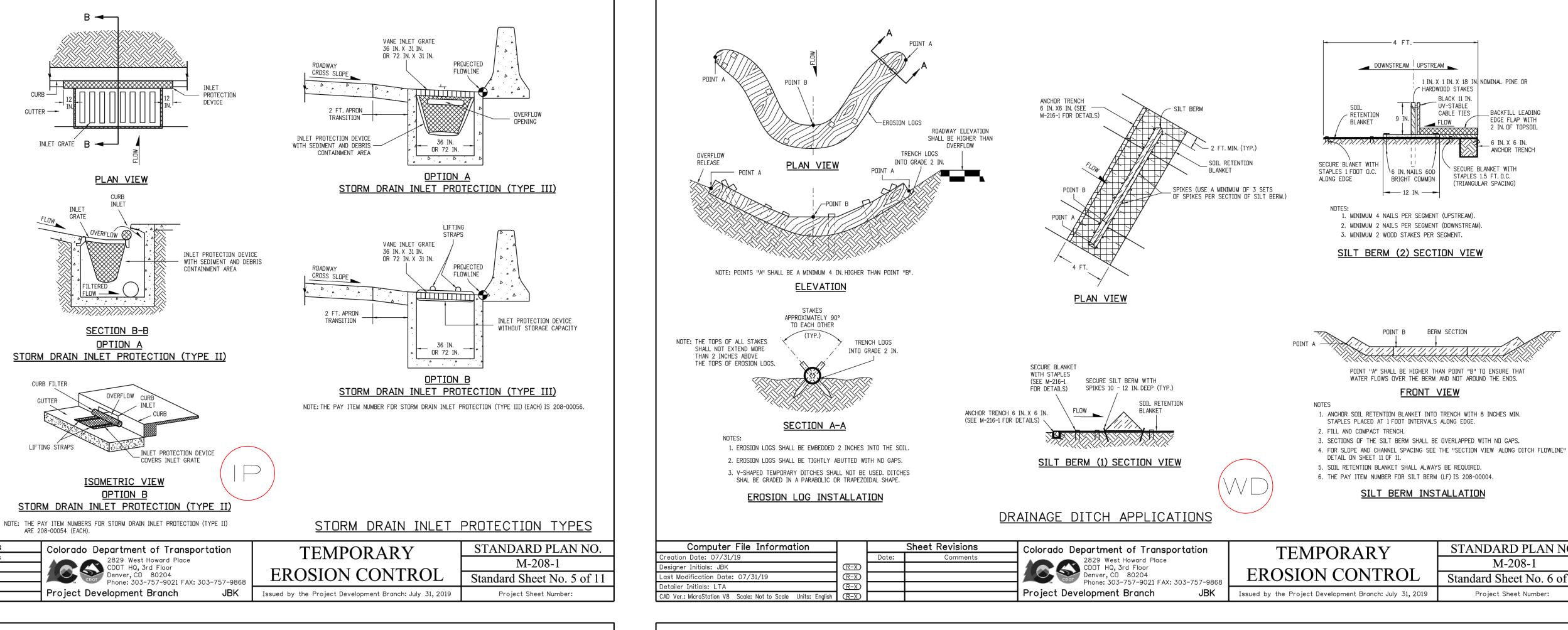
STANDARD PLAN NO.

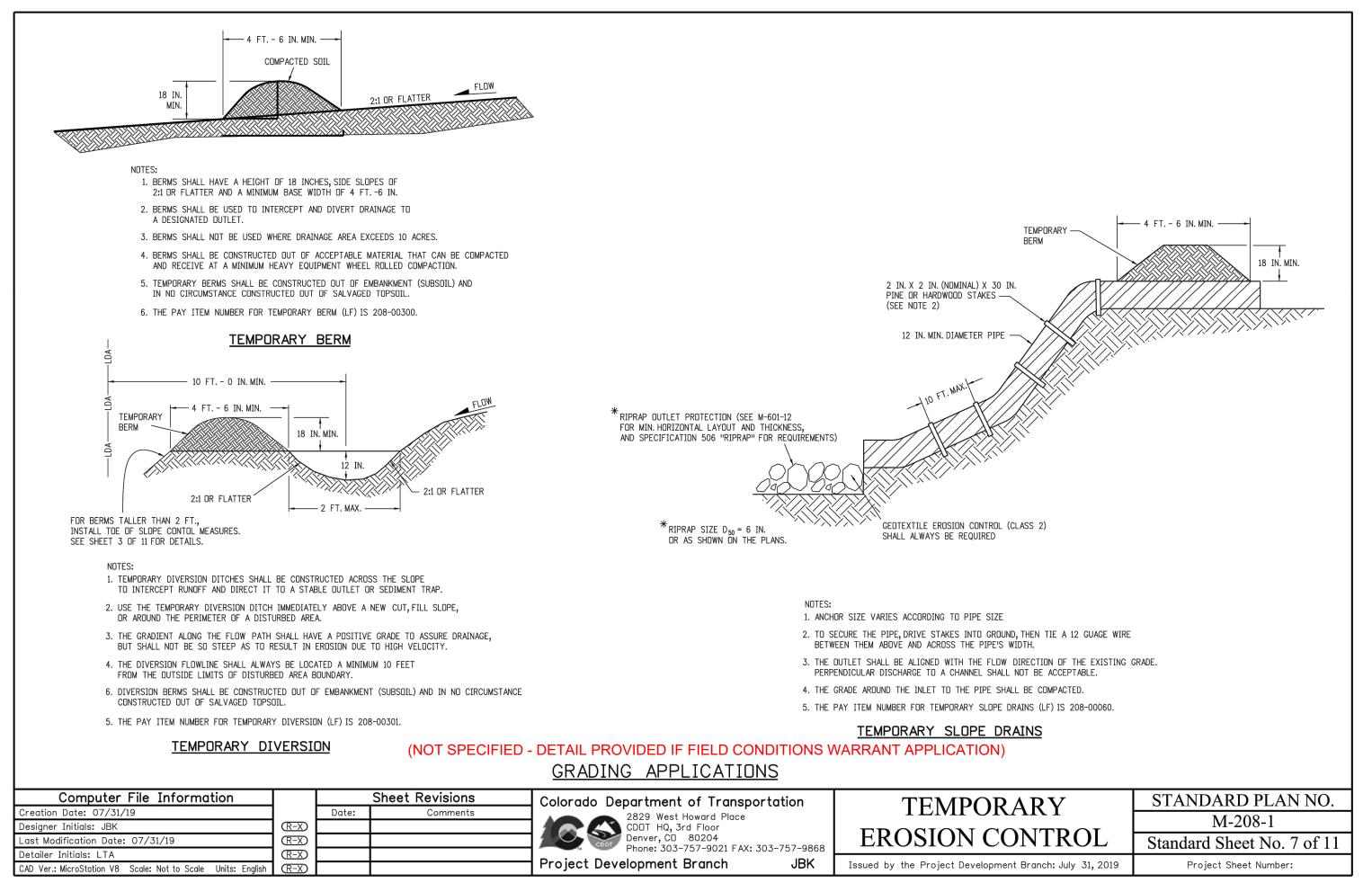
M-208-1

HARDWOOD STAKES BLACK 11 IN.

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GUTTER →

STORM DRAIN

PLAN VIEW

FILTERED

SECTION A-A

STORM DRAIN INLET PROTECTION (TYPE I)

1. INLET PROTECTION DEVICE SHALL EXTEND 12 INCHES PAST EACH END

2. THE PAY ITEM NUMBERS FOR STORM DRAIN INLET PROTECTION (TYPE I)

BAGS AT STORM DRAIN INLET (TYPE I) DETAIL ON SHEET 4 INSTEAD.

ARE 208-00051 (LF), 208-00053 84 INCHES (EACH), 208-00057 144 INCHES (EACH),

3. FOR STORM DRAIN INLET TYPES I AND II, IF THERE IS A MINIMUM CLEARANCE OF 3 FEET FROM THE EDGE OF THE TRAVELED WAY TO THE FACE OF CURB, USE THE AGGREGATE

FLOW

INLET PROTECTION

AND GUTTER

STORM DRAIN

OF THE INLET.

Computer File Information

CAD Ver.: MicroStation V8 Scale: Not to Scale Units:

signer Initials: JBK

etailer Initials: LTA

Last Modification Date: 07/31/19

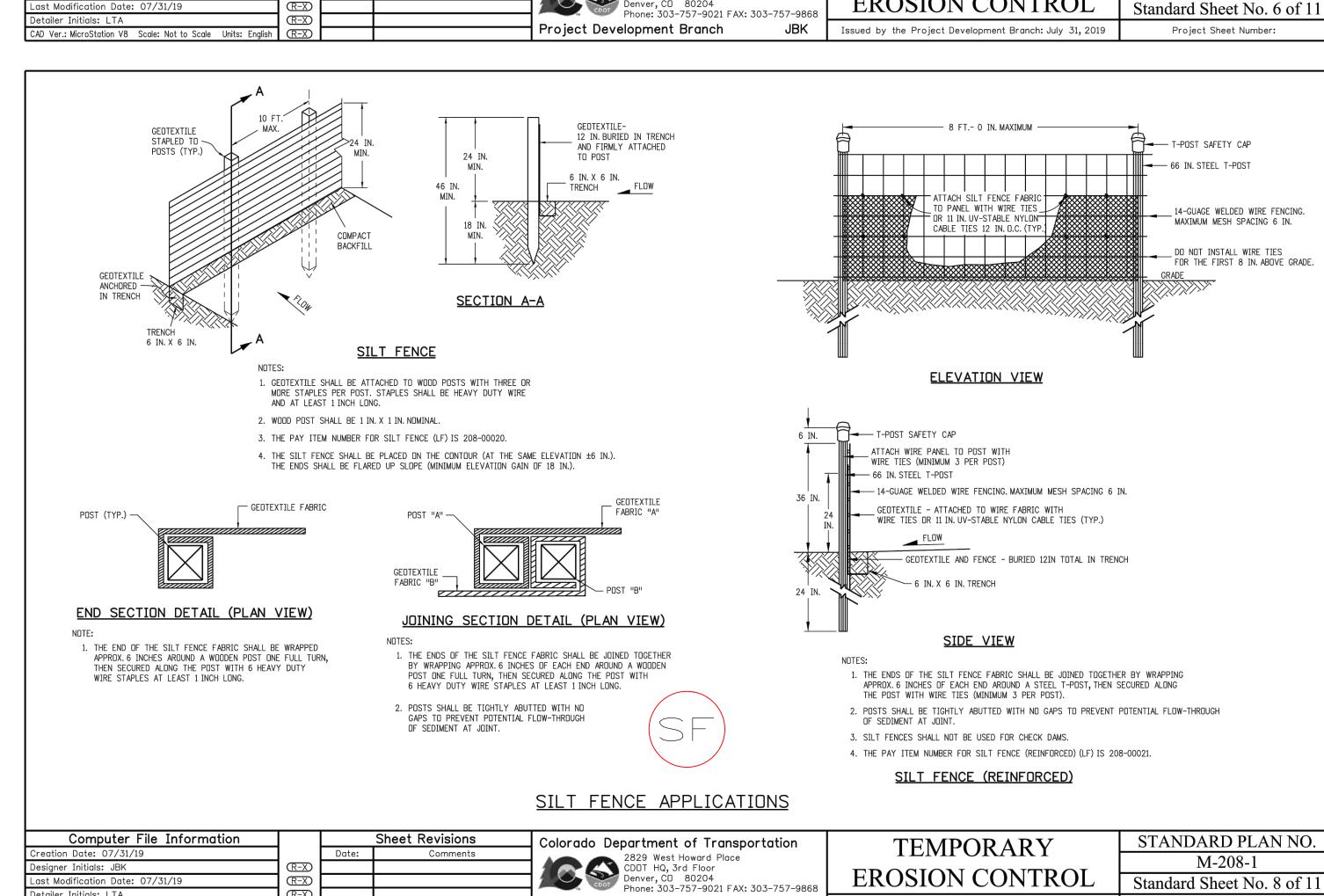
INLET PROTECTION

AND 208-00058 204 INCHES (EACH).

INLET GRATE B -

ARE 208-00054 (EACH).

Sheet Revisions



Project Development Branch

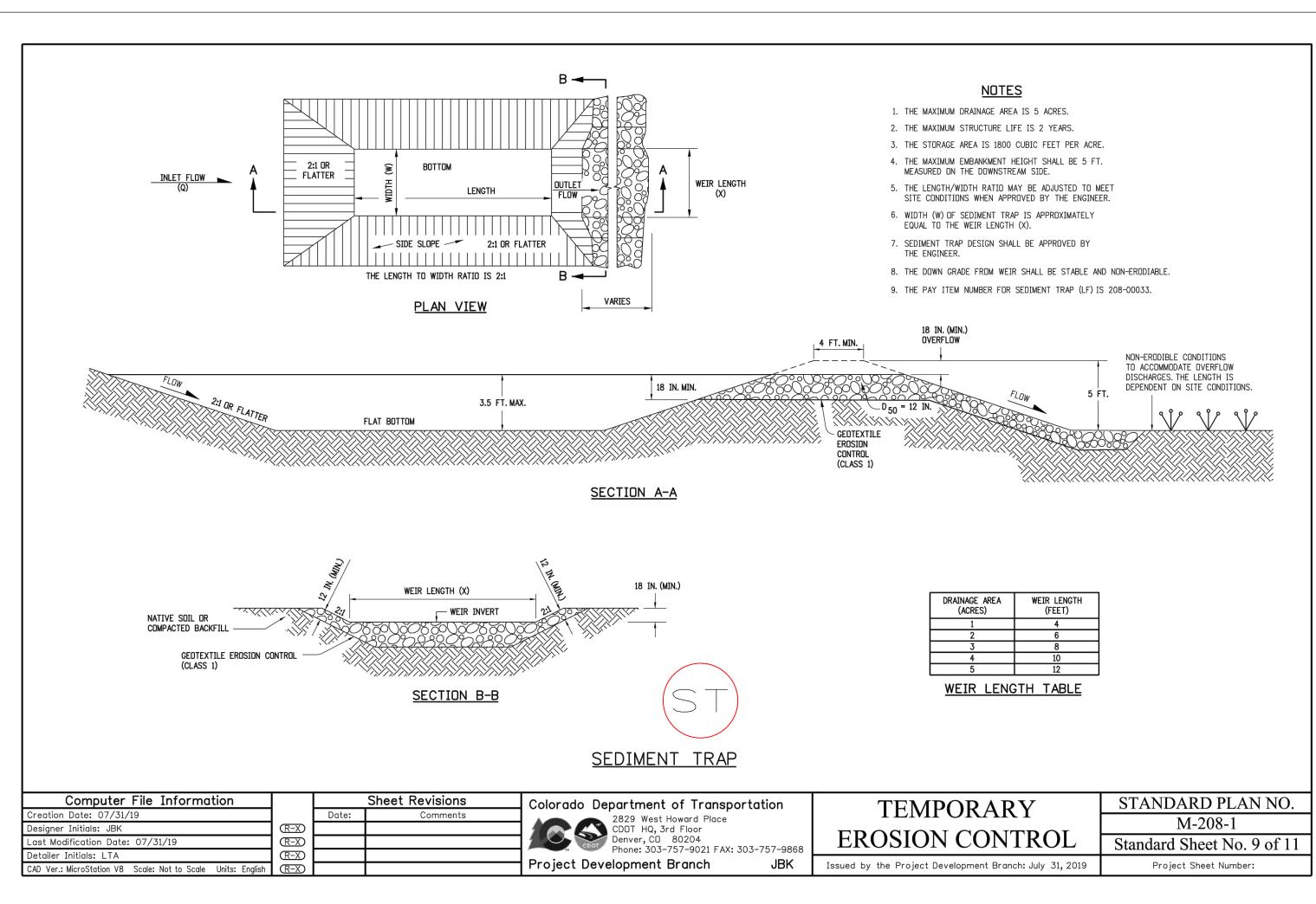
JBK

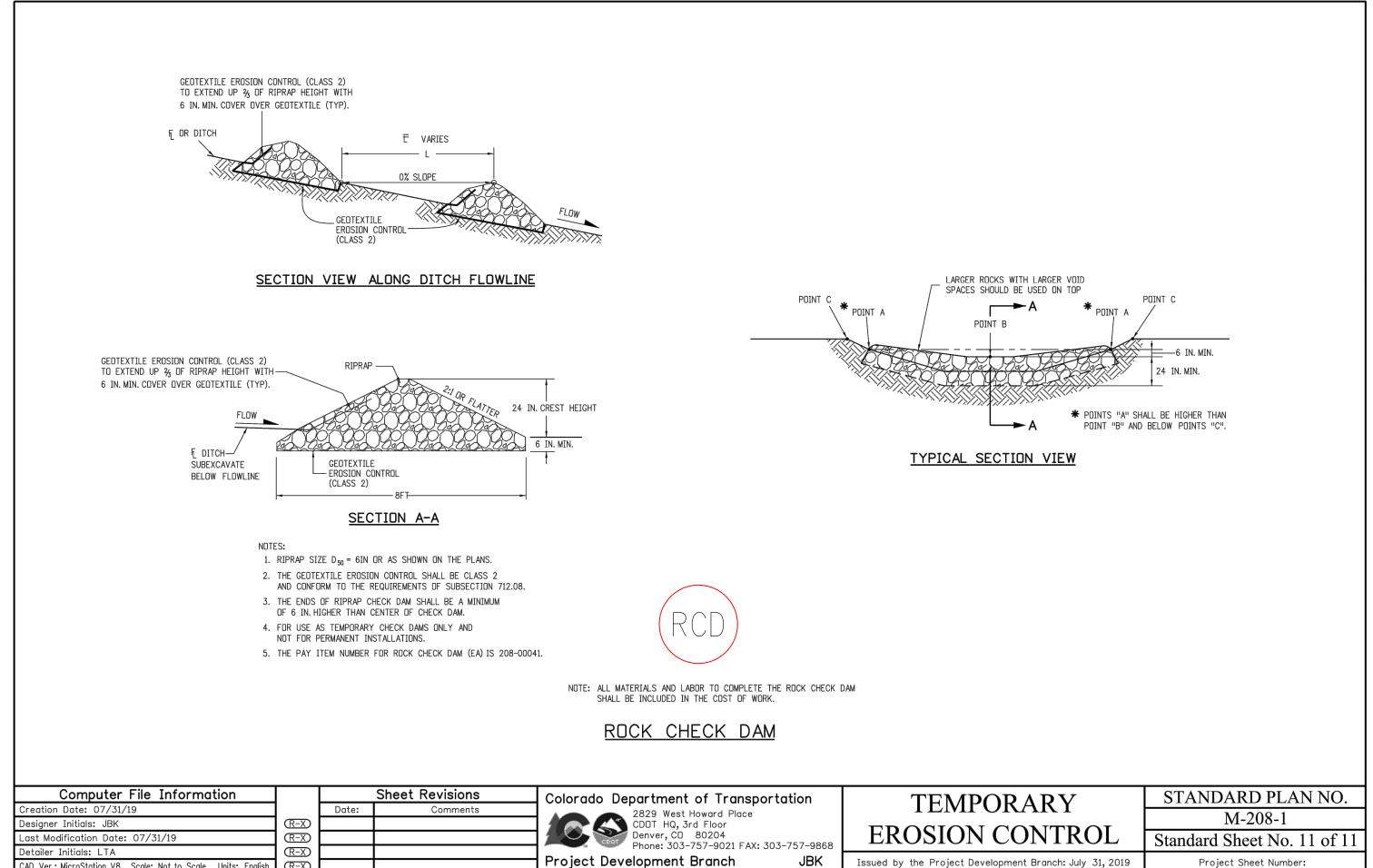
COLORADO Know what's **below**. Call before you dig. CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU

CALL UTILITY NOTIFICATION CENTER OF

DIG. GRADE, OR EXCAVATE FOR THE MARKING OF

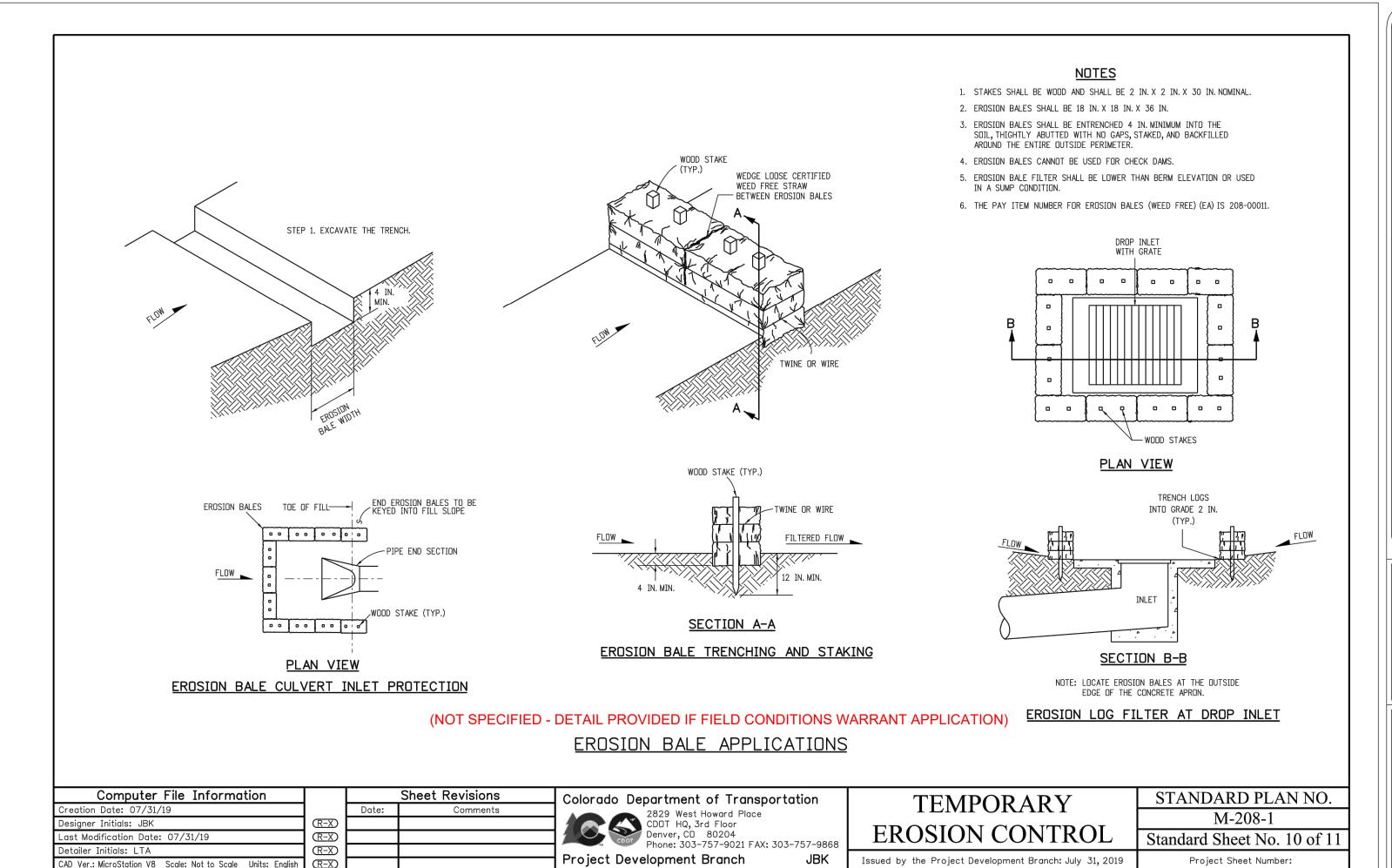
Issued by the Project Development Branch: July 31, 2019





Issued by the Project Development Branch: July 31, 2019

Project Sheet Number:



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CAD Ver.: MicroStation V8 Scale: Not to Scale Units:

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