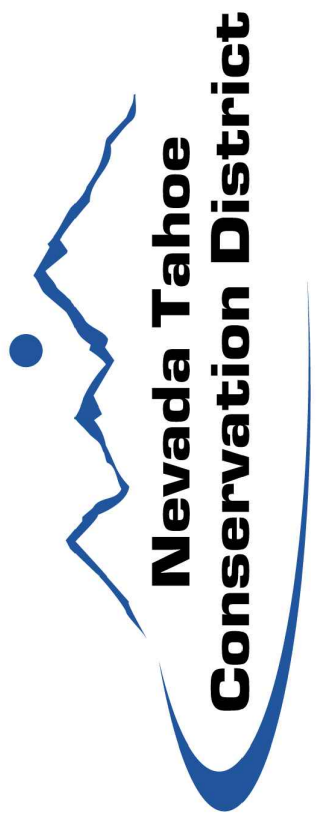


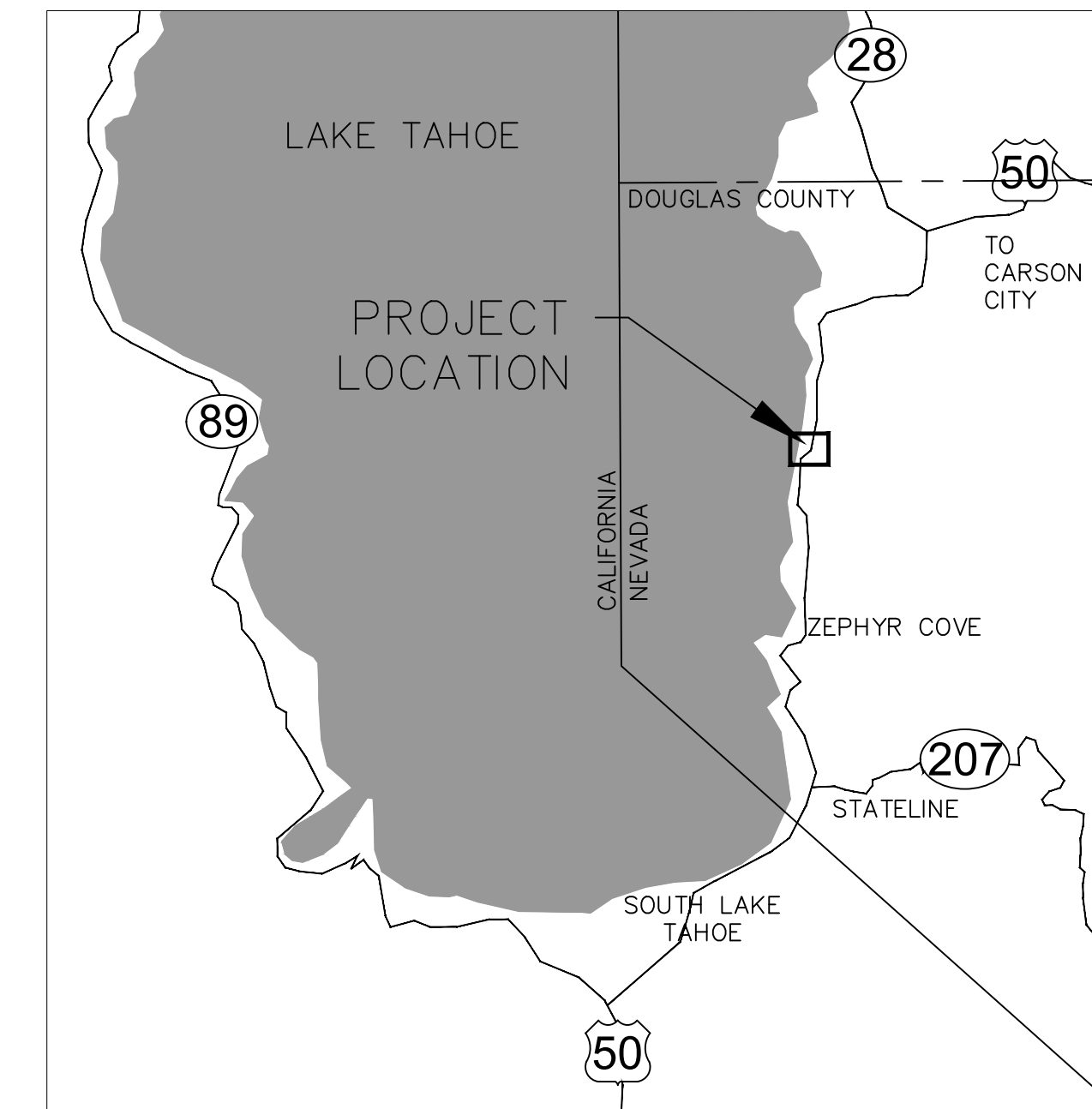
NEVADA TAHOE CONSERVATION DISTRICT PITTMAN TERRACE WATER QUALITY IMPROVEMENT PROJECT IN THE COUNTY OF DOUGLAS EIP #01.01.01.17



PLAN

SCALE: 1" = 150'

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VICINITY MAP

NOT TO SCALE

ENGINEER:

MEGHAN C. KELLY, P.E.
REGISTERED CIVIL ENGINEER
STATE OF NEVADA, NO. 20851
NEVADA TAHOE CONSERVATION DISTRICT
400 DORLA CT.
ZEPHYR COVE, NV 89448
(775) 586-1610

DATE

APPROVAL:

ERIK NILSSEN, P.E.
DOUGLAS COUNTY ENGINEER

DATE

TITLE
PITTMAN TERRACE WATER QUALITY
IMPROVEMENT PROJECT

DESIGNED/DRAWN MBG/CFW
CHECKED MCK
DATE 03/2018
SCALE AS SHOWN
PROJECT PT
SHEET

90% DESIGN PLANS
NOT FOR CONSTRUCTION



GENERAL NOTES

1. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF NEVADA TAHOE CONSERVATION DISTRICT (NTCD), DOUGLAS COUNTY, & THE NEVADA DEPARTMENT OF TRANSPORTATION (NDOT). IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND ALL WORK AND MATERIALS SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("ORANGE BOOK" OR "STANDARD SPECIFICATIONS"). ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE AMENDED SPECIFICATIONS AND DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS OBLIGATED TO BE FAMILIAR WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS NOT DISCUSSED IN THE GENERAL NOTES. THE CONTRACT SPECIAL TECHNICAL PROVISIONS SHALL SUPERSEDE THOSE OF THE STANDARD SPECIFICATIONS WHERE DISCREPANCIES OCCUR.
2. ONE WEEK PRIOR TO THE COMMENCEMENT OF ANY WORK, CONSTRUCTION OR INSTALLATIONS ASSOCIATED WITH THIS PERMIT, THE PERMITTEE SHALL NOTIFY THE DOUGLAS COUNTY INSPECTOR AT (775)782-6237OF INTENT TO BEGIN AND REQUEST/SCHEDULE PRECONSTRUCTION MEETING AT THE PROJECT SITE WITH DOUGLAS COUNTY CONSTRUCTION INSPECTOR. FAILURE TO PROVIDE PROPER INSPECTION NOTIFICATION AS PRESCRIBED ABOVE SHALL RESULT IN THIS PERMIT BECOMING INVALID AND WORK BEING STOPPED.
3. CONTRACTOR'S SHALL COMPLY WITH THE REQUIREMENTS TO OBTAIN THE NECESSARY SITE IMPROVEMENT PERMITS AND SHALL COMPLY WITH THE SITE IMPROVEMENT PERMIT CONDITIONS AS FOUND ON THE BACK OF THE PERMIT FORM.
4. THE APPROVED PLAN, PERMIT AND INSPECTION RECORD MUST BE ON THE JOB SITE AT ALL TIMES
5. THE CONTRACTOR IS ADVISED THAT DAMAGE TO PUBLIC SERVICES OR SYSTEMS AS A RESULT OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AND INSPECTED BY THE ENGINEERING INSPECTOR. UNLESS OTHERWISE APPROVED BY THE COUNTY, ALL REPAIRS SHALL BE DONE WITHIN 24 HOURS. THE CONTRACTOR IS ADVISED THAT ANY COSTS RELATED TO REPAIR OR REPLACEMENT OF DAMAGED PUBLIC SERVICES AND SYSTEMS AS A RESULT OF CONTRACTOR'S ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.
6. CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON SITE SHOWING "AS CONSTRUCTED" CHANGES. UPON COMPLETION, CONTRACTOR SHALL SUPPLY NDOT, DOUGLAS COUNTY, AND NTCD A SET OF "AS BUILT" PLANS. SEE SPECIAL PROVISIONS.
7. MOBILIZATION/STAGING AND STORAGE AREAS ARE TO BE SECURED BY THE CONTRACTOR AND APPROVED BY TRPA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF MOBILIZATION SITES, INCLUDING PLACEMENT AND MAINTENANCE OF BMPS.
8. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL INSTALL TEMPORARY BMP MEASURES AT LOCATIONS WHERE NEEDED TO CONTROL EROSION AND WATER POLLUTION DURING THE CONSTRUCTION OF THE PROJECT. THE BMP MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED IN A FUNCTIONAL CONDITION FOR THE DURATION OF THE CONSTRUCTION. DURING CONSTRUCTION ENVIRONMENTAL PROTECTION DEVICES, SUCH AS EROSION CONTROL, DUST CONTROL, AND VEGETATION PROTECTION DEVICES SHALL BE MAINTAINED AT ALL TIMES. SILT FENCE OR SEDIMENT LOGS WILL BE REQUIRED AT OTHER LOCATIONS AS SHOWN ON THE DRAWINGS OR STAKED IN THE FIELD BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL MEET OR EXCEED TRPA REQUIREMENTS.
9. ALL EXISTING VEGETATION SHALL BE PRESERVED UNLESS SPECIFICALLY IDENTIFIED BY THE ENGINEER FOR REMOVAL. BMP'S TO PROTECT VEGETATION SHALL BE INSTALLED BY THE CONTRACTOR IF REQUIRED BY TRPA. CONTRACTOR TO REVEGETATE ANY AREAS OUTSIDE THE DISTURBED AREA SHOWN ON THE PLANS WITH PLANTS APPROVED BY TRPA AT THEIR OWN EXPENSE.
10. NTCD WILL PROVIDE ONE SET OF CONSTRUCTION STAKES AT NTCD'S EXPENSE. ADDITIONAL CONSTRUCTION STAKES WILL BE PROVIDED AT THE CONTRACTOR'S EXPENSE. LIMITS FOR ALL ITEMS OF WORK SHALL BE STAKED IN THE FIELD BY THE ENGINEER. THESE LIMITS AND THE RESULTING TREATMENT LENGTH/AREAS MAY VARY FROM THOSE SHOWN ON THE DRAWINGS. PAYMENT FOR ITEMS OF WORK WILL BE MADE FOR THE AMOUNT AUTHORIZED BY THESE FIELD STAKED LIMITS AND THE SPECIAL TECHNICAL PROVISIONS.
11. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. WHERE EXCAVATION IS NECESSARY, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AND ALL AFFECTED UTILITY COMPANIES TO LOCATE ALL BURIED UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR RELOCATION OF UTILITIES AS REQUIRED BY THE WORK. WHENEVER CONNECTIONS TO OR CLEARANCE FROM ANY UTILITY IS REQUIRED, THE CONTRACTOR SHALL POTHOLE TO VERIFY THE LOCATION, SIZE AND MATERIAL OF THE UTILITY PRIOR TO CONSTRUCTION. NOTE THAT MANY OF THE UTILIZES ARE PRIVATE AND MAY NOT BE IDENTIFIED BY USA.
12. ASPHALT REPLACEMENT SHALL INCORPORATE A 4% ±1% CROSS SLOPE BETWEEN THE SAWCUT AND THE NEW ROADSIDE TREATMENT. NEW ROADSIDE FLOW CONVEYANCES SHALL INCORPORATE SUCH GRADE AS NECESSARY TO GUARANTEE WATER CONTINUES TO FLOW IN THE PRESENT DIRECTION, WITHOUT PONDING OR BREAKOUTS.
13. ANY DAMAGE DONE BY THE CONTRACTOR OR HIS SUBCONTRACTORS TO PRIVATE PROPERTY AND/OR OUTSIDE OF THE NOTED LIMITS OF WORK IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND/OR HIS SUBCONTRACTORS.
14. THE CONTRACTOR WILL PROVIDE INITIAL TESTING AND INSPECTION OF WORK AND MATERIAL AT CONTRACTOR'S EXPENSE. THE COST OF REMOVAL AND/OR REPLACEMENT OF ANY DEFECTIVE WORK OR MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF RETESTING AND/OR INSPECTING OF REPLACED WORK AND MATERIAL IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR. SUCH COSTS WILL BE DEDUCTED FROM ANY MONEYS DUE OR WHICH MAY BECOME DUE TO THE CONTRACTOR.
15. STANDARD WORK DAYS SHALL BE MONDAY THROUGH FRIDAY. SATURDAY AND SUNDAY MAY BE WORKED ON OCCASION ONLY TO MAKE UP FOR WEATHER DELAYS OR OTHER SCHEDULE DELAYS WITH TRPA APPROVAL. NOISE GENERATING ACTIVITIES WILL BE LIMITED TO THE HOURS OF 8:00 AM TO 6:30 PM.
16. NOISE SHALL BE REDUCED BY THE MANDATORY USE OF MUFFLERS ON ALL CONSTRUCTION VEHICLES AND EQUIPMENT. WHERE FEASIBLE, SOLENOIDAL PAVEMENT BREAKERS WILL BE USED IN LIEU OF AIR POWERED JACK HAMMERS. NOISE GENERATING ACTIVITIES WILL BE LIMITED TO THE HOURS OF 8:00 AM TO 6:30 PM.
17. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS. ALL OPERATIONS SHALL COMPLY WITH PERMIT REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK TO WATER AREAS AS NECESSARY TO CONTROL DUST. THE CONTRACTOR WILL PROVIDE SWEEPING PER SPECIFICATION.
18. ALL TREES AND NATURAL VEGETATION TO REMAIN ON THE SITE SHALL BE PROTECTED PER TRPA.
19. SOIL AND CONSTRUCTION MATERIAL SHALL NOT BE TRACKED OFF THE CONSTRUCTION SITE. GRADING OPERATIONS SHALL CEASE IN THE EVENT THAT A DANGER OF VIOLATING THIS CONDITION EXISTS.
20. LOOSE SOIL MOUNDS OR SURFACES SHALL BE PROTECTED FROM WIND OR WATER EROSION BY BEING APPROPRIATELY COVERED WHEN CONSTRUCTION IS NOT IN ACTIVE PROGRESS OR WHEN REQUIRED BY TRPA.
21. EXCAVATED MATERIAL SHALL BE STORED UPGRADE FROM THE EXCAVATED AREA WHENEVER POSSIBLE. NO MATERIAL SHALL BE STORED IN ANY STREAM ENVIRONMENT ZONE (SEZ) OR WET AREA.
22. ONLY EQUIPMENT OF A SIZE AND TYPE THAT WILL DO THE LEAST AMOUNT OF DAMAGE, UNDER PREVAILING SITE CONDITIONS, AND CONSIDERING THE NATURE OF THE WORK TO BE PERFORMED, WILL BE USED.
23. NO WASHING OF VEHICLES OR HEAVY EQUIPMENT, INCLUDING CEMENT MIXERS, SHALL BE PERMITTED ANYWHERE ON THE SUBJECT PROPERTY UNLESS AUTHORIZED BY TRPA IN WRITING.
24. NO VEHICLE OR HEAVY EQUIPMENT SHALL BE ALLOWED IN A STREAM ENVIRONMENT ZONE OR WET AREA EXCEPT AS AUTHORIZED BY TRPA.
25. ALL CONSTRUCTION SHALL BE WINTERIZED BY OCTOBER 15 TO REDUCE THE WATER QUALITY IMPACTS ASSOCIATED WITH WINTER WEATHER.
26. THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE NDOT RIGHT-OF-WAYS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SYSTEM.
27. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LONGER THAN 24 HOURS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED.

28. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMP'S WEEKLY, PRIOR TO A FORECASTED RAIN EVENT AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS FROZEN GROUND CONDITIONS OF SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO STORM WATER GENERAL PERMIT NVR1000000, SECTION 1.B.1.g. AND THE PROJECT SWPPP
25. TRAFFIC CONTROL AND LANE CLOSURES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PER NDOT STANDARD SPECIFICATIONS OR DOUGLAS COUNTY STANDARDS WHERE APPLICABLE. THE CONTRACTOR SHALL OBTAIN AND MAINTAIN ALL APPLICABLE PERMITS. ANY ROAD CLOSURES REQUIRE THE CONTRACTOR TO OBTAIN A ROAD CLOSURE PERMIT FROM DOUGLAS COUNTY.
26. ACCESS TO HOMES AND PUMP STATIONS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION
27. IF A FIRE HYDRANT IS NEEDED TO OBTAIN CONSTRUCTION WATER, THE CONTRACTOR SHALL OBTAIN A FIRE HYDRANT METER FROM DOUGLAS COUNTY PUBLIC WORKS OR APPLICABLE WATER PURVEYOR AND PAY ALL APPLICABLE FEES AND CHARGES.
28. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS, (CURB AND GUTTER TRANSITION ONLY, ALL UNEXPOSED CONCRETE MAY BE 3000 PSI), MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 202.
29. REINFORCING STEEL SHALL BE GRADE 40 AND 1.5 INCHES MINIMUM CLEAR COVER.
30. ALL STORM DRAIN PIPE AND STRUCTURES SHALL BE CLEANED OF SEDIMENT AND DEBRIS PRIOR TO ISSUANCE OF A NOTICE OF COMPLETION OR CERTIFICATE OF OCCUPANCY.
31. FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT, WITH MINIMAL GAPS, AS APPROVED BY THE STORM DRAIN UTILITY.
32. GRATES SHALL BE PLACED OUTSIDE OF THE PEDESTRIAN TRAVELED WAY. GRATE OPENINGS SHALL NOT EXCEED 0.5 INCHES IN WIDTH OR 4 INCHES IN LENGTH. GRATES SHALL BE TRAFFIC RATED AND ADA COMPLIANT.
33. SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL, OR AS DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE COUNTY.
34. FILL AREAS SHALL BE CLEARED OF ALL VEGETATION AND DEBRIS, SCARIFIED, AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO THE PLACING OF FILL.

ABBREVIATIONS

NOT ALL ABBREVIATIONS LISTED ARE USED IN THESE PLANS

<p>A.B. AGGREGATE BASE AC. ACRE AC OR A.C. ASPHALT CONCRETE OR ASBESTOS CEMENT @ AT APPROX. APPROXIMATE AVG. AVERAGE AWWA AMERICAN WATER WORKS ASSOCIATION BC BEGIN CURVE BGN BEGIN C&G CURB AND GUTTER CATV CABLE TELEVISION C.B. CATCH BASIN CBM CHANNEL BED MATERIAL CL CENTERLINE CLF CONSTRUCTION LIMIT FENCE CLR. CLEAR CO. CLEAN OUT CONST. CONSTRUCT CF CUBIC FEET CMP CORRIGATED METAL PIPE CMAP CORRIGATED METAL ARCH PIPE CY CUBIC YARD DBH DIAMETER AT BREAST HEIGHT DEG DEGREE(S) D.G. DECOMPOSED GRANITE DI DROP INLET DIA. DIAMETER DR DIMENSION RATIO DWG DRAWING DW, DWY DRIVEWAY EA. EACH EASE. EASEMENT EG EXISTING GRADE ELEC ELECTRIC EP EDGE OF PAVEMENT ELEV. OR EL. ELEVATION EC END CURVE EWF EACH WAY EACH FACE EX. EXISTING FG FINISH GRADE FH FIRE HYDRANT FCA FLANGE COUPLER ADAPTER FES FLARED END SECTION (METAL) FF FILTER FENCE FL FLOWLINE FLG FLANGED FT. FOOT, FEET FTG FOOTING FV FLUSH VALVE ° DEGREE G GAS GV GATE VALVE GB GRADE BREAK HDPE HIGH DENSITY POLYETHYLENE HDPE-NP NON-PERFORATED HIGH DENSITY POLYETHYLENE HDPE-P PERFORATED HIGH DENSITY POLYETHYLENE HP HIGH POINT HOR., HORIZ. HORIZONTAL HWY HIGHWAY IN. INCH IE INVERT ELEVATION IRR. IRRIGATION L LEFT LEN. LENGTH LF LINEAR FEET LID LOW IMPACT DEVELOPMENT LP LOW POINT LS LUMP SUM MH MANHOLE MAX. MAXIMUM</p>	<p>MDD MAXIMUM DRY DENSITY MJ MECHANICAL JOINT MI. MILE MIN. MINIMUM MISC. MISCELLANEOUS N NORTH NAC NEVADA ADMINISTRATIVE CODE N.I.C. NOT IN CONTRACT NDOT NEVADA DEPT OF TRANSPORTATION NTCD NEVADA TAHOE CONSERVATION DISTRICT N.T.S. NOT TO SCALE NO. NUMBER OC ON CENTER OD OUTSIDE DIAMETER OFF OFFSET OG ORIGINAL GRADE OH(E/T) OVERHEAD ELECTRIC OR TELEPHONE LINES ± PLUS OR MINUS ° PT. POINT PCC POINT OF COMPOUND CURVE, PORTLAND CEMENT PC POINT OF CURVATURE PI POINT OF INFLECTION PIP PROTECT IN PLACE PVC POLYVINYL CHLORIDE PVMT PAVEMENT POC POINT ON CURVE POS POSITIVE PRC POINT OF REVERSE CURVE PSI POUNDS PER SQUARE INCH PL PROPERTY LINE PO PUSH ON PUE PUBLIC UTILITY EASEMENT R RADIUS RCP REINFORCED CONCRETE PIPE REVEG REVEGATATION RLC ROCK LINED CHANNEL RT,R RIGHT R/W, ROW RIGHT-OF-WAY S SLOPE OR SOUTH SD STORM DRAIN SDMH STORM DRAIN MANHOLE SDR STANDARD DIMENSION RATIO SF SQUARE FOOT/FEET SHT SHEET STA STATION STD STANDARD SS SANITARY SEWER, STAINLESS STEEL SSCO. SANITARY SEWER CLEAN OUT SSMH SANITARY SEWER MANHOLE SSPWC STANDARD SPECIFICATIONS FOR PUBLIC WORKS STORM WATER POLLUTION PREVENTION PLAN SWPPP SQUARE YARD SY TOP BACK OF CURB TBC TOP OF CURB TOC TAHOE REGIONAL PLANNING AGENCY TW TOP OF WALL (TYP) TYPICAL UGE UNDERGROUND ELECTRIC LINES UGT UNDERGROUND TELEPHONE LINES VC VERTICAL CURVE VG VALLEY GUTTER VPC VERTICAL POINT OF CURVATURE VPI VERTICAL POINT OF INFLECTION VPT VERTICAL POINT OF TANGENT W WATER WL WATERLINE W WEST W/ WITH WM WATER METER</p>
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LEGEND

NOTE: LEGENDS PROVIDED ON INDIVIDUAL PLAN SHEETS OVERRIDE THIS LEGEND

EXISTING		PROPOSED	
— — — — —	MAJOR CONTOUR	— — — — —	MAJOR CONTOUR
— — — — —	MINOR CONTOUR	— — — — —	MINOR CONTOUR
6695	EXISTING MAJOR CONTOUR LABEL	6694	PROPOSED MAJOR CONTOUR LABEL
5+00	EXISTING ALIGNMENT	5+00	PROPOSED ALIGNMENT(ROAD CENTERLINE)
— — — — —	EXISTING GRADE (SECTION VIEW)	— — — — —	GRADING DAYLIGHT LINE/GRADING LIMIT
— — — — —	PROPERTY LINE	— — — — —	GRADING LINE/FEATURE LINE
— — — — —	EXISTING FENCE	— — — — —	PROPOSED GRADE (SECTION VIEW)
— — — — —	OR — — — — — PAVEMENT	— — — — —	CONSTRUCTION LIMIT FENCE
— SD — — —	STORM DRAIN LINE	— FF — — —	FILTER FENCE
□	CATCH BASIN	▨	SEDIMENT ROLL
⊙	STORM DRAIN MANHOLE	▨▨▨▨▨▨▨▨▨▨	EROSION CONTROL BLANKET
— W — — —	WATER LINE	▨▨▨▨▨▨▨▨▨▨	STAGING AREA
⊞	WATER METER/ VALVE	— — — — —	PROPOSED PIPE
— SS — — —	SANITARY SEWER LINE	▨▨▨▨▨▨▨▨▨▨	PROPOSED CONCRETE
⊞	SANITARY SEWER MANHOLE	+ + + + +	PROPOSED VEGETATION/WILLOW
— OH E — —	OVERHEAD ELECTRIC LINE	▨▨▨▨▨▨▨▨▨▨	ROCK LINED CHANNEL (PLAN VIEW)
-o-	POWER POLE	+ + + + +	SEDIMENT REMOVAL
— — — — —	UNDER GROUND TELEPHONE LINES	●	ROCK (SECTION VIEW)
— OH T — —	OVERHEAD TELEPHONE LINES	⊞	ROCK DISSIPATER
— UG FO — —	UNDERGROUND FIBER OPTIC LINES	▨▨▨▨▨▨▨▨▨▨	PROJECT BOUNDARY
— GAS — — —	UNDERGROUND GAS LINES	— □ — — —	PROPOSED FENCE (TYPE SPECIFIED ON PLAN)
— — — — —	DRAINAGE		
⊙	TREE		
⊞	FIRE HYDRANT		
— — — — —	CURB		
▨▨▨▨▨▨▨▨▨▨	OR — — — — — CONCRETE	③	SECTION OR DETAIL IDENTIFICATION
△	CONTROL POINT	D-5	NUMBER OF SHEET ON WHICH SECTION OR DETAIL IS DRAWN
□	BUILDING	③	SECTION OR DETAIL IDENTIFICATION
— — — — —	PRIVATE DRIVEWAY	-	SYMBOL FOR DETAIL ON THE SAME
— — — — —	SIGN		
▨▨▨▨▨▨▨▨▨▨	ROCK LINED CHANNEL		
▨▨▨▨▨▨▨▨▨▨	EXISTING ROCK WALL		
125-382-13	ASSESSOR PARCEL NUMBER		
JOHN A. SMITH	OWNER (PRIVATE LOT)		

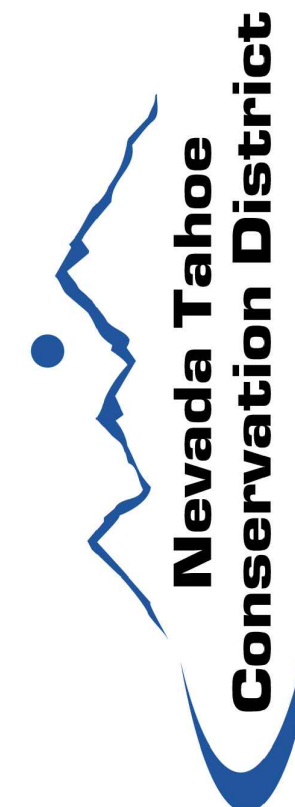
UTILITIES

<p>CABLE TELEVISION NATURAL GAS ELECTRIC STORM DRAIN SEWER WATER PHONE USA DIGS</p>	<p>CHARTER COMMUNICATIONS, (775) 588-1077 N/A NV ENERGY, (775) 834-4444 DOUGLAS COUNTY PUBLIC WORKS (775) 782-9989 DOUGLAS COUNTY SEWER IMPROVEMENT DISTRICT (775) 588-3558 PRIVATE SYSTEMS FRONTIER (775) 782-0966 (800) 642-2444 OR 811</p>
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HORIZONTAL AND VERTICAL PROJECTION

VERTICAL CONTROL IS DATUM NAVD 88 (US FEET);
 HORIZONTAL CONTROL IS HORIZONTAL DATUM NAD 83 STATE PLANE COORDINATE SYSTEM
 NEVADA ZONE WEST (U.S. FEET).

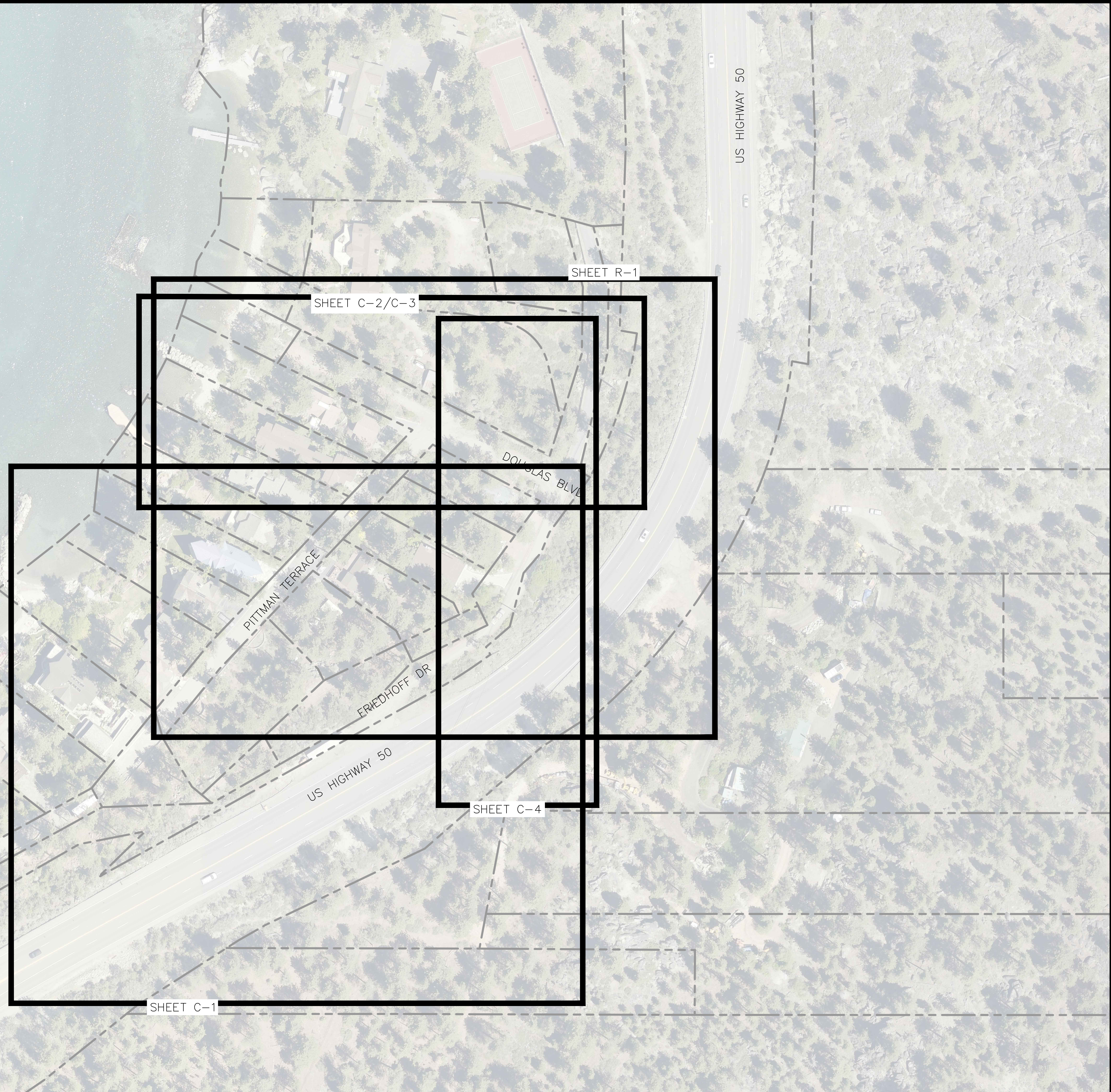
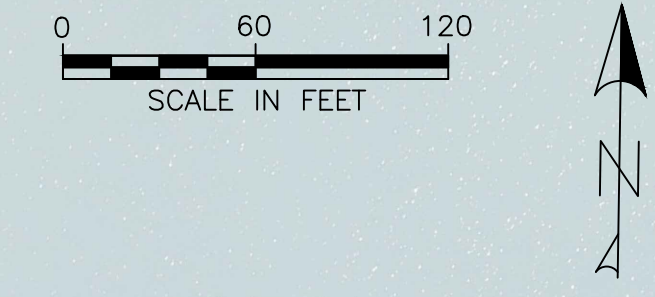
90% DESIGN PLANS
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GENERAL NOTES
PITTMAN TERRACE WATER QUALITY
IMPROVEMENT PROJECT

DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
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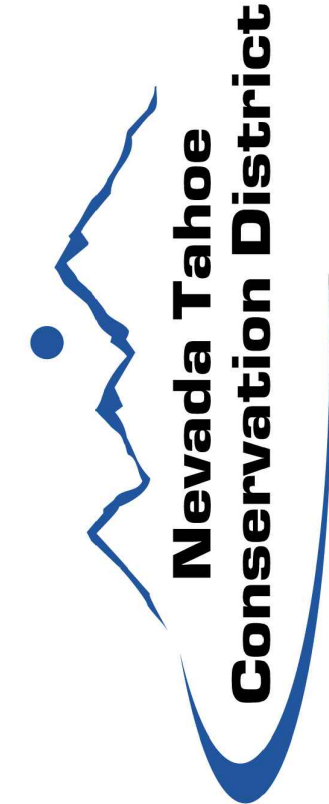
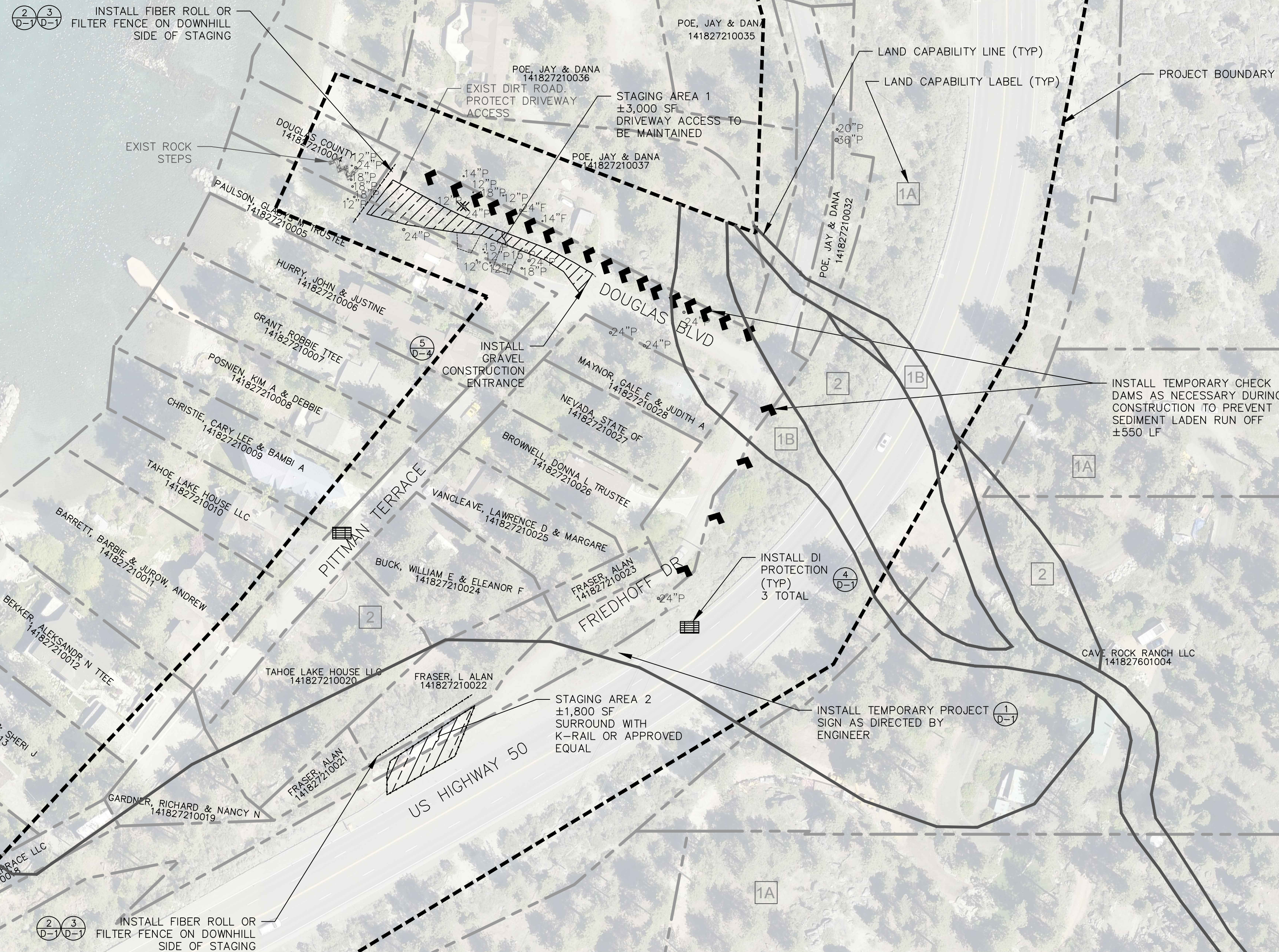
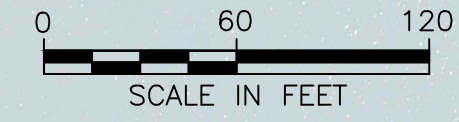


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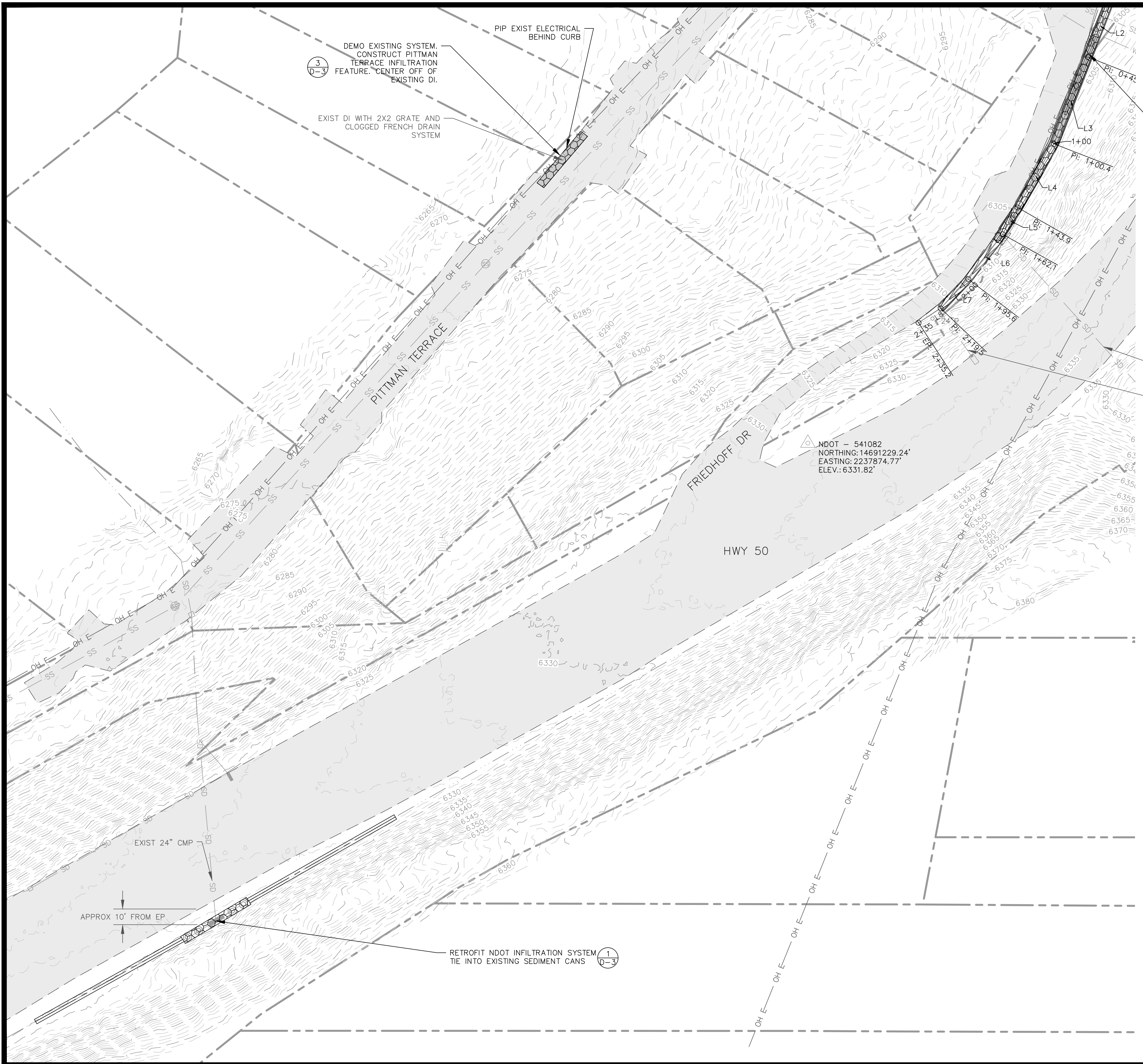
90% DESIGN PLANS
NOT FOR CONSTRUCTION

- NOTES:
1. CONTRACTOR SHALL INSTALL BMPS AS NECESSARY TO PREVENT SEDIMENT LADEN RUN OFF FROM REACHING DRAINAGES. ADDITIONAL BMPS NOT SHOWN ON THIS SHEET MAY BE NECESSARY.
 2. DRAINAGE DITCHES MAY NEED CLEARING OF EXISTING VEGETATION AND ROCK. ONLY CONIFERS GREATER THAN 1" DBH ARE SHOWN ON PLANS
 3. LAND CAPABILITY IS MAPPED AND UNVERIFIED.



STAGING, STORAGE, AND TEMPORARY BMP
PITTMAN TERRACE WATER QUALITY
IMPROVEMENT PROJECT

DESIGNED/DRAWN	MBG/CFW
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SEE SHEET C-4 FOR IMPROVEMENTS ON FRIEDHOFF DR

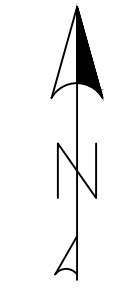
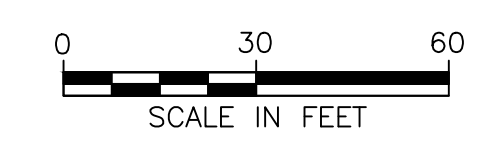
EXIST 24" CMP

EXIST 12" CMP

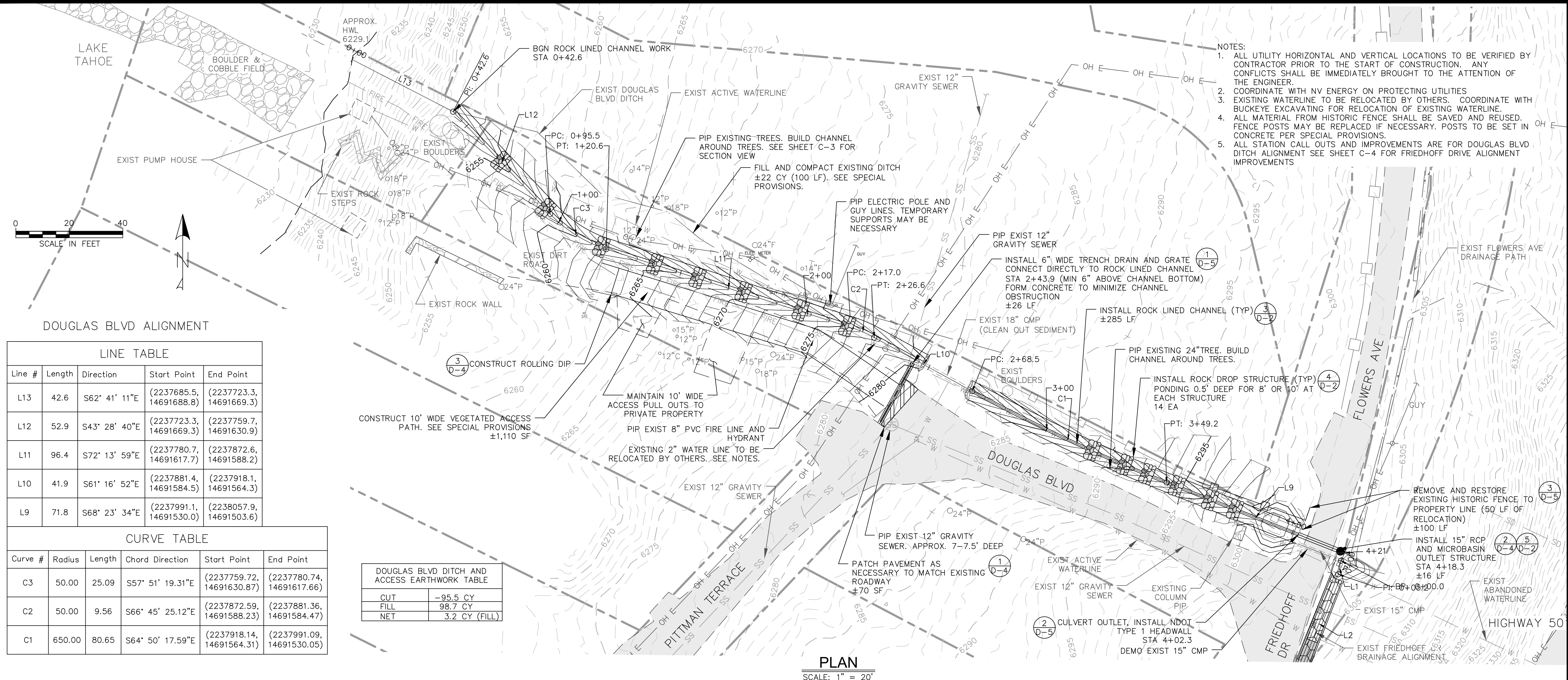
NDOT - 541082
NORTHING: 14691229.24'
EASTING: 2237874.77'
ELEV.: 6331.82'

- NOTES:
1. ALL UTILITY HORIZONTAL AND VERTICAL LOCATIONS TO BE VERIFIED BY CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY CONFLICTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
 2. FULL OR PARTIAL ROAD CLOSURE NECESSARY FOR CONSTRUCTION COMPLETION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM DOUGLAS COUNTY AND/OR NDOT.

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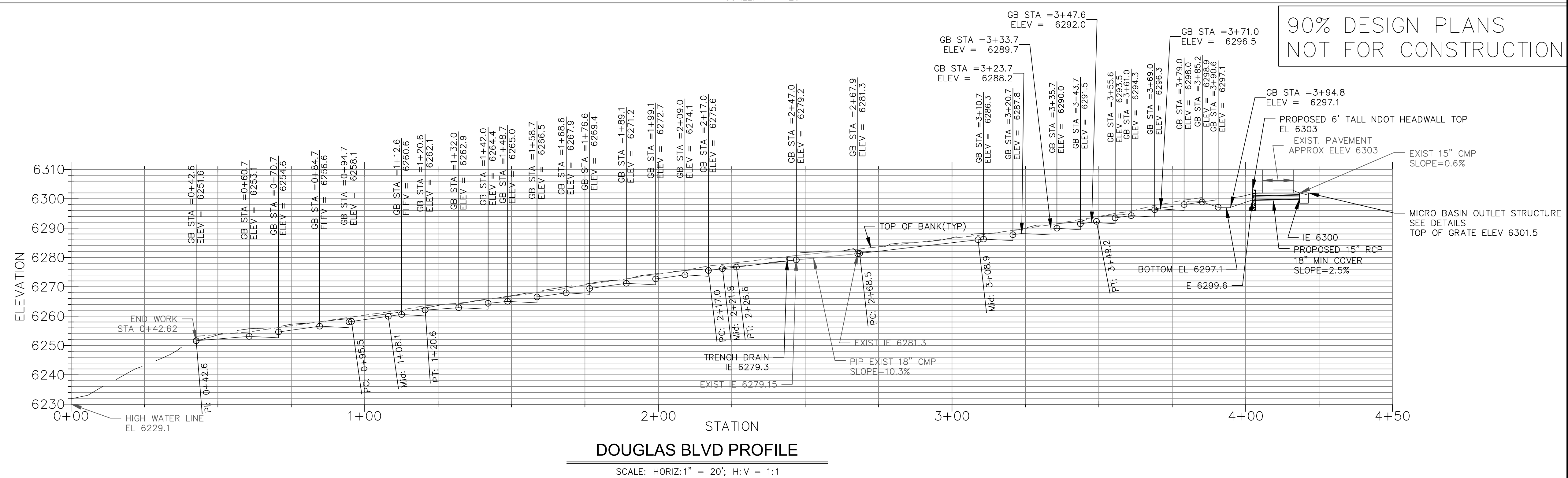
LINE TABLE

Line #	Length	Direction	Start Point	End Point
L13	42.6	S62° 41' 11"E	(2237685.5, 14691688.8)	(2237723.3, 14691669.3)
L12	52.9	S43° 28' 40"E	(2237723.3, 14691669.3)	(2237759.7, 14691630.9)
L11	96.4	S72° 13' 59"E	(2237780.7, 14691617.7)	(2237872.6, 14691588.2)
L10	41.9	S61° 16' 52"E	(2237881.4, 14691584.5)	(2237918.1, 14691564.3)
L9	71.8	S68° 23' 34"E	(2237991.1, 14691530.0)	(2238057.9, 14691503.6)

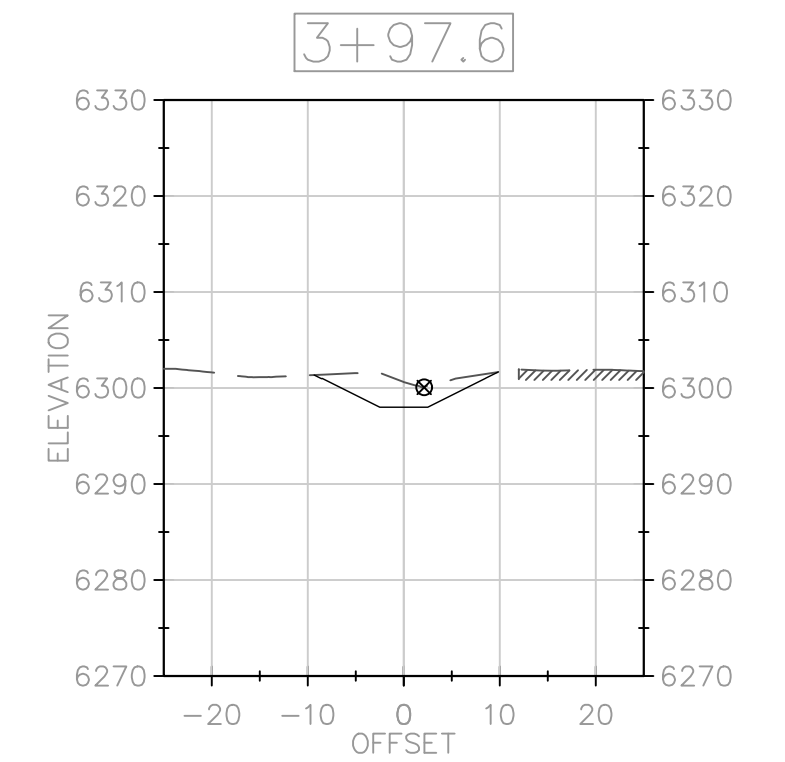
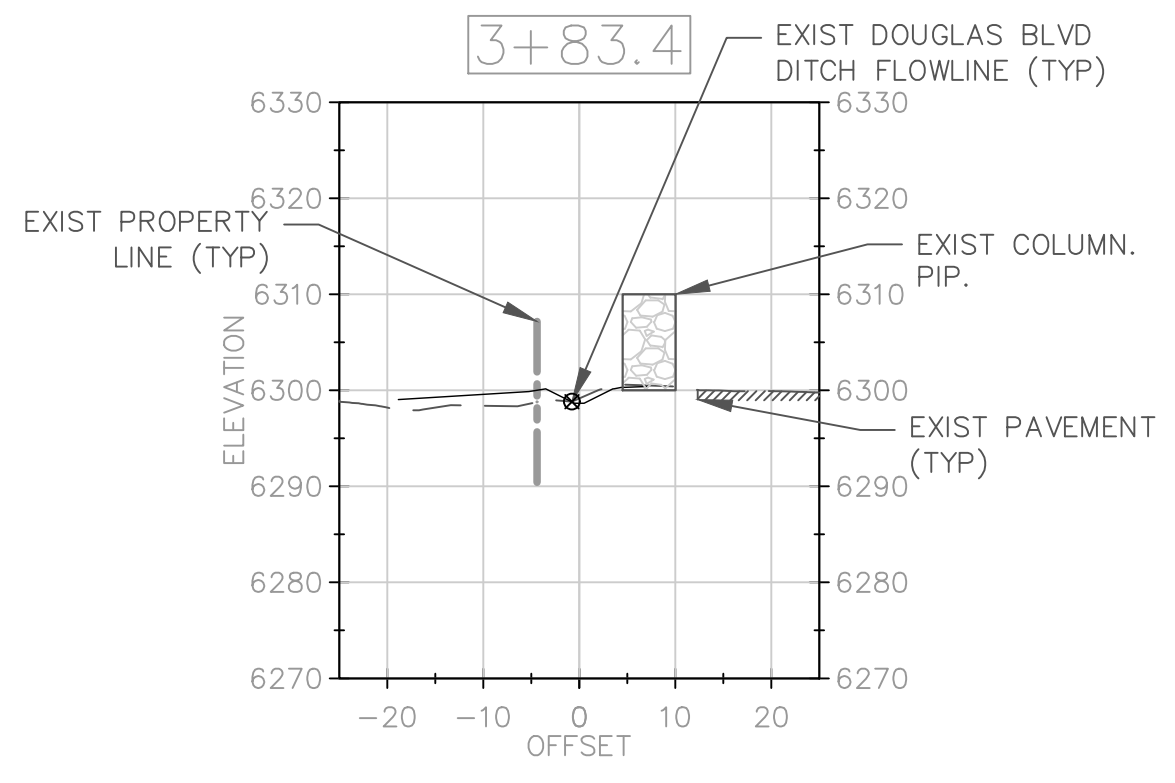
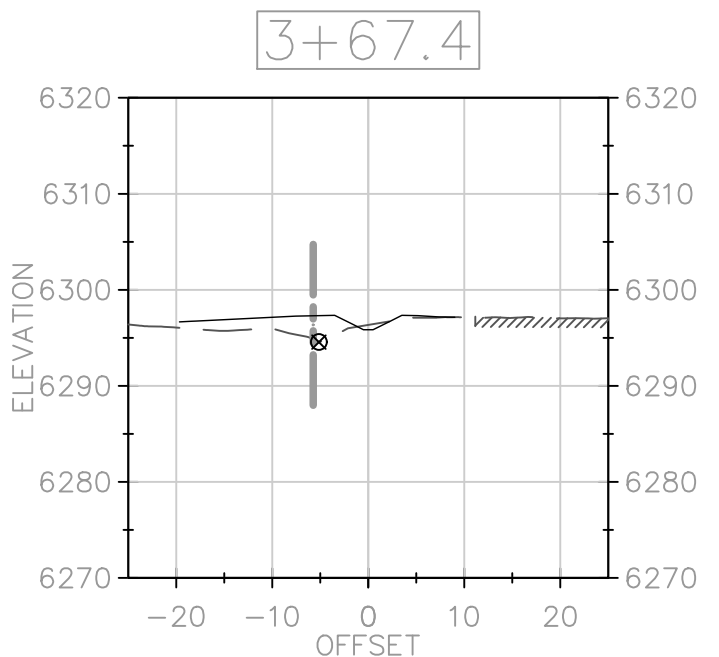
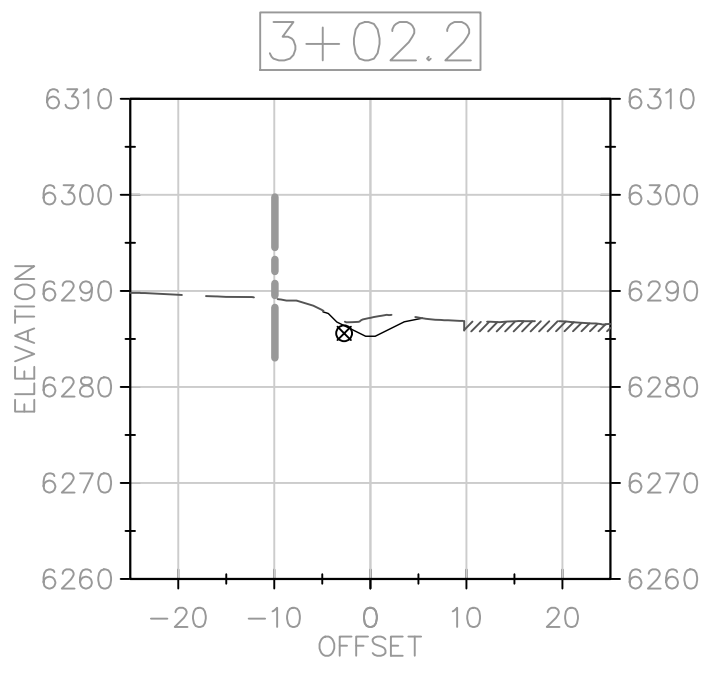
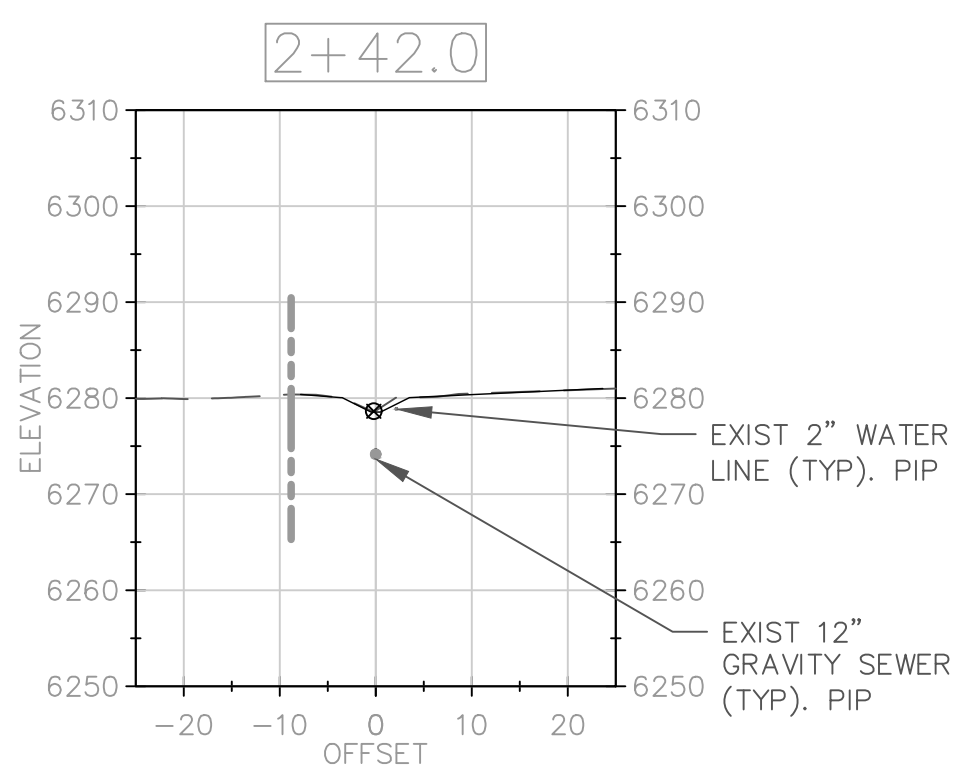
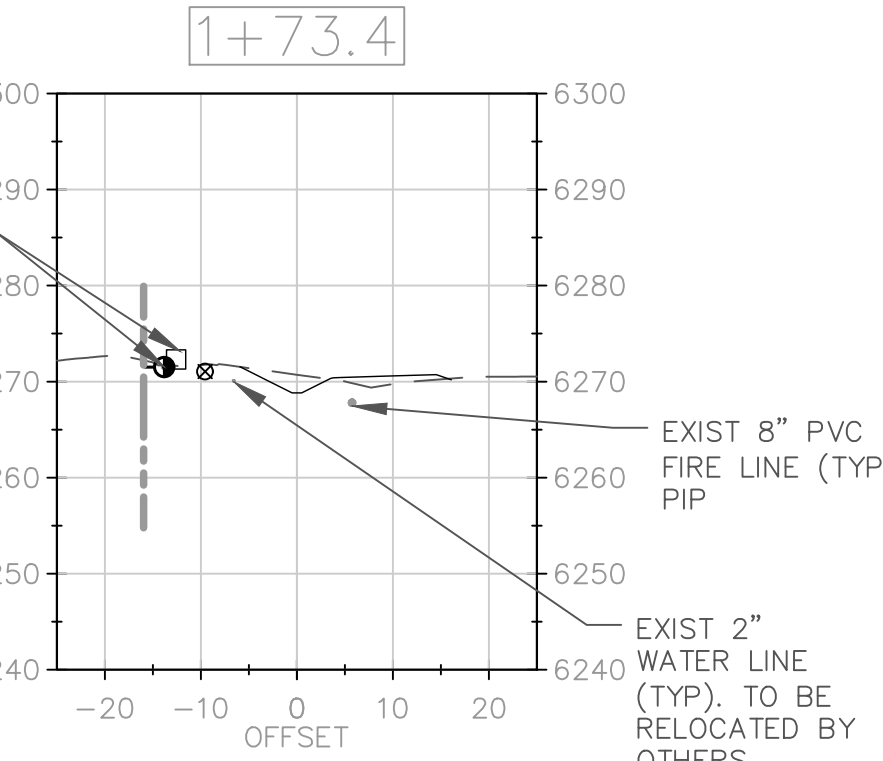
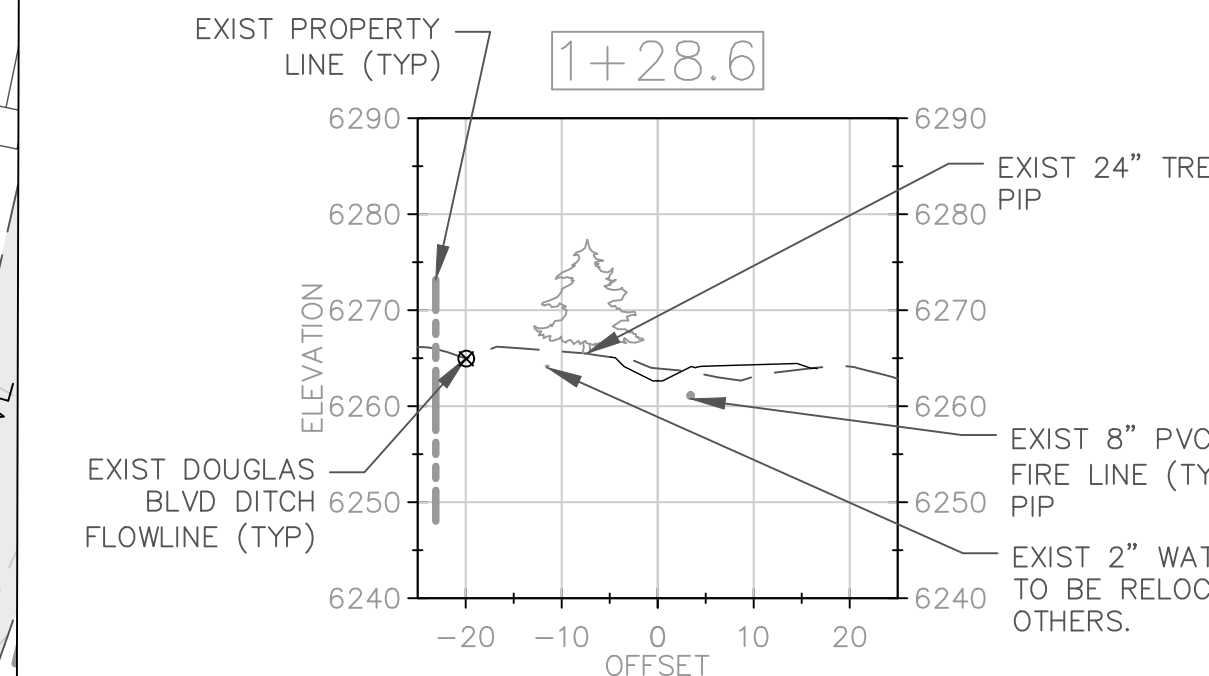
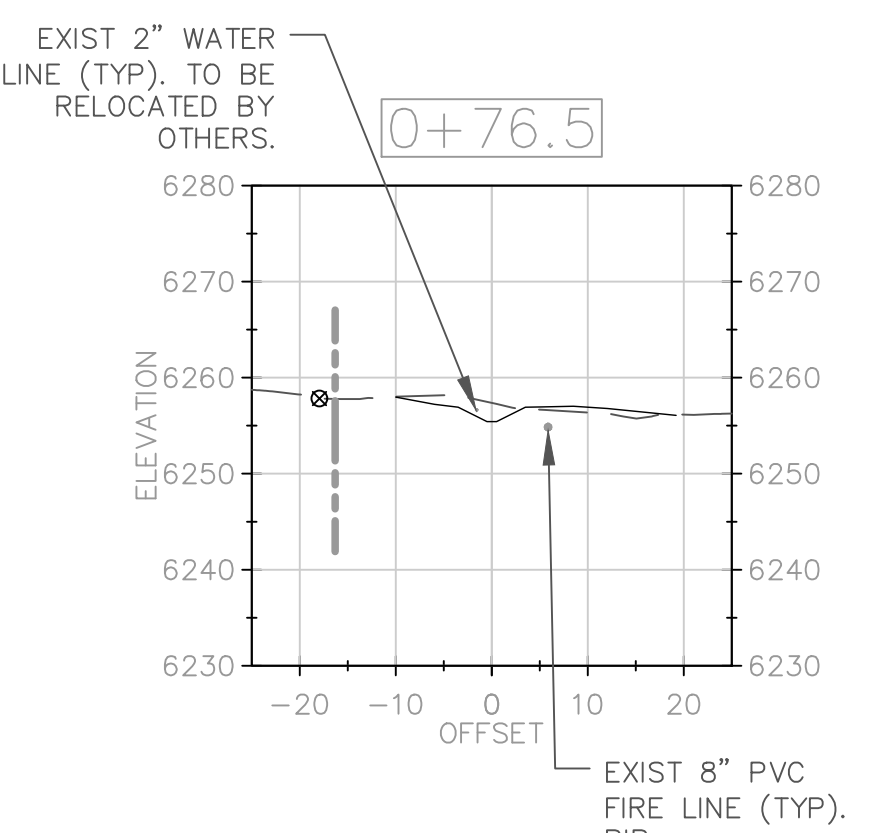
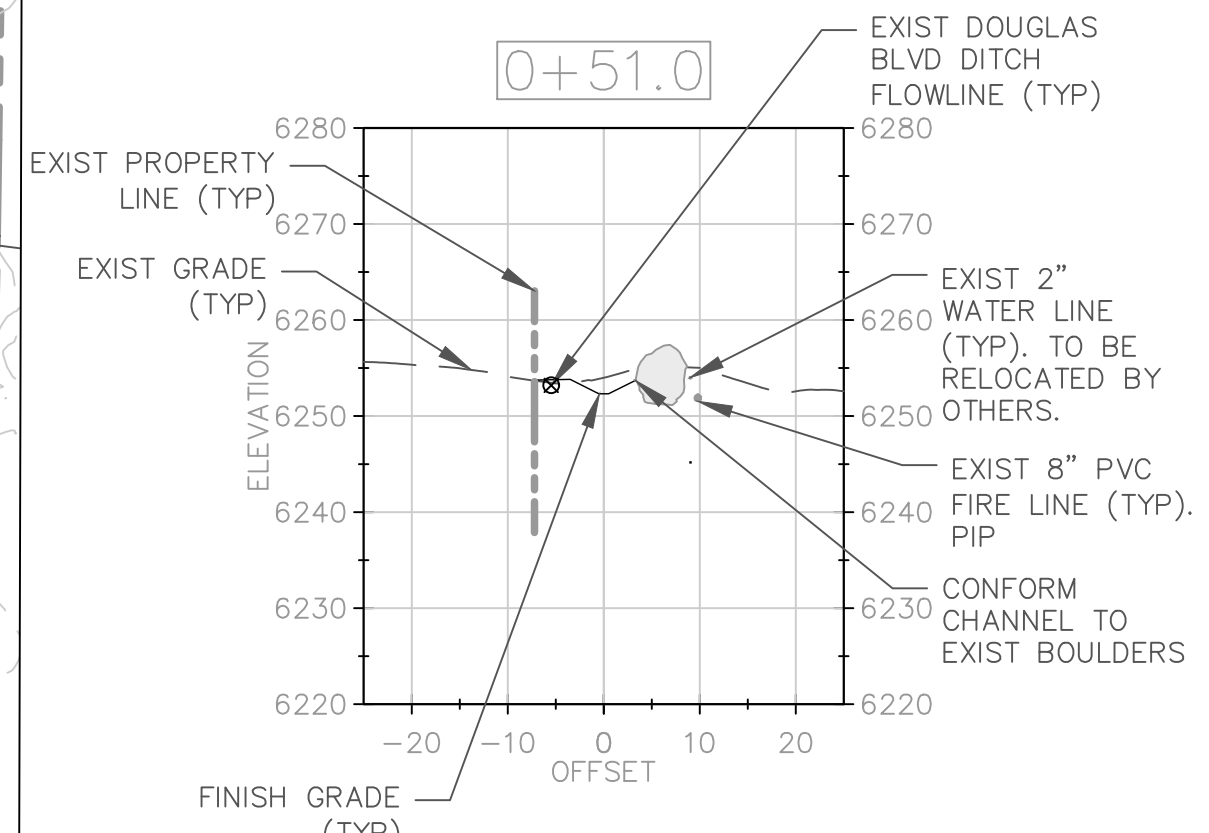
CURVE TABLE

Curve #	Radius	Length	Chord Direction	Start Point	End Point
C3	50.00	25.09	S57° 51' 19.31"E	(2237759.72, 14691630.87)	(2237780.74, 14691617.66)
C2	50.00	9.56	S66° 45' 25.12"E	(2237872.59, 14691588.23)	(2237881.36, 14691584.47)
C1	650.00	80.65	S64° 50' 17.59"E	(2237918.14, 14691564.31)	(2237991.09, 14691530.05)

PLAN
SCALE: 1" = 20'



DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
DATE	03/2018
SCALE	AS SHOWN
PROJECT	PT



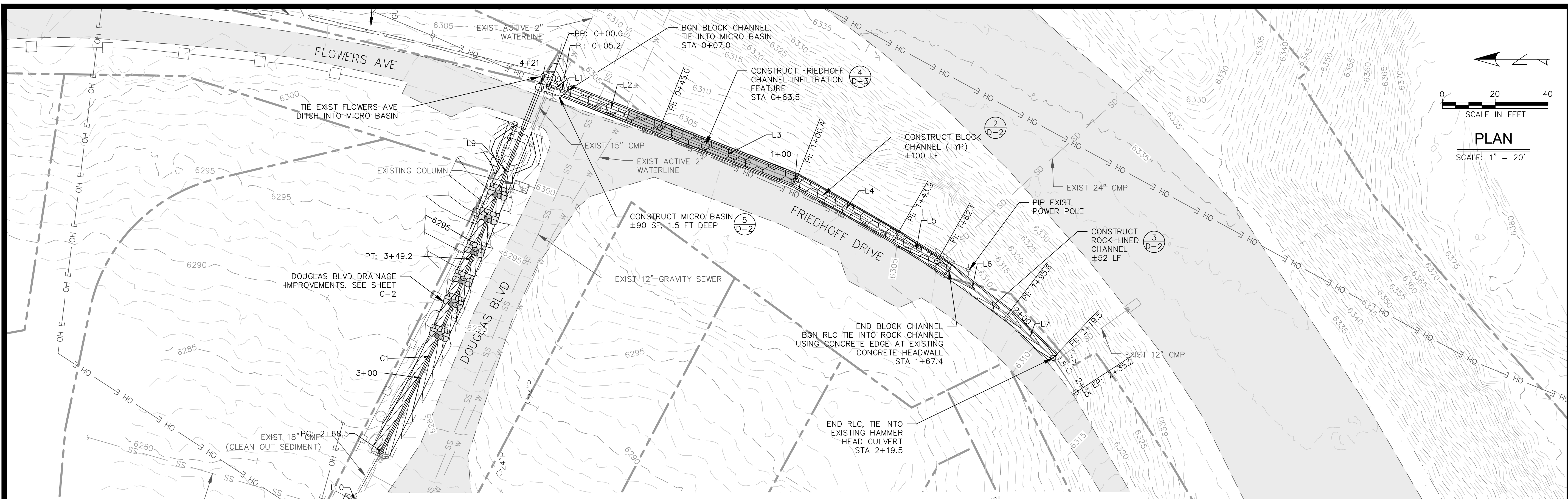
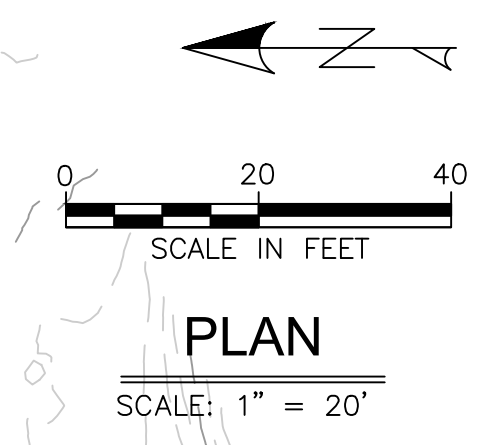
- NOTES:
1. ALL UTILITY HORIZONTAL AND VERTICAL LOCATIONS TO BE VERIFIED BY CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY CONFLICTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
 2. COORDINATE WITH NV ENERGY ON PROTECTING UTILITIES.
 3. EXISTING WATERLINE TO BE RELOCATED BY OTHERS. COORDINATE WITH BUCKEYE CONSTRUCTION FOR RELOCATION OF EXISTING WATERLINE.
 4. LOCATION OF ABANDONED WATERLINE ON UPSTREAM PORTION OF DOUGLAS BLVD DITCH (STA 34+00 AND HIGHER) IS UNKNOWN AND IS THEREFORE NOT SHOWN IN CROSS SECTIONS. CONTRACTOR TO TAKE CARE DURING EXCAVATION AND INFORM ENGINEER OF ANY CONFLICT IMMEDIATELY.
 5. ALL STATION CALL OUTS ARE FOR DOUGLAS BLVD DITCH ALIGNMENT

DOUGLAS BLVD SECTIONS
SCALE: HORIZ: 1" = 20'; H: V = 1:1

90% DESIGN PLANS
NOT FOR CONSTRUCTION

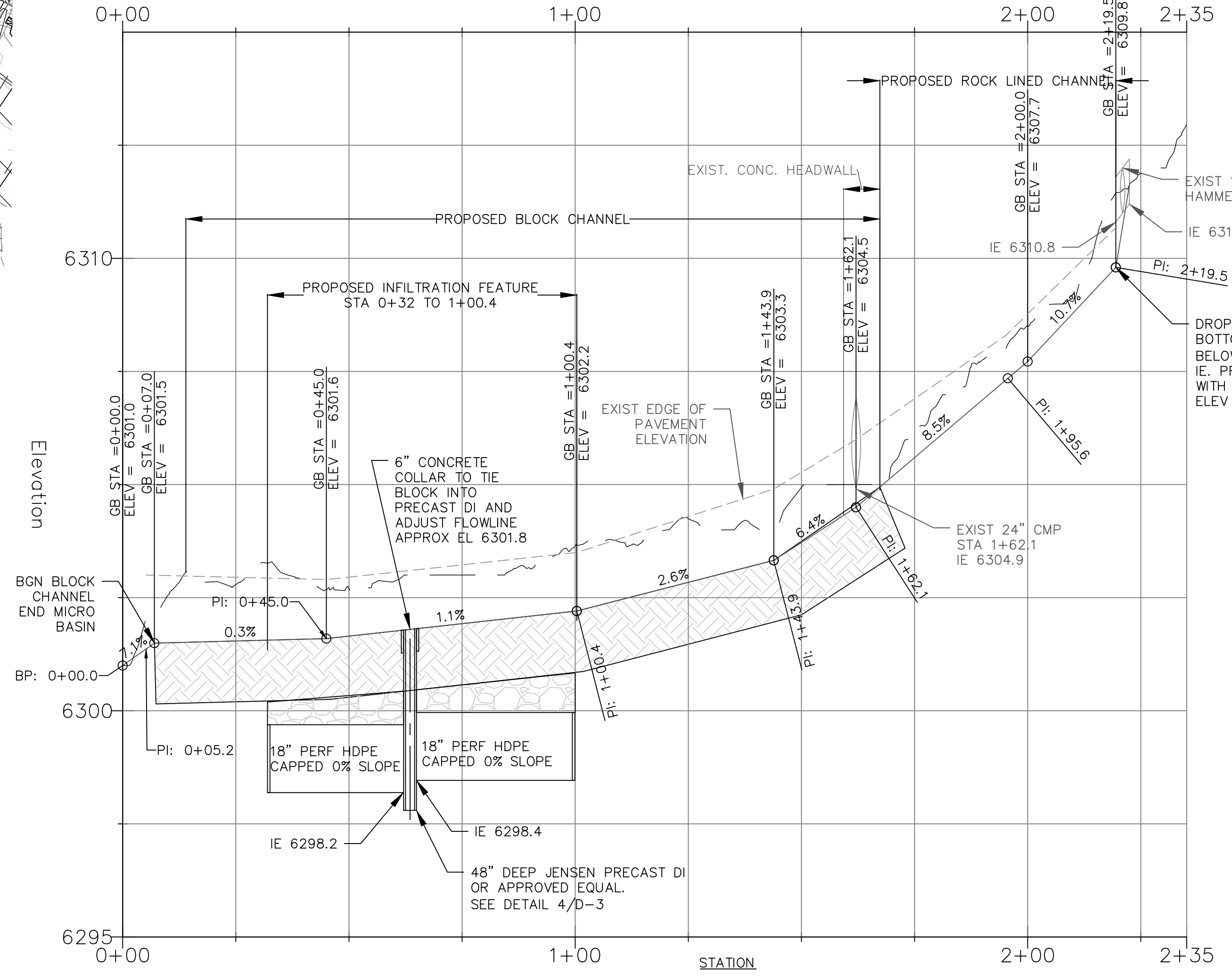
DOUGLAS BLVD SECTIONS
PITTMAN TERRACE WATER QUALITY
IMPROVEMENT PROJECT

DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
DATE	03/2018
SCALE	AS SHOWN
PROJECT	PT



CUT	-30.8 CY
FILL	4.2 CY
NET	-26.6 CY (CUT)

Line #	Length	Direction	Start Point	End Point
L1	5.2	S11° 17' 51"W	(2238056.5, 14691500.6)	(2238055.5, 14691495.6)
L2	39.9	S21° 26' 49"W	(2238055.5, 14691495.6)	(2238040.9, 14691458.5)
L3	55.3	S21° 14' 19"W	(2238040.9, 14691458.5)	(2238020.9, 14691406.9)
L4	43.5	S29° 46' 57"W	(2238020.9, 14691406.9)	(2237999.3, 14691369.1)
L5	18.2	S29° 16' 11"W	(2237999.3, 14691369.1)	(2237990.4, 14691353.2)
L6	33.5	S37° 16' 09"W	(2237990.4, 14691353.2)	(2237970.1, 14691326.6)
L7	23.9	S43° 30' 07"W	(2237970.1, 14691326.6)	(2237953.6, 14691309.2)
L8	15.7	S56° 56' 02"W	(2237953.6, 14691309.2)	(2237940.5, 14691300.7)

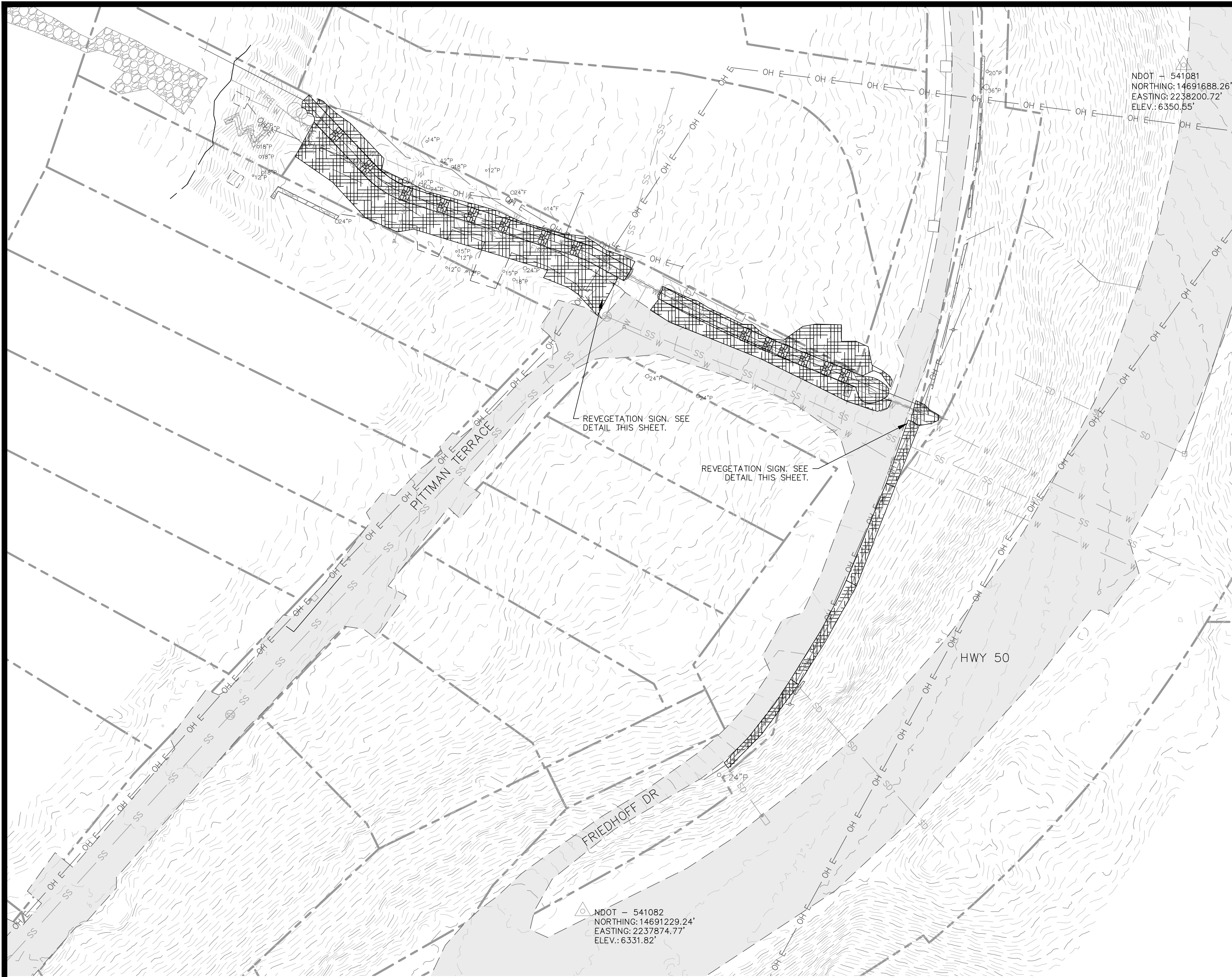


- NOTES:
1. ALL UTILITY HORIZONTAL AND VERTICAL LOCATIONS TO BE VERIFIED BY CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY CONFLICTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
 2. ROCK LINED AND BLOCK CHANNEL ALONG FRIEDHOFF DRIVE SHALL FOLLOW THE EXISTING EDGE OF PAVEMENT AND BE INSTALLED BELOW THE EDGE OF PAVEMENT AND WITH THE DIMENSIONS PER DETAIL SHEETS. PROFILE ELEVATIONS ARE GIVEN FOR GUIDANCE. ACTUAL INSTALLATION WILL DEPEND ON BEST FIT AND BE INITIALLY STAKED OUT BY NTCD.
 3. ALL STATION CALL OUTS AND IMPROVEMENTS ARE FOR FRIEDHOFF DRIVE DITCH ALIGNMENT. SEE SHEET C-2 FOR DOUGLAS BLVD ALIGNMENT IMPROVEMENTS.
 4. NET CUT TO BE USED IN "COMPACT AND FILL EXISTING DITCH" ADJACENT TO DOUGLAS BLVD. SEE SHEET C-2

90% DESIGN PLANS
NOT FOR CONSTRUCTION

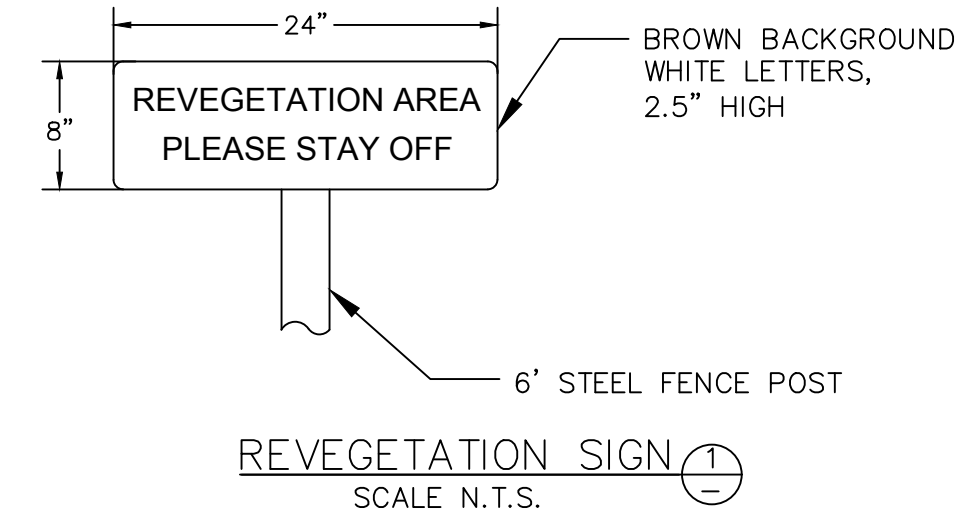
FRIEDHOFF AVE PROFILE
SCALE: HORIZ: 1" = 20'; H: V = 1:10

DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
DATE	03/2018
SCALE	AS SHOWN
PROJECT	PT



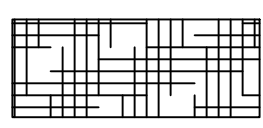
NDOT - 541081
 NORTHING: 14691688.26'
 EASTING: 2238200.72'
 ELEV.: 6350.55'

NDOT - 541082
 NORTHING: 14691229.24'
 EASTING: 2237874.77'
 ELEV.: 6331.82'



REVEGETATION SIGN
 SCALE N.T.S.

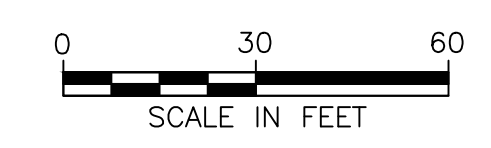
REVEGETATION LEGEND



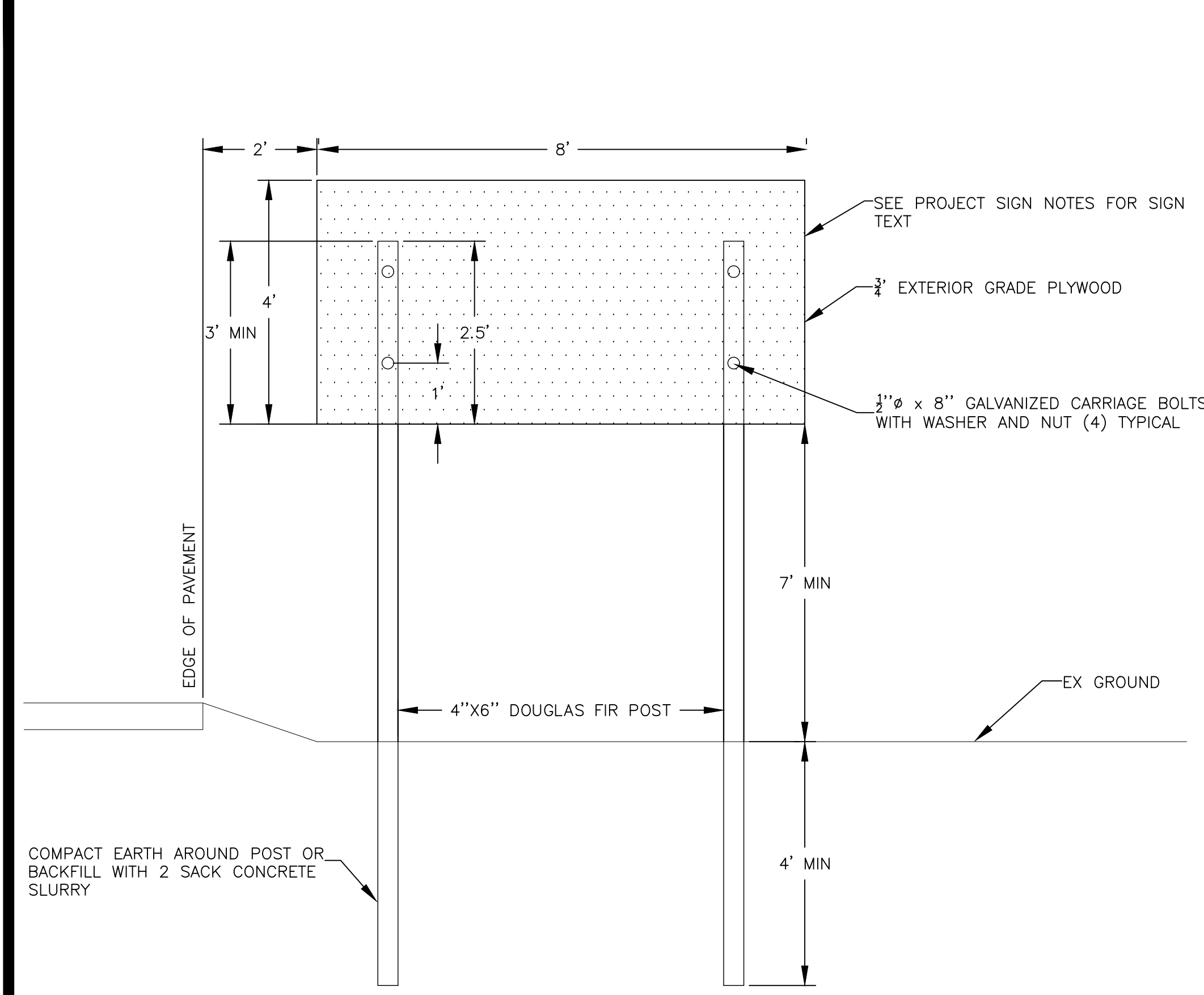
TREATMENT TYPE 1: UPLAND (±8,930 SF)

NOTES:
 1. SEE SPECIAL PROVISIONS FOR REVEGETATION DETAILS.

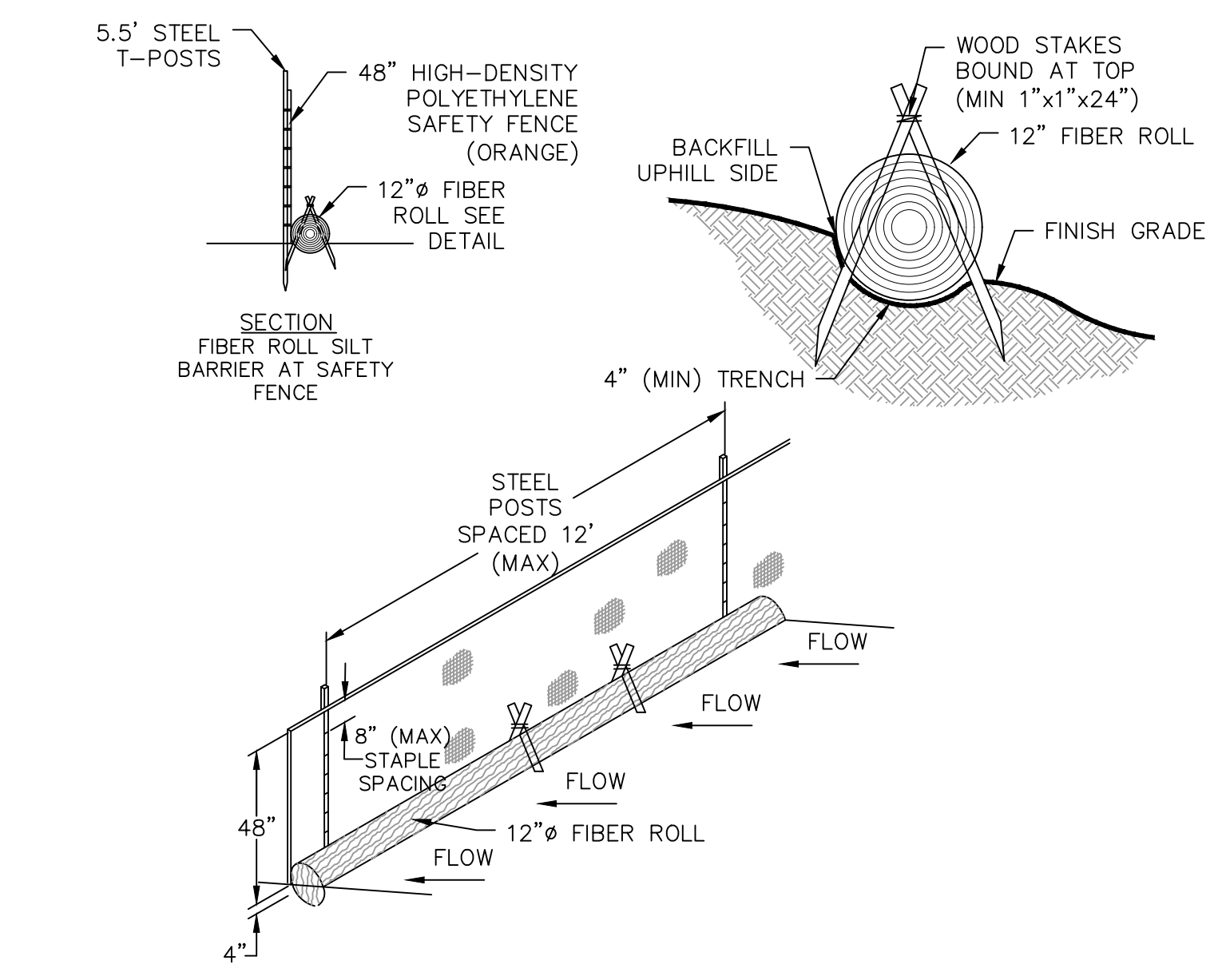
90% DESIGN PLANS
 NOT FOR CONSTRUCTION



DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
DATE	03/2018
SCALE	AS SHOWN
PROJECT	PT

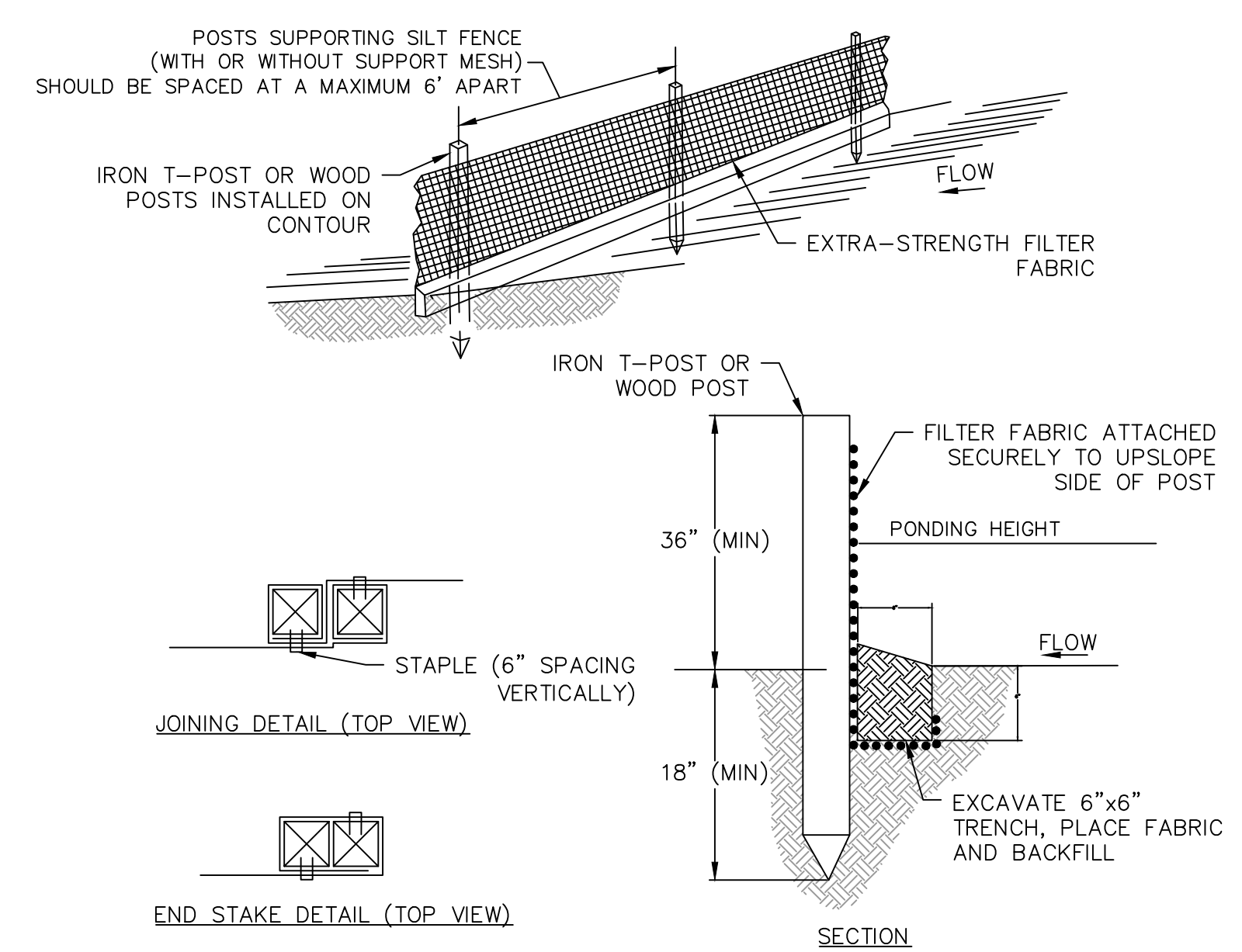


TEMPORARY PROJECT SIGN
SCALE: N.T.S. **1**
D-1



- FIBER ROLL NOTES:**
1. FIBER ROLL SHALL NOT BE MADE FROM STRAW. FIBER ROLLS SHALL BE BOUND BY HIGH STRENGTH COIR NETTING, AND HAVE A MINIMUM WEIGHT OF 5 LBS PER LINEAL FOOT.
 2. ORANGE SAFETY FENCE IS INTENDED TO PROTECT FIBER ROLLS FROM COMPRESSION BY VEHICLES, CONSTRUCTION EQUIPMENT, EXT. FENCES SHALL BE HIGH DENSITY POLYETHYLENE WITH A MESH OPENING OF APPROXIMATELY 1 INCH BY 4 INCHES AND A MINIMUM HEIGHT OF 4 FEET. SAFETY FENCE MAY BE OMITTED IN LOW TRAFFIC AREAS.
 3. FIBER ROLL SILT BARRIER SHALL BE INSTALLED ALONG CONTOUR AND ON SLOPES 5H:1V OR FLATTER UNLESS OTHERWISE APPROVED BY TRPA.
 4. THE INSTALLATION CONFIGURATION SHALL PREVENT RUNOFF FROM LEAVING THE SITE OR ENTERING A WATERCOURSE WITHOUT PASSING THROUGH A SILT BARRIER.
 5. THE MAXIMUM LENGTH OF SLOPE DRAINING TO THE SILT BARRIER SHALL BE 100 FEET.
 6. FIBER ROLL SHALL BE INSTALLED BY SHAPING A 4 INCH DEEP FURROW TO MATCH THE SHAPE OF THE LOG, SECURING IN FURROW WITH WOOD STAKES, AND TAMPING THE GROUND AROUND THE FIBER ROLL TO FILL VOIDS BETWEEN THE LOG AND THE GROUND.

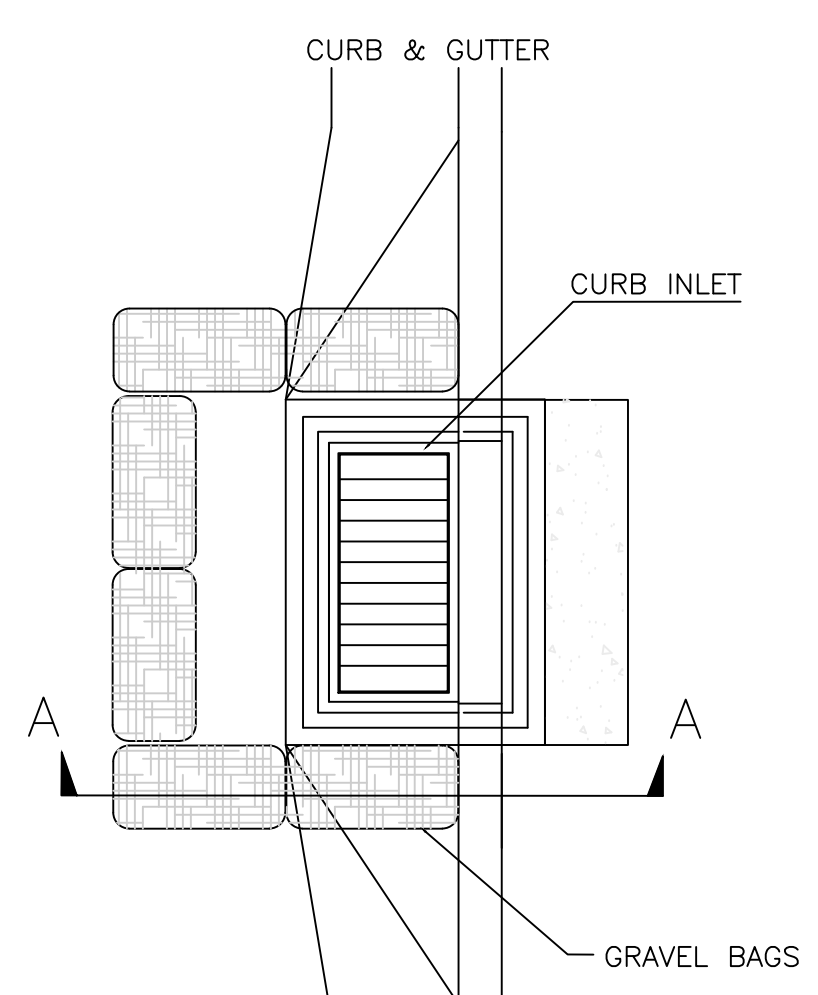
FIBER ROLL SILT BARRIER
SCALE: N.T.S. **2**
D-1



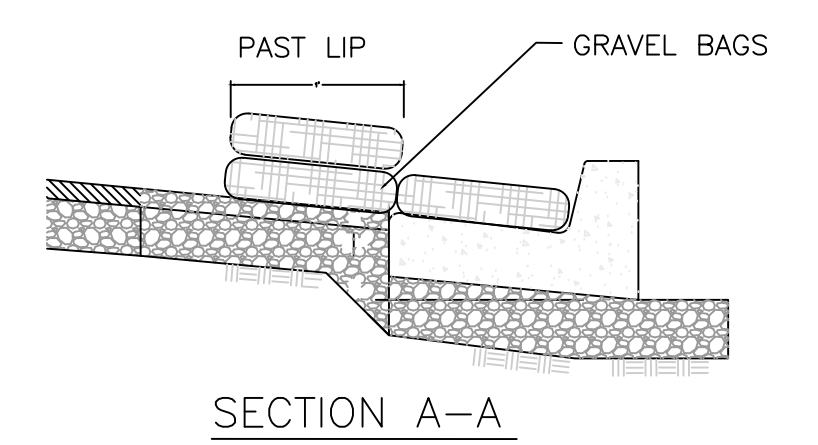
- SILT FENCE NOTES:**
1. USED IN AREAS WHERE SHEET FLOW OCCURS.
 2. DO NOT USE IN STREAMS, CHANNELS, OR ANYWHERE FLOW IS CONCENTRATED. DO NOT USE SILT FENCES TO DIVERT FLOW.
 3. DO NOT USE BELOW SLOPES SUBJECT TO CREEP, SLUMPING, OR LANDSLIDES.
 4. SILT FENCE SHOULD BE WOVEN POLYPROPYLENE WITH A MINIMUM WIDTH OF 36 INCHES AND A MINIMUM TENSILE STRENGTH OF 100 LB FORCE.
 5. INSTALL ALONG A LEVEL CONTOUR SO WATER DOES NOT POND MORE THAN 1.5 FEET AT ANY POINT ALONG THE SILT FENCE.
 6. THE MAXIMUM LENGTH OF SLOPE DRAINING TO ANY POINT ALONG THE SILT FENCE SHOULD BE 200 FEET OR LESS.
 7. THE MAXIMUM SLOPE PERPENDICULAR TO THE FENCE LINE SHOULD BE 1:1.
 8. PROVIDE SUFFICIENT ROOM FOR RUNOFF TO POND BEHIND THE FENCE AND TO ALLOW SEDIMENT REMOVAL EQUIPMENT TO PASS BETWEEN THE SILT FENCE AND TOES OF SLOPES OR OTHER OBSTRUCTIONS.
 9. TURN THE ENDS OF THE FILTER FENCE UPHILL TO CREATE A "J" SHAPE, TO PREVENT STORMWATER FROM FLOWING AROUND THE FENCE.
 10. LEAVE AN UNDISTURBED OR STABILIZED AREA IMMEDIATELY DOWN SLOPE FROM THE FENCE WHERE FEASIBLE.
 11. SILT FENCES SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.
 12. REMOVE SEDIMENT WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF BARRIER.

FILTER FENCE SILT BARRIER
SCALE: N.T.S. **3**
D-1

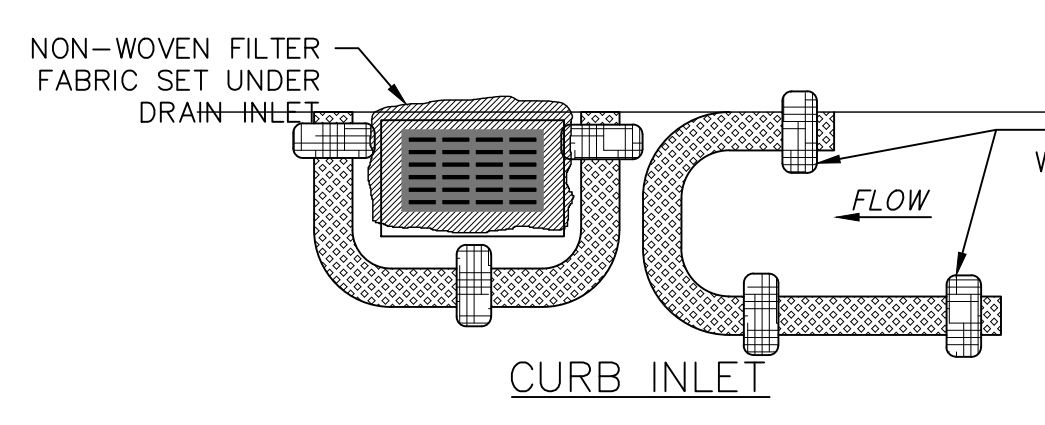
90% DESIGN PLANS NOT FOR CONSTRUCTION



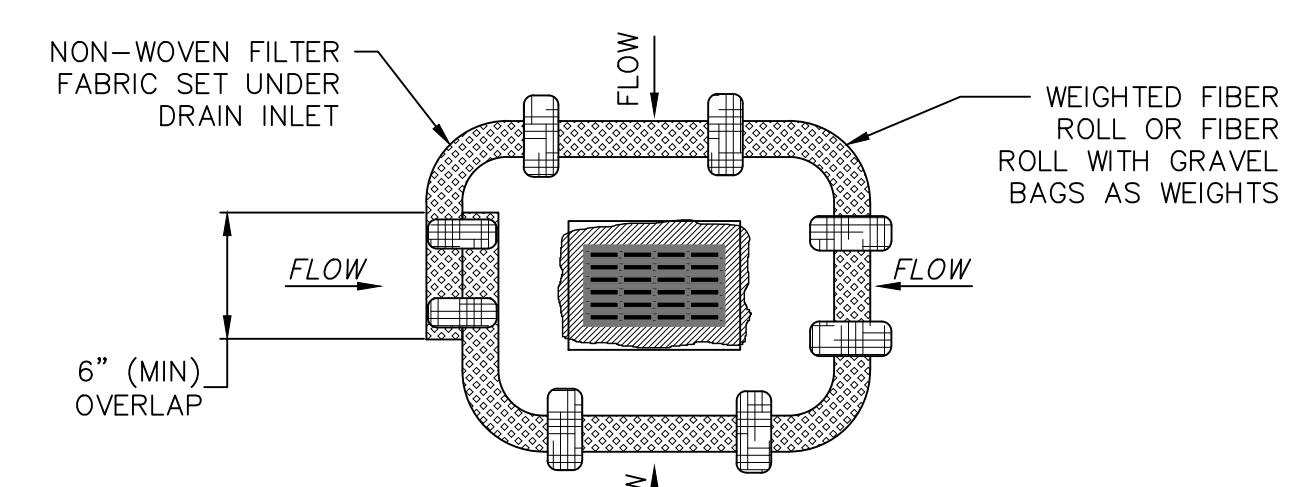
ALTERNATE CURB INLET



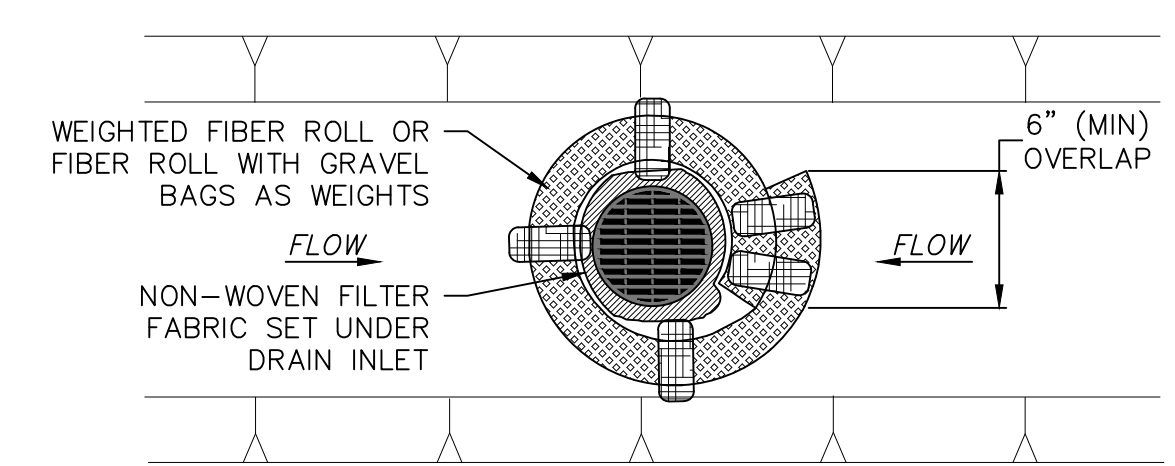
SECTION A-A



CURB INLET



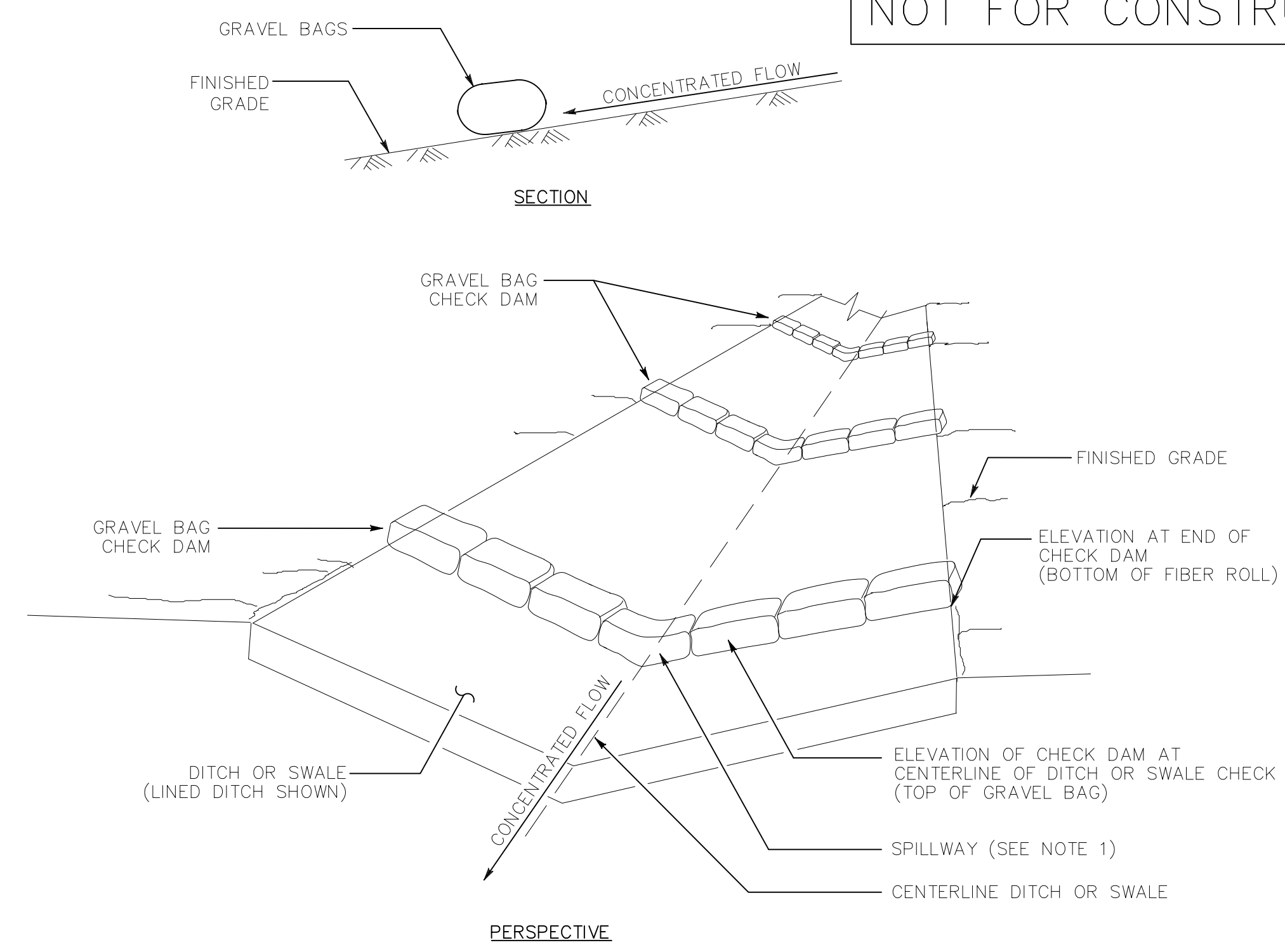
SHEET FLOW INLET



DRAINAGE DITCH INLET

- DI PROTECTION NOTES:**
1. FIBER ROLL DRAIN INLET PROTECTION SHALL USE A MIN. 12" DIAMETER ROLL AND BE INSTALLED BEFORE CONSTRUCTION BEGINS.
 2. GRAVEL BAGS SHALL BE FILLED WITH 3/4" DIA, CLEANED, WASHED GRAVEL. SAND BAGS ARE NOT AN ACCEPTABLE SUBSTITUTE.
 3. INSPECT AND REPAIR FIBER ROLLS EACH DAY AND AFTER EACH STORM EVENT. REMOVE SEDIMENT WHEN ONE THIRD OF THE FILTER DEPTH HAS BEEN FILLED. REMOVED SEDIMENT SHALL BE DISPOSED OF PROPERLY.
 4. SEDIMENT AND GRAVEL DEPOSITED ON ROADWAYS SHALL BE IMMEDIATELY REMOVED.
 5. IN HIGH TRAFFIC AREAS, MARK DRAIN INLET PROTECTION WITH VISIBLE BARRIERS SUCH AS SAFETY CONES.
 6. REMOVE DRAIN INLET PROTECTION AFTER THE SURROUNDING AREA HAS BEEN STABILIZED.
 7. ADDITIONAL OR OVERLAPPING GRAVEL BAGS MAY BE NECESSARY AS DIRECTED BY ENGINEER FOR PROPER FUNCTIONING OF BMP.

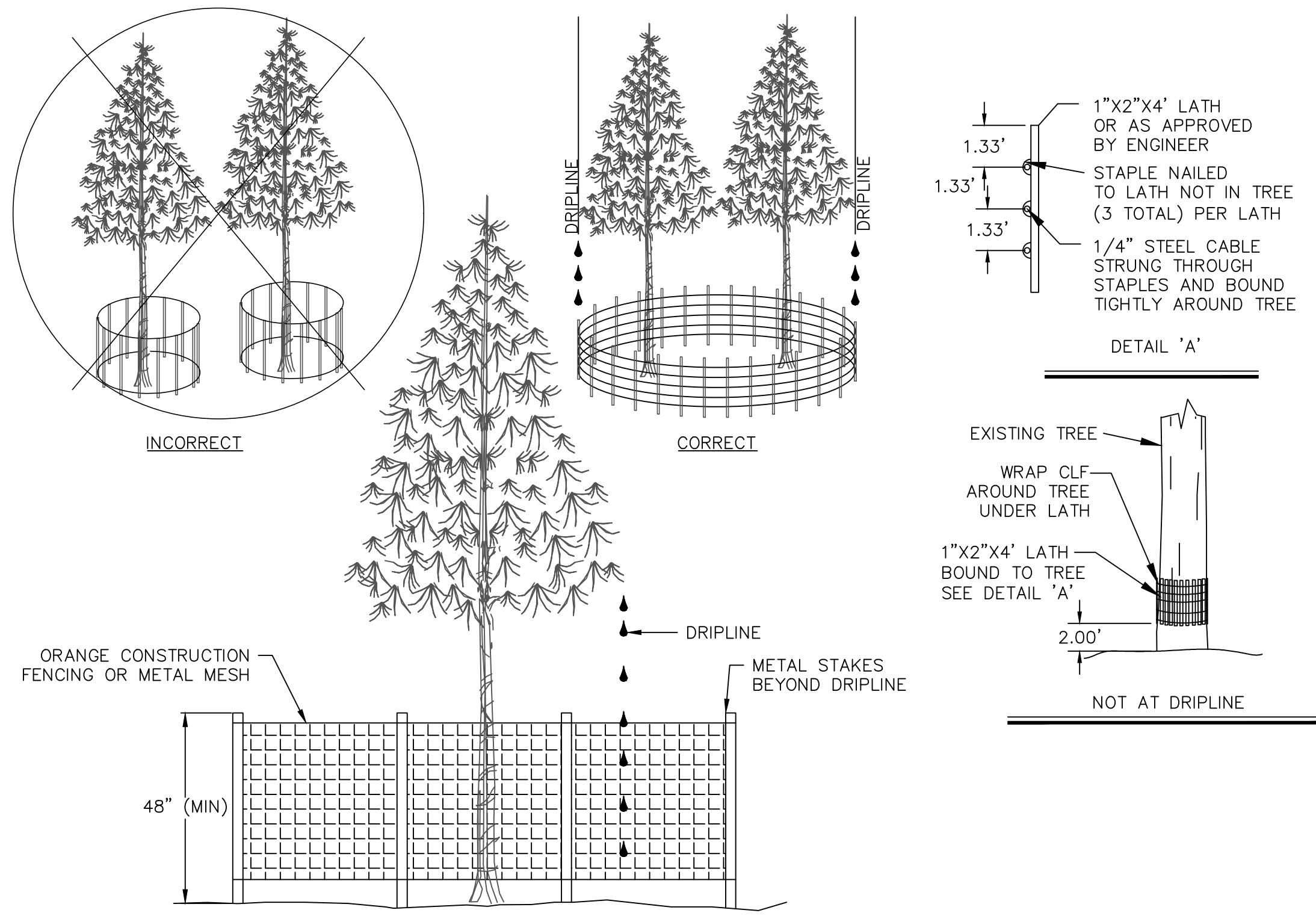
DI PROTECTION
SCALE: N.T.S. **4**
D-1



- TEMPORARY CHECK DAM NOTES:**
1. CHECK DAM DIMENSIONS TO BE VERIFIED BY CIVIL ENGINEER.
 2. ONLY CLEAN/WASHED GRAVEL MUST BE USED IN BAGS
 3. SAND BAGS MAY BE REPLACED WITH GRAVEL BAGS BY APPROVAL OF CIVIL ENGINEER.

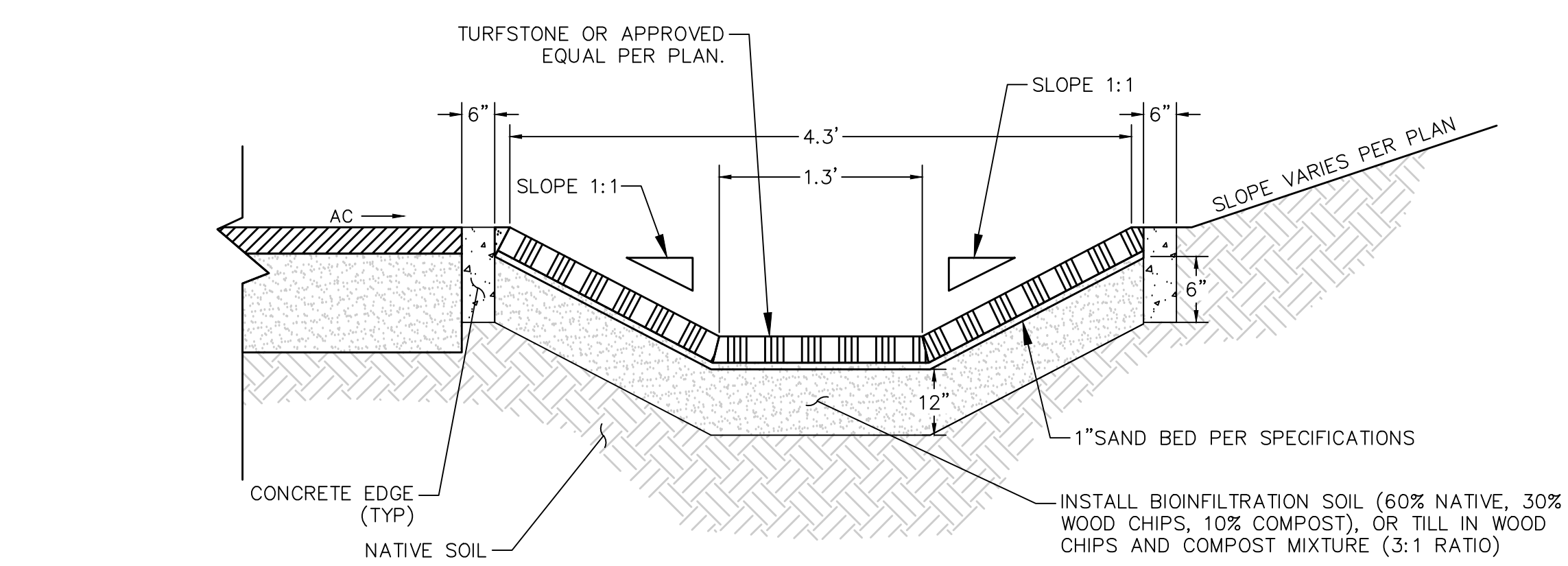
TEMPORARY CHECK DAM
SCALE: N.T.S. **5**
D-1

DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
DATE	03/2018
SCALE	AS SHOWN
PROJECT	PT



- CLF AND TREE PROTECTION NOTES:**
- DO NOT PERMIT PERSONNEL, CONSTRUCTION MATERIALS, OR EQUIPMENT, TEMPORARY OR OTHERWISE, WITHIN PROTECTIVE FENCING.
 - VEGETATION PROTECTION IS REQUIRED FOR ALL PROJECTS AS A CONDITION OF PROJECT APPROVAL.
 - METAL OR WIRE MESH FENCING MAY BE REQUIRED.
 - CALCULATE THE PROTECTIVE PERIMETER FOR SHIELDING LARGER SPECIMEN TREES MEASURING OVER 30" DBH AS FOLLOWS: COMPUTE THE PROTECTIVE RADIUS BY ADDING ONE FOOT, AS MEASURED OUT FROM THE TREE BOLE, FOR EVERY INCH IN DBH. (E.G. A TREE WITH A 30" DBH WOULD RECEIVE A 30' PROTECTIVE PERIMETER)
 - CLF AND TREE PROTECTION FENCE SHALL BE A MINIMUM OF 48" HIGH. FOR TREES WITH DRIPLINES THAT OVERHANG THE CONSTRUCTION AREAS, THE LOCATION OF THE TREE PROTECTION FENCE SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER AND/OR THE TRPA AT THE PREGRADE MEETING.
 - THE DETAIL SHOWN IS FOR TREE PROTECTION. MATERIAL AND SPACING SHOWN ALSO APPLIES TO CLF.
 - QUANTITY OF FILTER FENCE AND CONSTRUCTION LIMIT FENCE DOES NOT INCLUDE MINIMUM LIMITS FOR TREE PROTECTION. TREE PROTECTION FENCING TO BE PER DETAIL THIS SHEET AND/OR AS DETERMINED IN THE FIELD.

CONSTRUCTION LIMIT AND TREE PROTECTION FENCING
 SCALE: N.T.S. **1**
 D-2



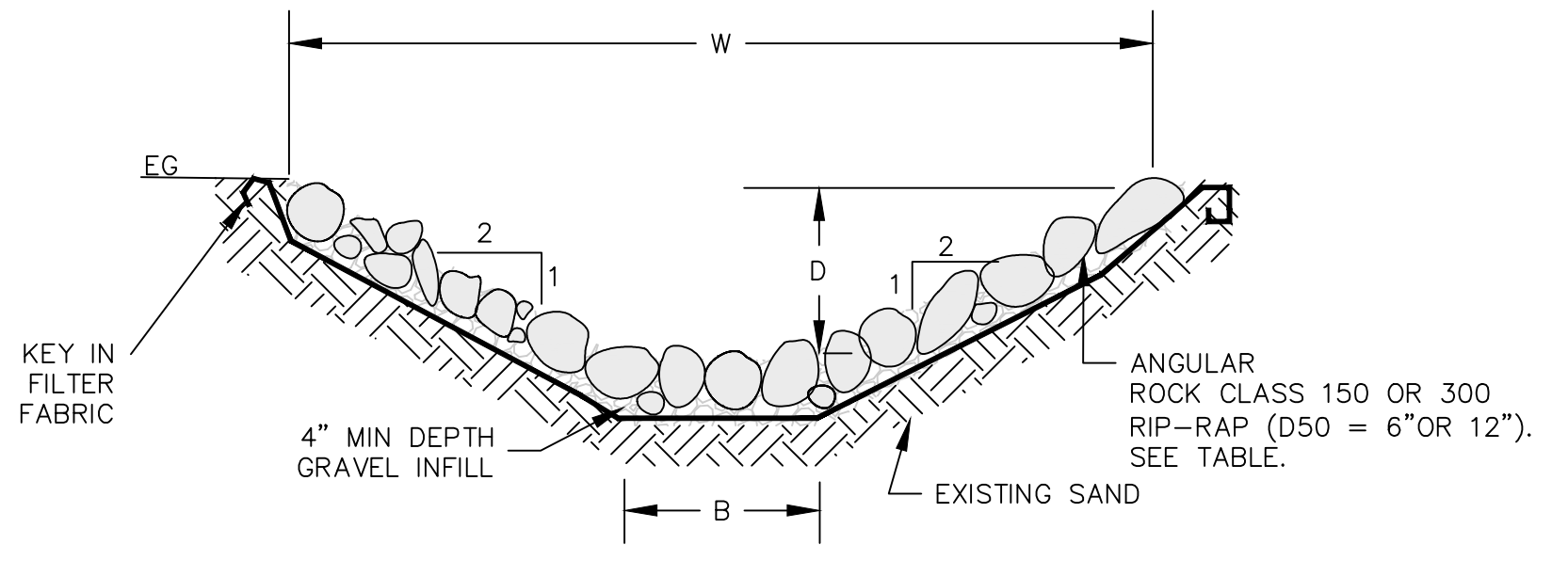
- BLOCK CHANNEL NOTES:**
- SEE REVEGETATION PLAN AND SPECIAL PROVISIONS FOR REVEGETATION DETAILS
 - SAWCUT PAVEMENT ON FRIEDHOFF DRIVE TO CREATE SMOOTH TRANSITION BETWEEN ROAD AND CHANNEL. SEE STREET CUT REPAIR DETAIL 1/D-4.
 - CONCRETE EDGE TO BE INSTALLED ON UPSTREAM AND DOWNSTREAM EDGE OF BLOCK CHANNEL AS WELL AS ALONG THE SIDES OF THE CHANNEL AS SHOWN.

BLOCK CHANNEL
 SCALE: N.T.S. **2**
 D-2

90% DESIGN PLANS NOT FOR CONSTRUCTION

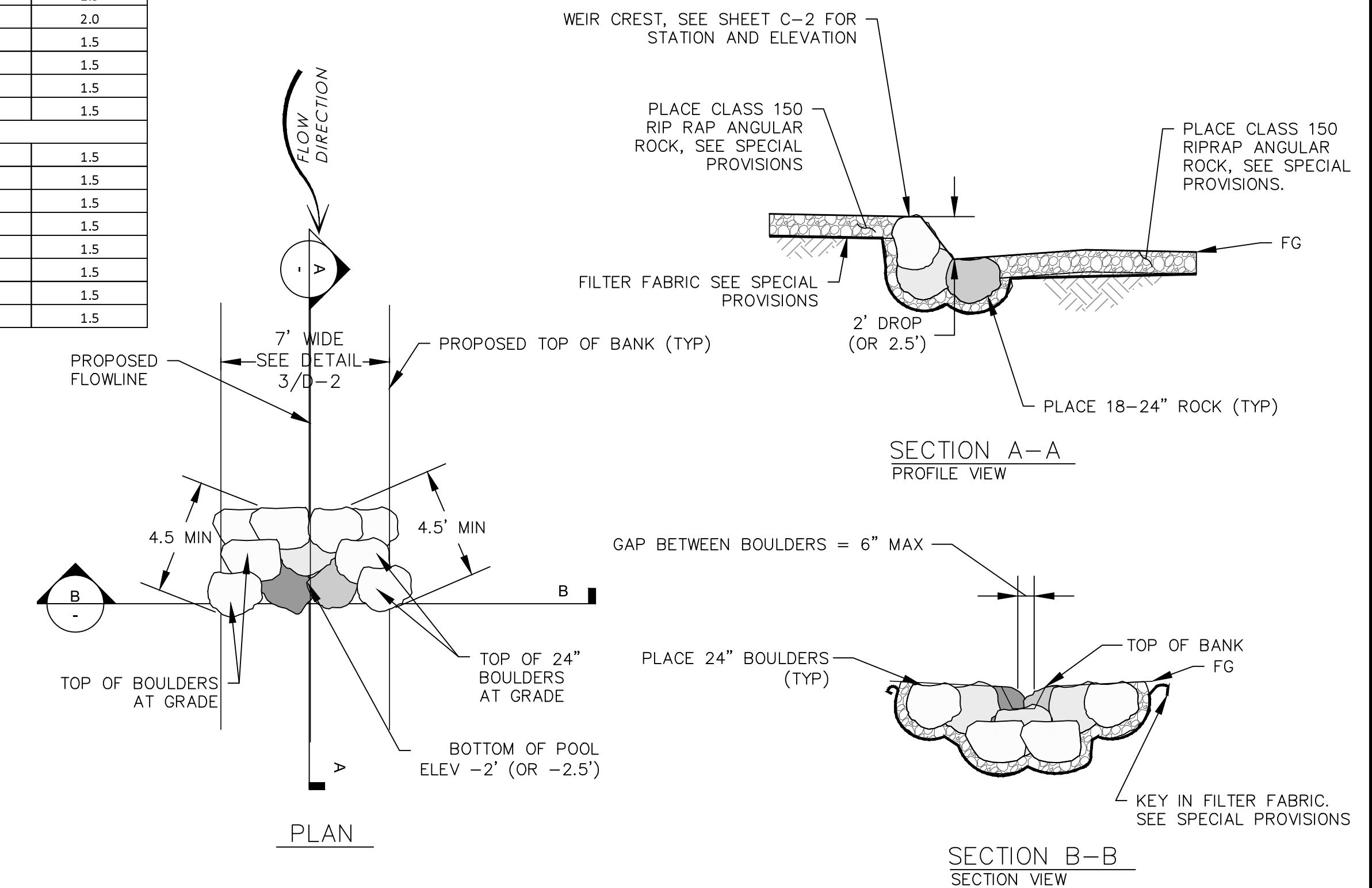
ROCK LINED CHANNEL TABLE						
ALIGNMENT NAME	BGN STATION [FT]	END STATION [FT]	W [FT]	B [FT]	D [FT]	RIP RAP
FRIEDHOFF DR.	1+67.4	2+19.5	3.5	0.5	0.75	CLASS 150
DOUGLAS BLVD.	2+67.9	3+85.2	7.0	1	1.5	CLASS 300
DOUGLAS BLVD.	3+85.2	3+90.6	TRANSITION			CLASS 300
DOUGLAS BLVD.	3+90.6	4+20.3	17.0	5.0	2.0	CLASS 300

- RLC NOTES:**
- SEE REVEGETATION PLAN AND SPECIAL PROVISIONS FOR REVEGETATION DETAILS
 - SAWCUT PAVEMENT ON FRIEDHOFF DRIVE TO CREATE SMOOTH TRANSITION BETWEEN ROAD AND CHANNEL. SEE STREET CUT REPAIR DETAIL 1/D-4.

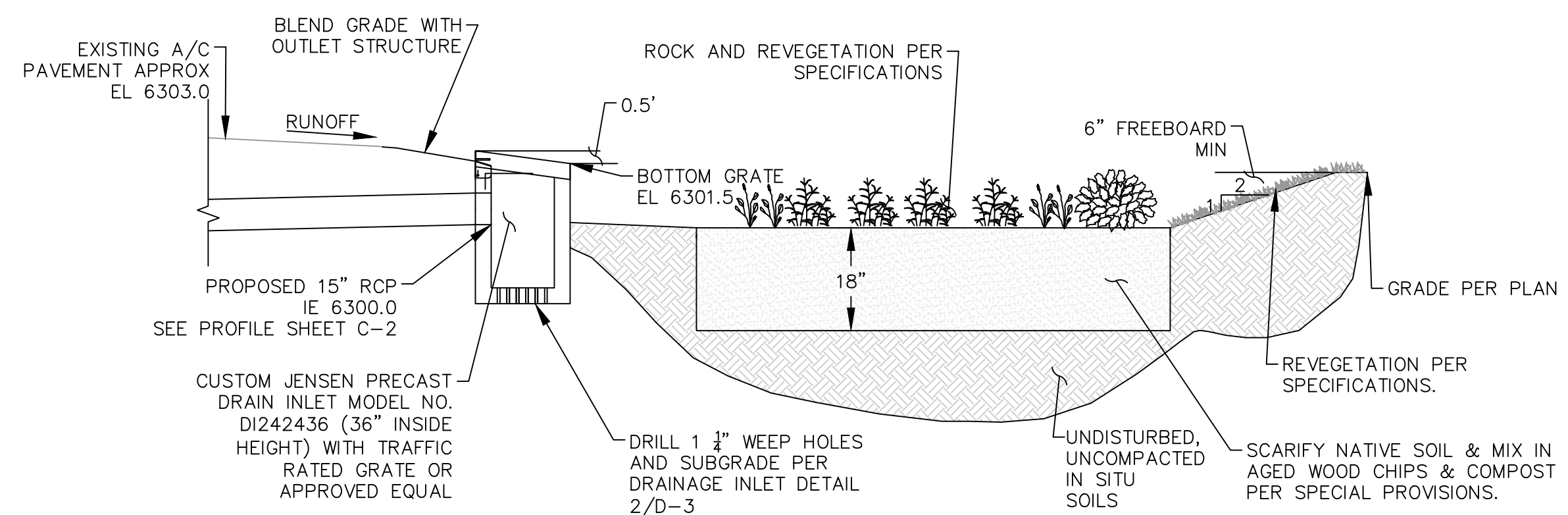


ROCK LINED CHANNEL
 SCALE: N.T.S. **3**
 D-2

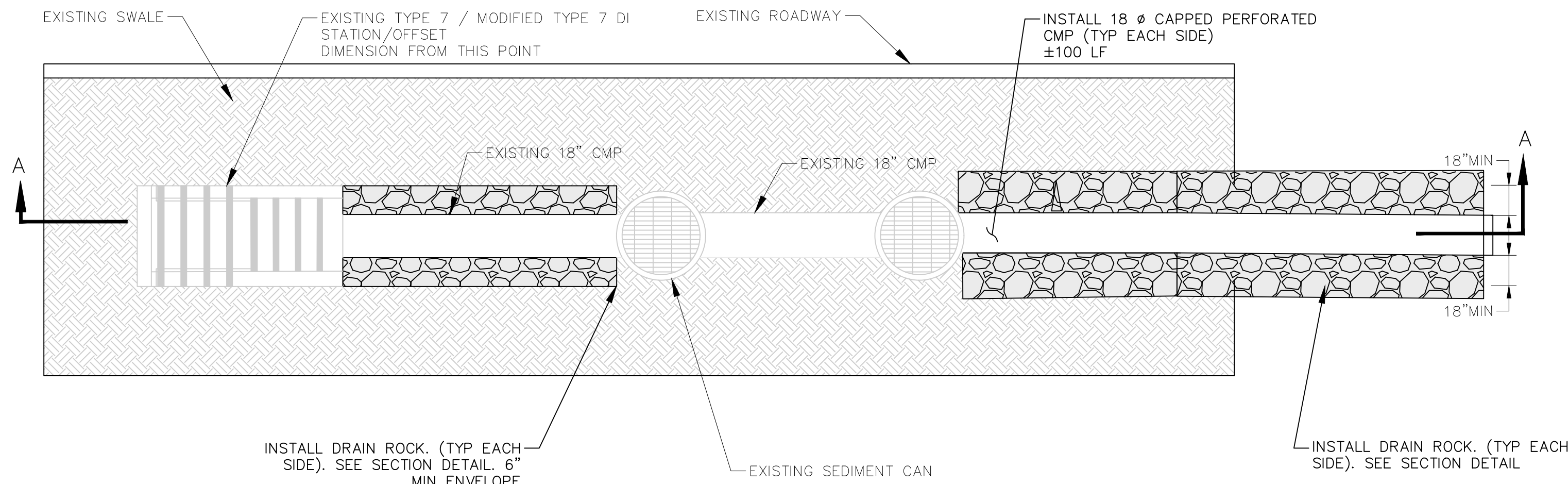
ROCK DROP STRUCTURE TABLE				
CREST STATION [FT]	CREST ELEVATION [FT]	POOL LENGTH [FT]	INITIAL POOL DROP [FT]	OVERALL DROP [FT]
3+79.0	6298.0	8.0	2.0	1.5
3+69.0	6296.3	8.0	2.5	2.0
3+55.6	6293.5	8.0	2.0	1.5
3+43.4	6291.5	8.0	2.0	1.5
3+33.7	6289.7	10.0	2.0	1.5
3+20.7	6287.8	10.0	2.0	1.5
STA 2+67.9 THRU 2+47.0: CULVERT				
2+17.0	6275.6	8.0	2.0	1.5
1+99.1	6272.7	10.0	2.0	1.5
1+76.6	6269.4	8.0	2.0	1.5
1+58.7	6266.5	10.0	2.0	1.5
1+42.0	6264.4	10.0	2.0	1.5
1+20.6	6262.1	8.0	2.0	1.5
0+94.7	6258.1	10.0	2.0	1.5
0+70.7	6254.6	10.0	2.0	1.5



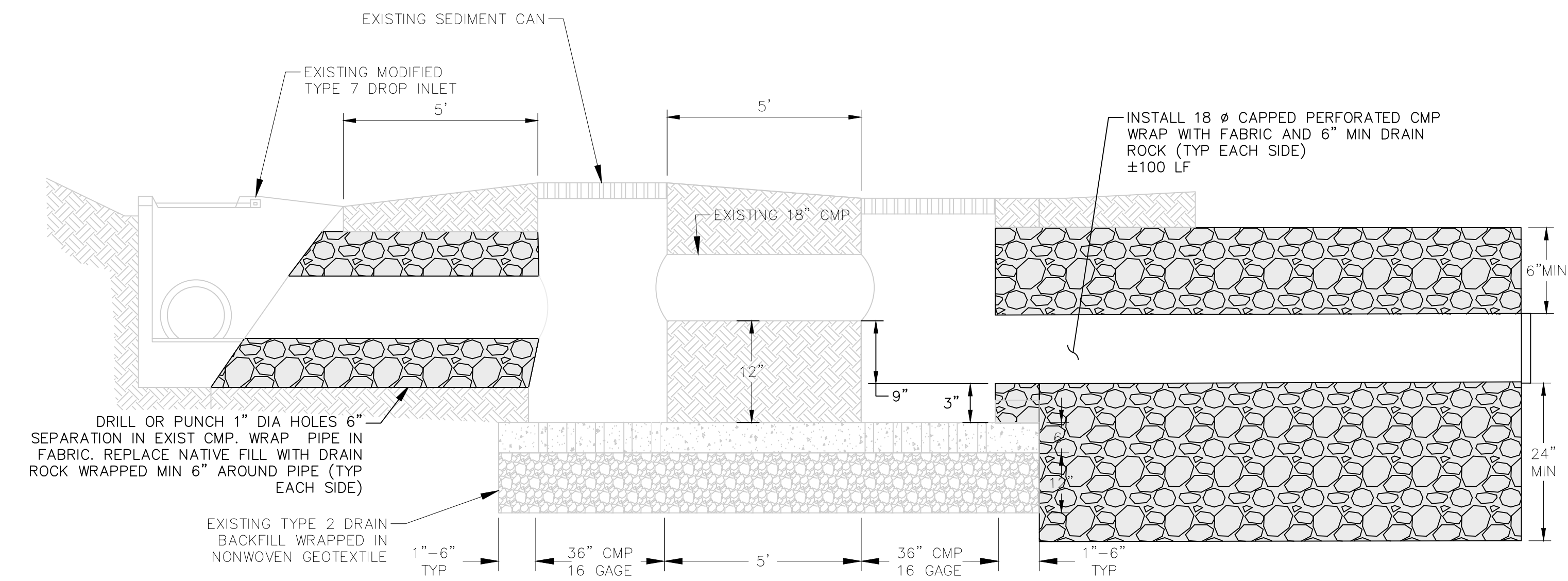
ROCK DROP STRUCTURE
 SCALE: N.T.S. **4**
 D-2



MICRO BASIN
 SCALE: N.T.S. **5**
 D-2



PLAN



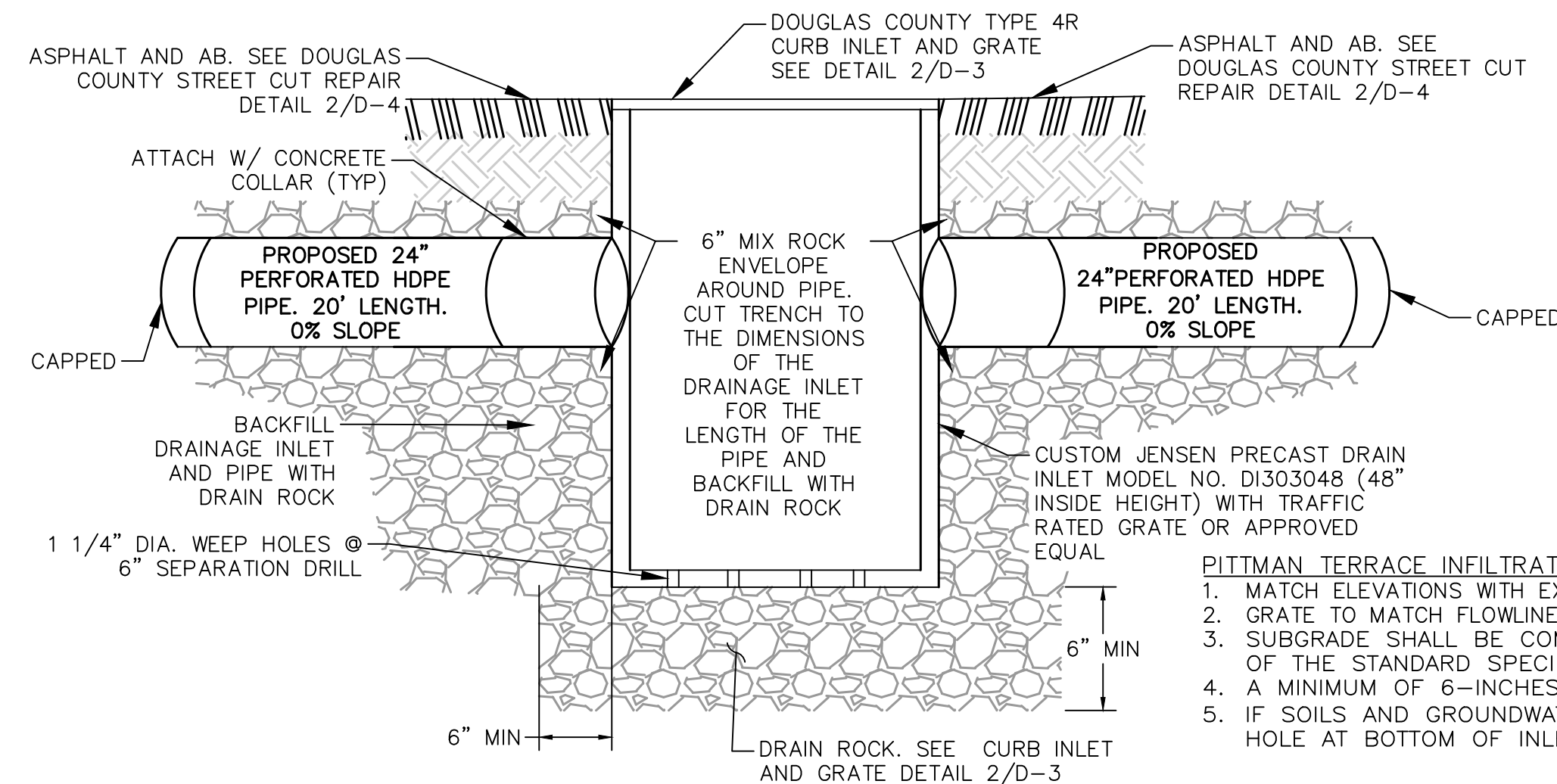
SECTION A-A

- NDOT RETROFIT NOTES:**
1. THIS DETAIL ONLY REPRESENTS HALF OF THE FEATURE. DOUBLE SEDIMENT TRAPS EXIST ON BOTH SIDED OF THE EXISTING DI. THE 100 FOOT PIPE EXTENSION SHALL BE ON BOTH SIDES OF THE FEATURE.
 2. EXISTING PIPE MAY BE REPLACED WITH PERFORATED PIPE INSTEAD OF PERFORMING IN PLACE

RETROFIT NDOT INFILTRATION SYSTEM 1

SCALE: N.T.S.

D-3

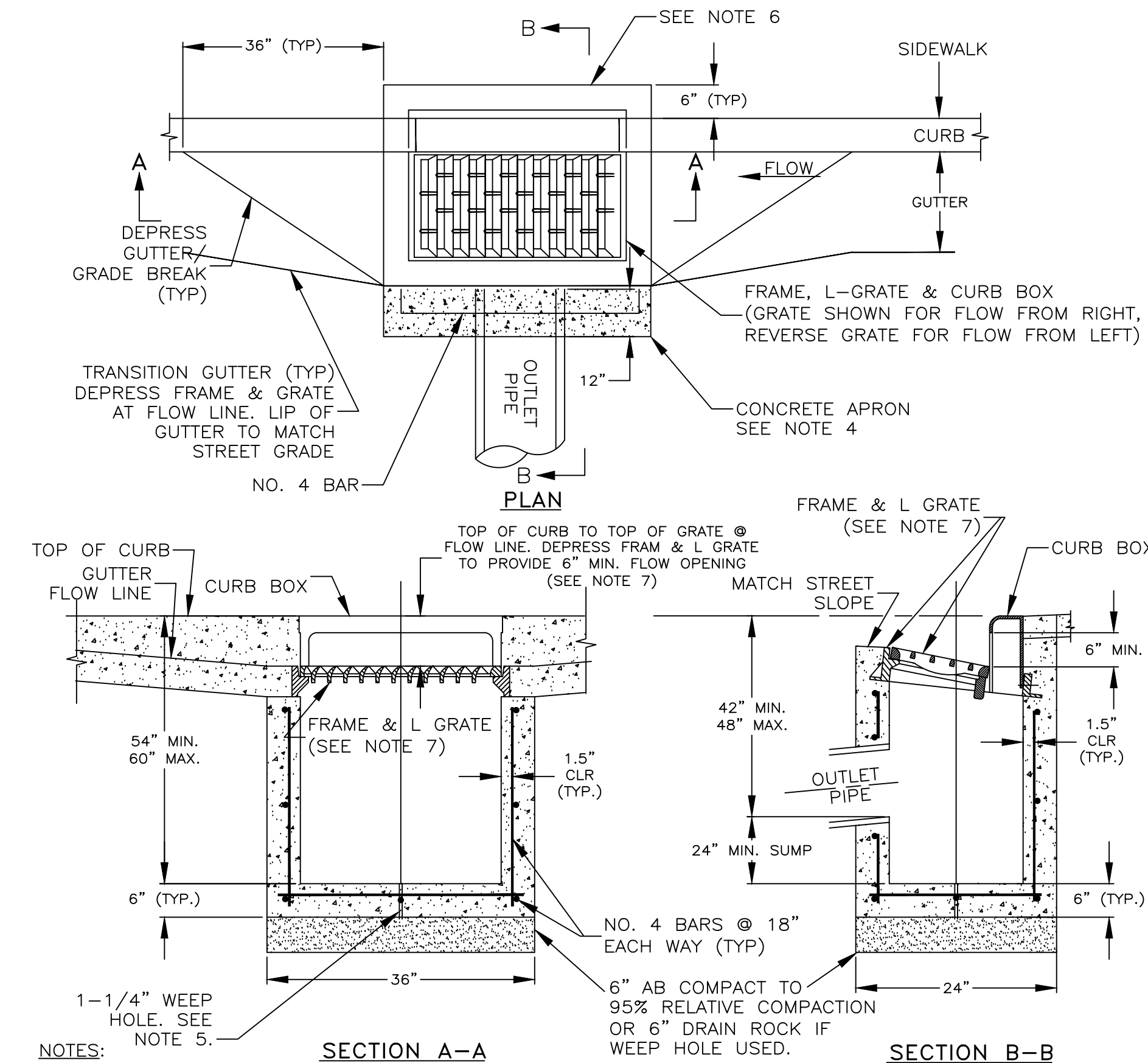


PITTMAN TERRACE INFILTRATION FEATURE 3

SCALE: N.T.S.

D-3

90% DESIGN PLANS
NOT FOR CONSTRUCTION



SECTION A-A

SECTION B-B

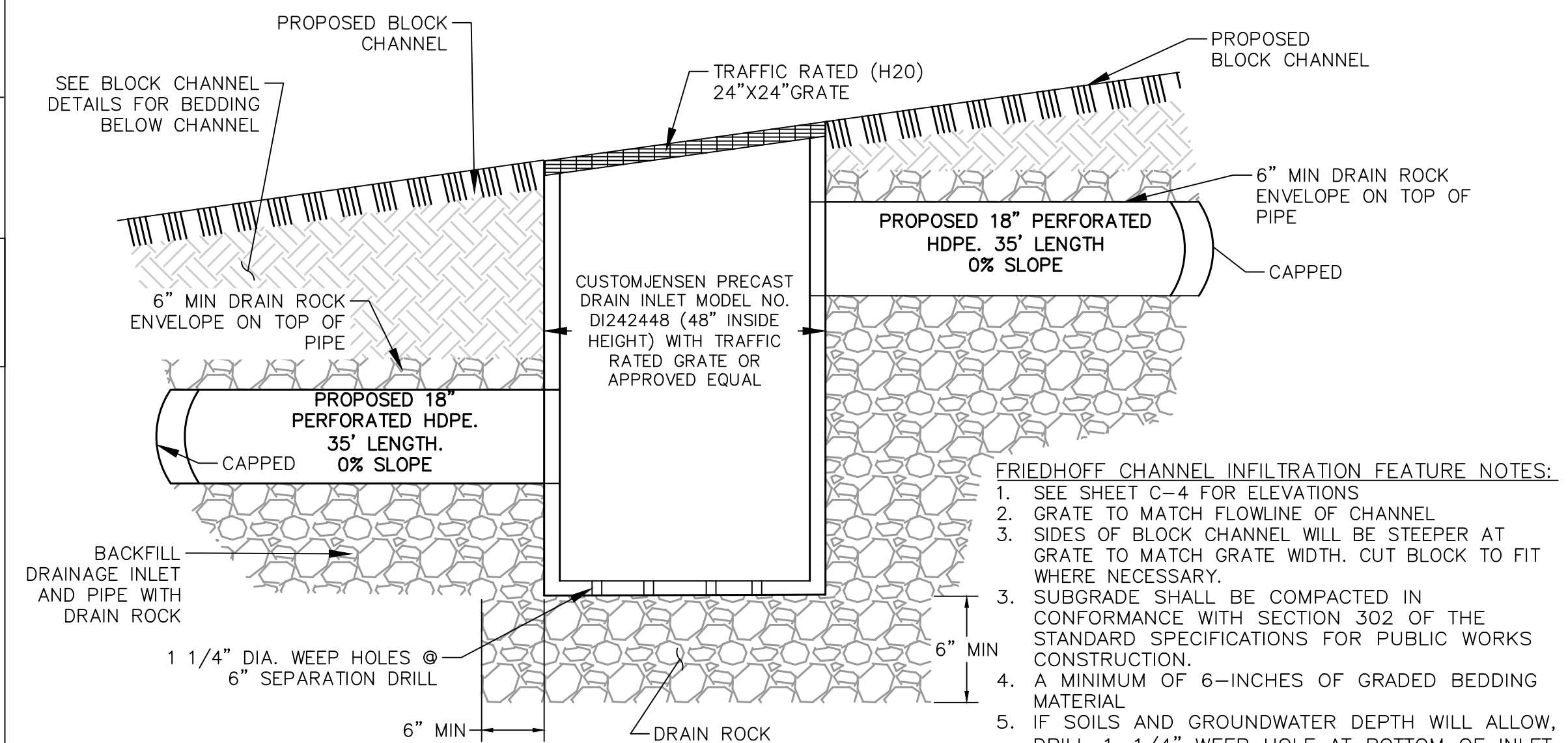
NOTES:

1. SUBGRADE SHALL BE COMPACTED IN CONFORMANCE WITH SECTION 302 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. A MINIMUM OF 6-INCHES OF GRADED BEDDING MATERIAL AS DESCRIBED IN "TYPICAL STORM DRAIN TRENCH" DETAIL D01 SHALL BE CONSTRUCTED.
3. CONCRETE BOX SHALL BE DESIGNED FOR H-20 TRAFFIC LOAD.
4. IF FRAME AND GRATE EXTEND BEYOND LIP OF GUTTER, PROVIDE 8-INCH THICK CONCRETE APRON.
5. IF SOILS AND GROUNDWATER DEPTH WILL ALLOW, DRILL 1-1/4" WEEP HOLE AT BOTTOM OF INLET TO ALLOW WATER TO INFILTRATE INTO SOIL.
6. IF NO SIDEWALK IS PRESENT, POUR 6-INCH CONCRETE CURB STRUCTURE BEHIND GRATE AND TIE BEAM INTO BOX.
7. TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6-INCH MINIMUM FLOW OPENING AND INSTALL DURABLE SHIMS BETWEEN THE CURB BOX AND FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF CURB AND FACE OF CURB (SEE SECTION B-B).

DOUGLAS COUNTY TYPE 4R CURB INLET 2

SCALE: N.T.S.

D-3



FRIEDHOFF CHANNEL INFILTRATION FEATURE 4

SCALE: N.T.S.

D-3

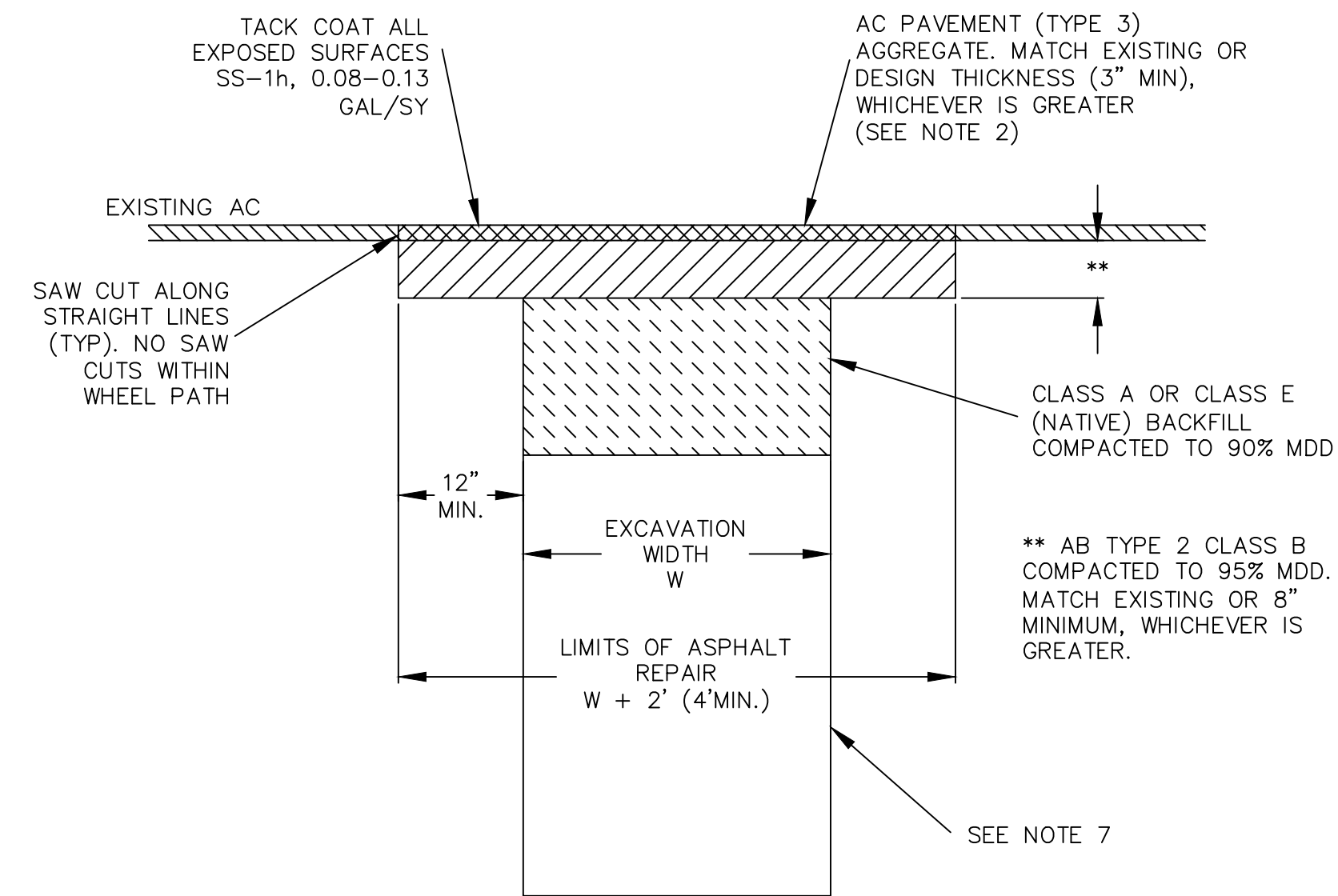
DESIGNED/DRAWN	MBG/CFW
CHECKED	MCK
DATE	03/2018
SCALE	AS SHOWN
PROJECT	PT

SHEET

D-3

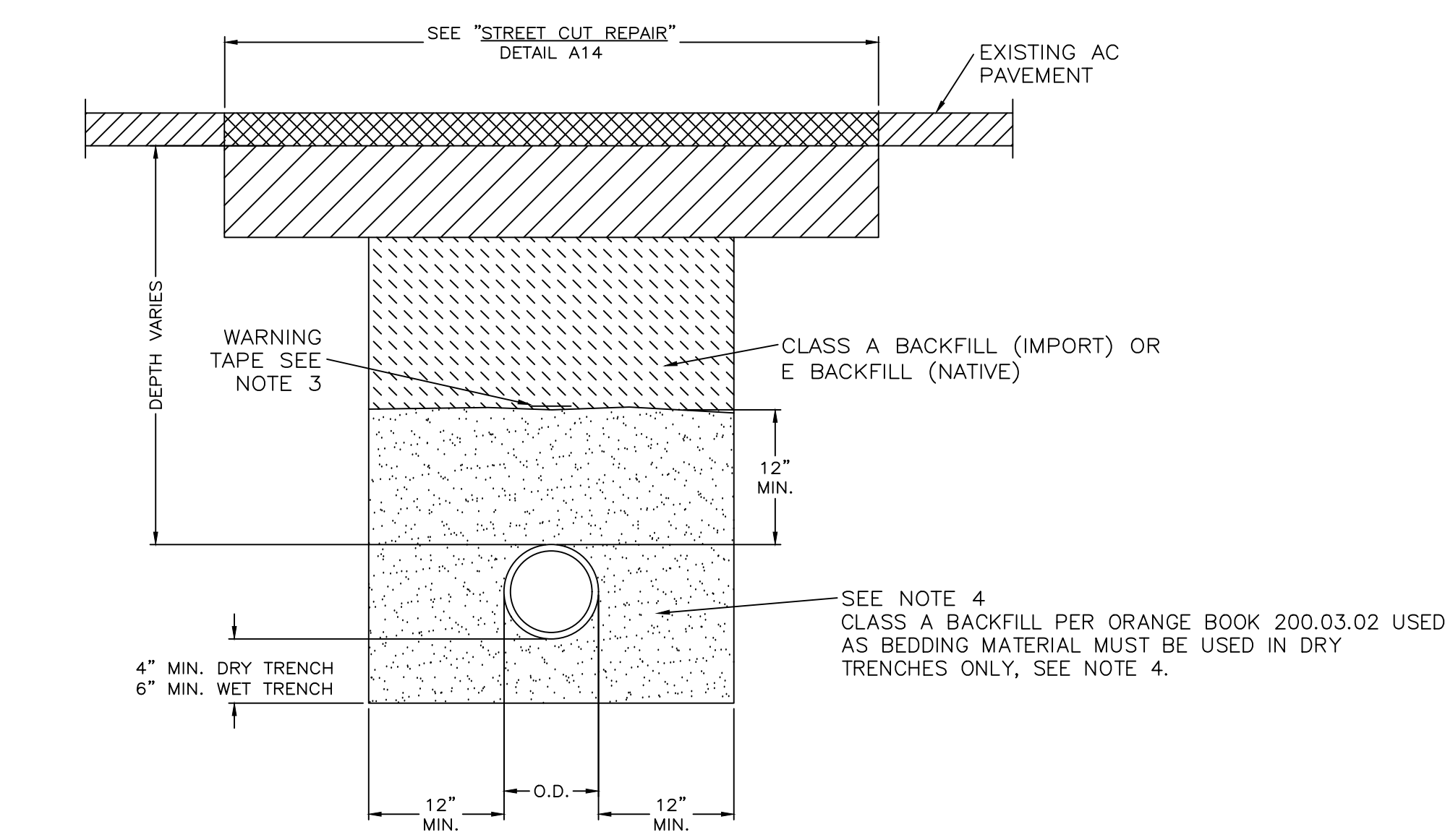
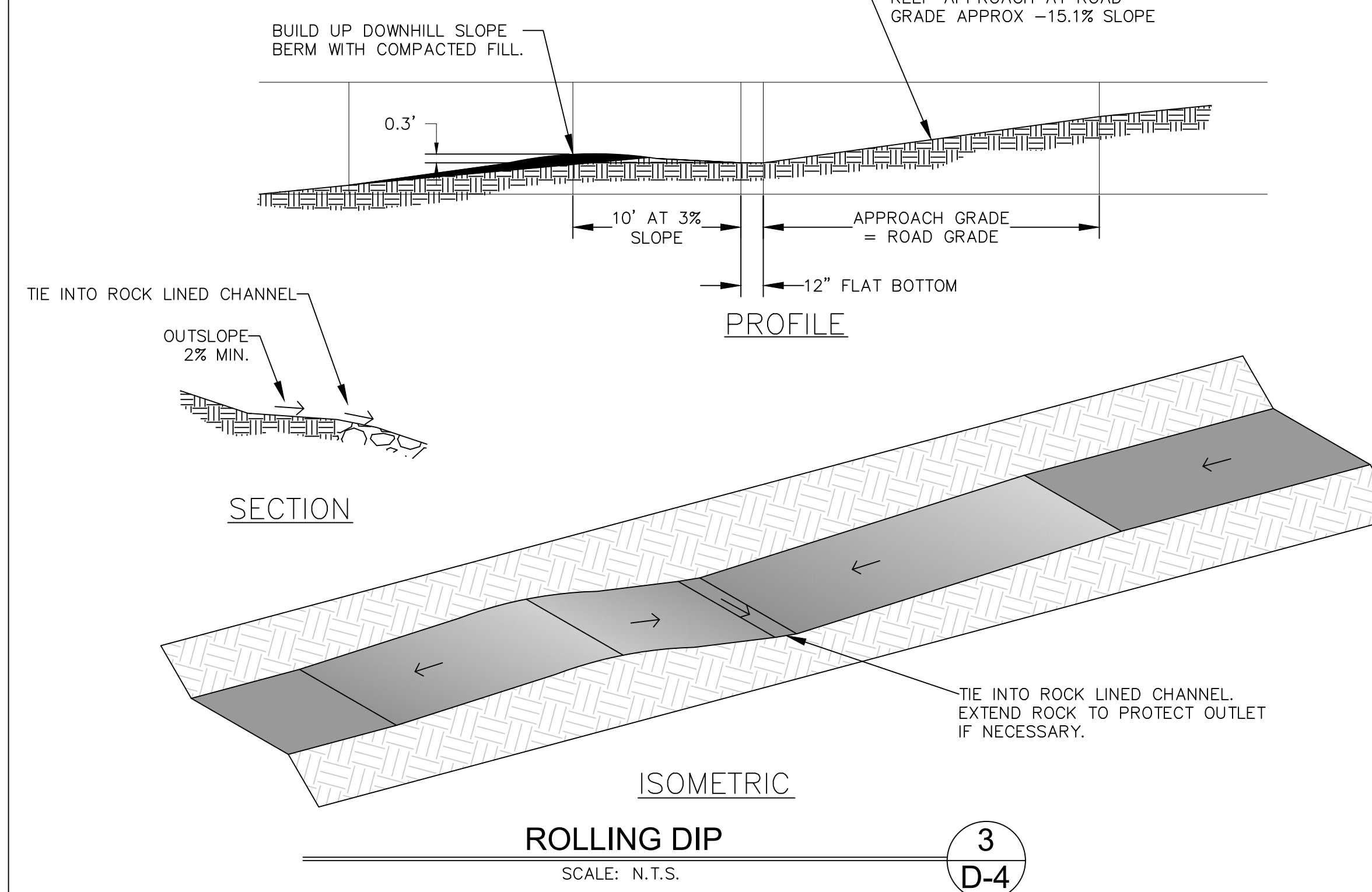
12 OF 14

90% DESIGN PLANS
NOT FOR CONSTRUCTION



- STREET CUT REPAIR NOTES:**
- BORE AND JACK OR TRENCHLESS DIRECTIONAL DRILLING IS ALLOWED.
 - PATCH WIDTH:
 - PATCHES WILL BE 4 FOOT MINIMUM, ANY DIRECTION.
 - IF EDGE OF PATCHING IS WITHIN 3 FEET OF EDGE OF PAVEMENT OR LIP OF GUTTER, REMOVE AND REPLACE AC PAVEMENT FROM PATCH TO THAT EDGE.
 - FOR PATCHING IN PAVEMENT SURFACE THAT IS LESS THAN FIVE (5) YEARS OLD OR $PCI > 80$, ENTIRE TRAVEL LANE WIDTH FOR FULL LENGTH OF PAVEMENT PATCH SHALL RECEIVE 1.5" MILL AND OVERLAY.
 - PLACE SLURRY SEAL OR CHIP SEAL ON STREETS WITH EXISTING SLURRY SEAL OR CHIP SEAL SURFACE.
 - SURFACE TOLERANCES FOR AC PAVEMENT REPAIR SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (ORANGE BOOK).
 - ASPHALT CONCRETE CONSTRUCTION MATERIALS AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (ORANGE BOOK).
 - TYPE 2 CLASS B AGGREGATE BASE SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (ORANGE BOOK).
 - ASPHALT CEMENT SHALL BE PG 64-28 NV UNLESS OTHERWISE APPROVED BY DOUGLAS COUNTY ENGINEERING. WHEN PG 64-28 NV ASPHALT CEMENT IS NOT USED, NEW ASPHALT CONCRETE SURFACE SHALL BE FOG SEALED.
 - FOR NON-COUNTY UTILITIES, PIPE ZONE BEDDING PER UTILITY PURVEYOR REQUIREMENTS. BACKFILL PER COUNTY REQUIREMENTS.

DOUGLAS COUNTY STREET CUT REPAIR 1
SCALE: N.T.S. D-4

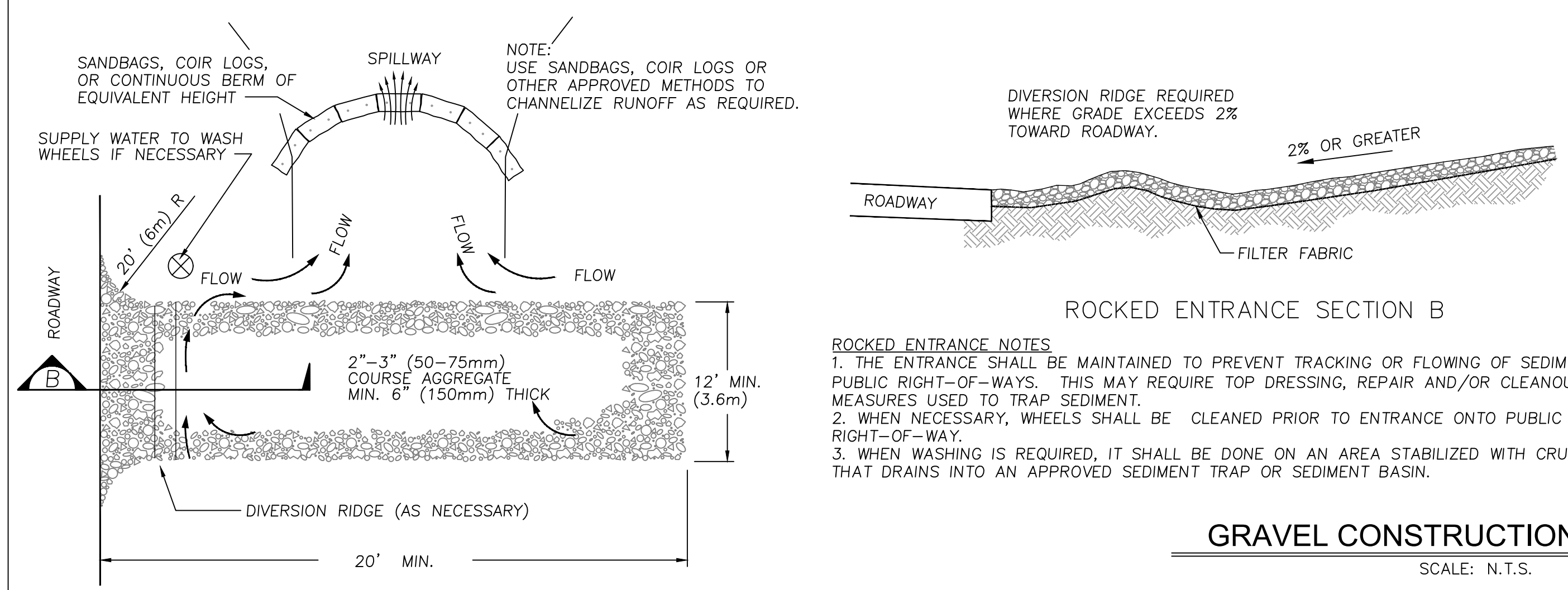
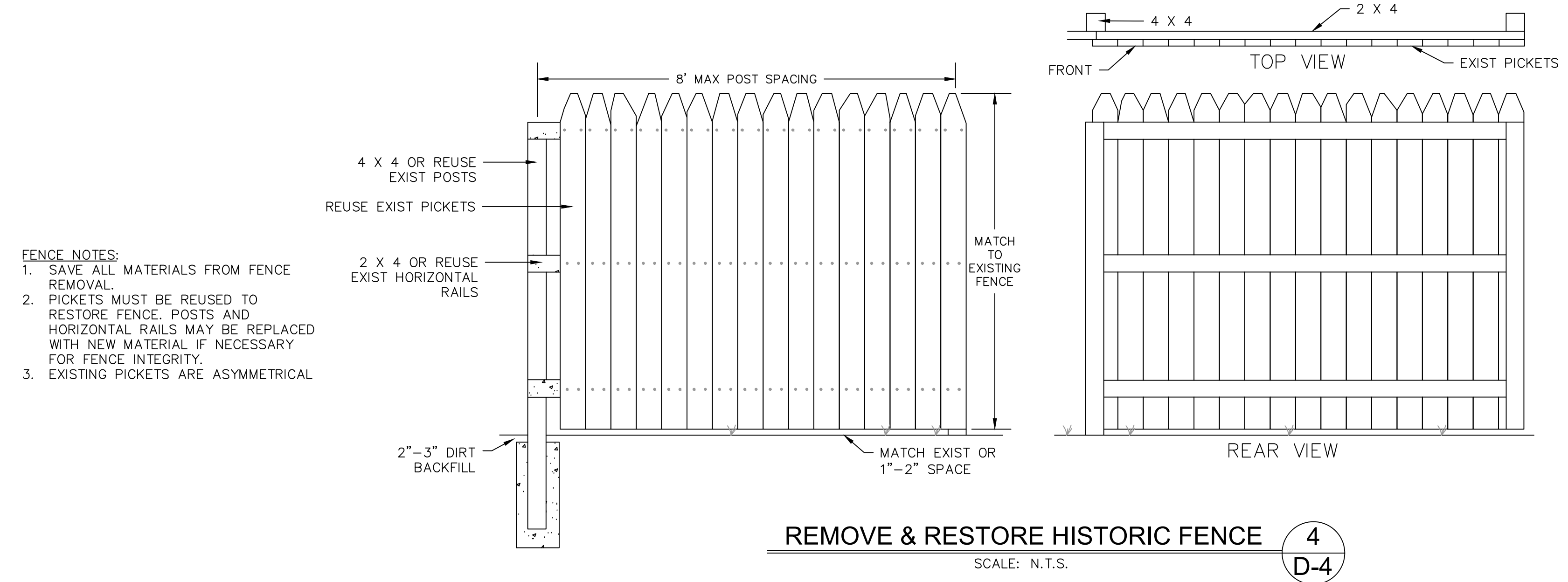


THE FOLLOWING GRADED BEDDING MATERIAL MAY BE USED IN WET TRENCHES:

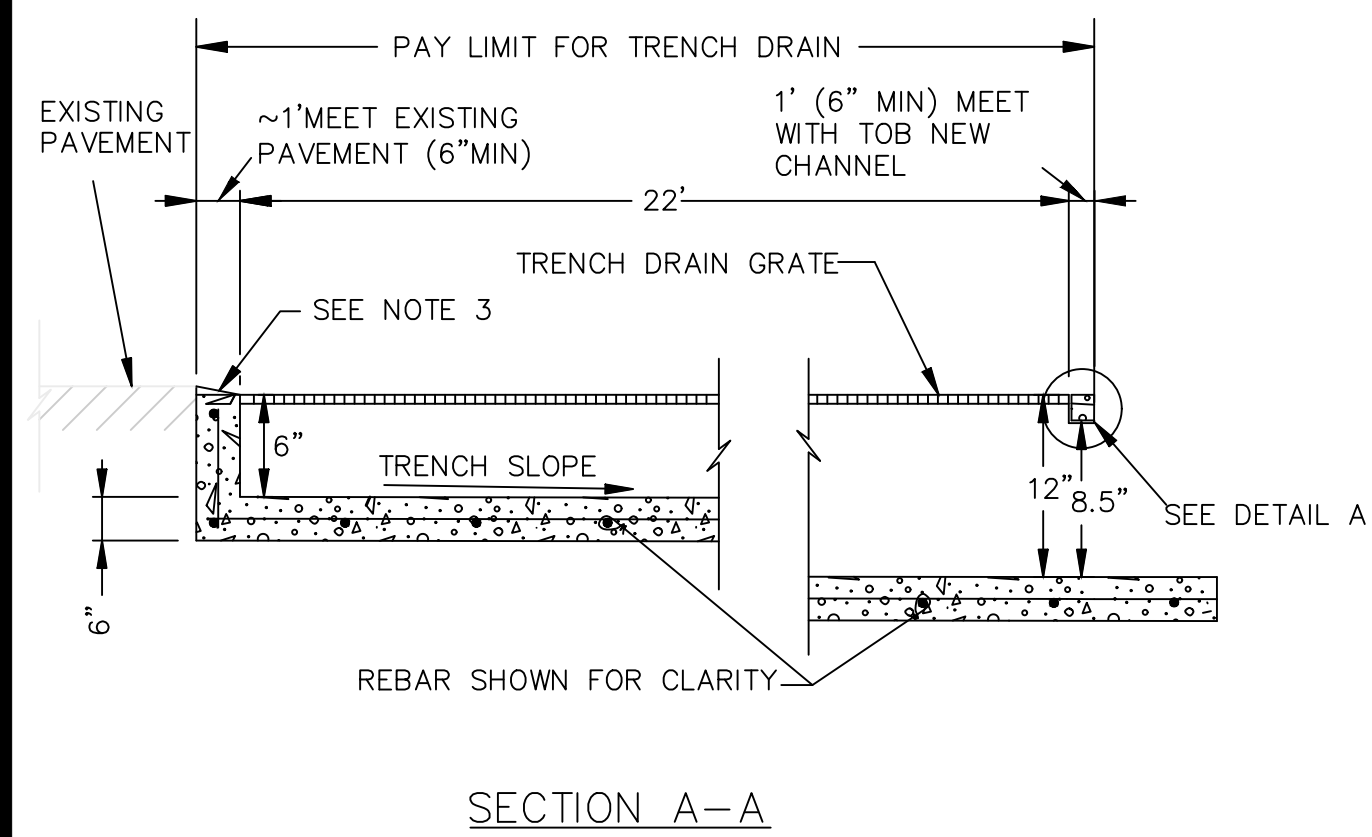
U.S. STANDARD SIEVE SIZE	PERCENT BY WEIGHT PASSING
1.5"	100%
1"	50-90%
3/4"	30-70%
3/8"	10-40%
#4	5-25%
#200	0-10%

- STORM DRAIN TRENCH NOTES:**
- ALL REQUIREMENTS OF THE STORM DRAIN UTILITY ORDINANCE MUST BE MET.
 - CLASS A AND CLASS E BACKFILL AND BEDDING MATERIAL SHALL CONFORM TO SECTION 200 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. BEDDING AND BACKFILL SHALL BE MECHANICALLY COMPACTED IN CONFORMANCE WITH SECTION 305.10 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 - PLACE WARNING TAPE 1-FOOT ABOVE STORM DRAIN PIPE. WARNING TAPE SHALL READ "CAUTION STORM DRAIN MAIN".
 - CLASS A BACKFILL AS BEDDING MATERIAL PER ORANGE BOOK 200.03.02. COMPACT OR CONSOLIDATE TO PROVIDE PROPER SUPPORT OF PIPE.
 - UTILIZE WATER STOP FOR WET TRENCHES.

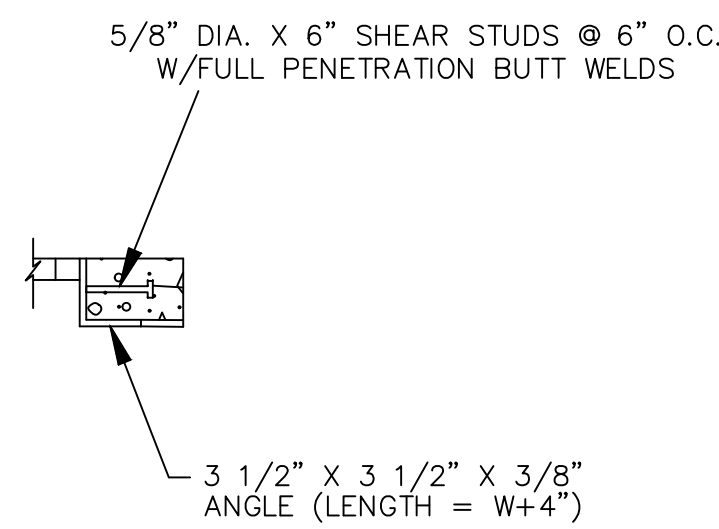
DOUGLAS COUNTY STORM DRAIN TRENCH 2
SCALE: N.T.S. D-4



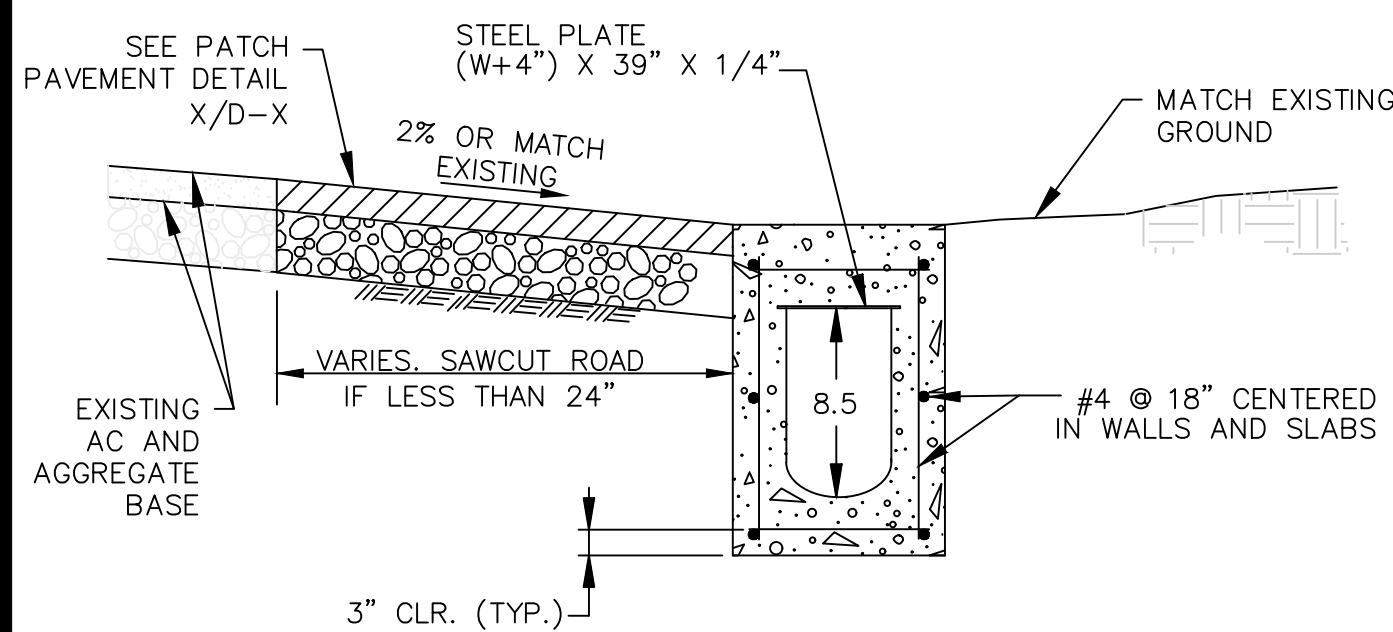
DESIGNED/DRAWN	MBG/CFW
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DATE	03/2018
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PROJECT	PT



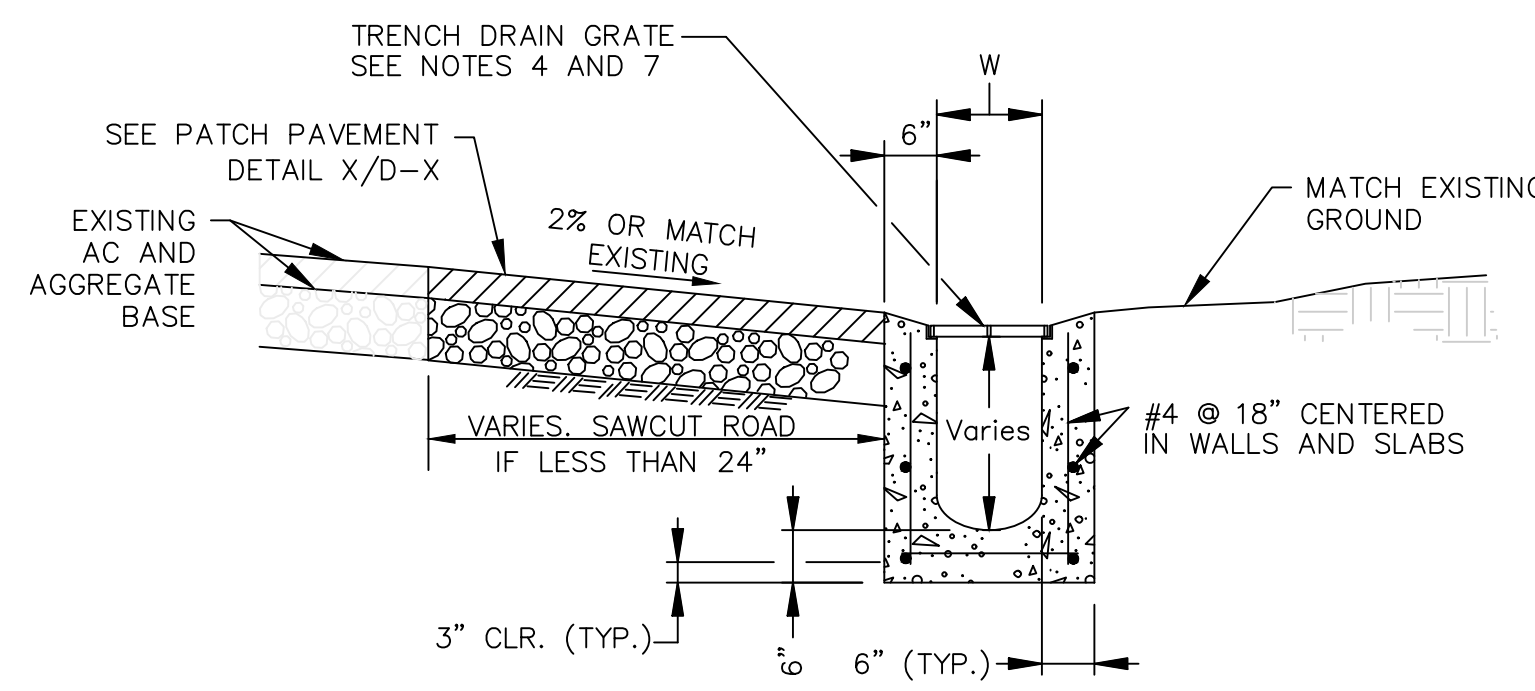
SECTION A-A



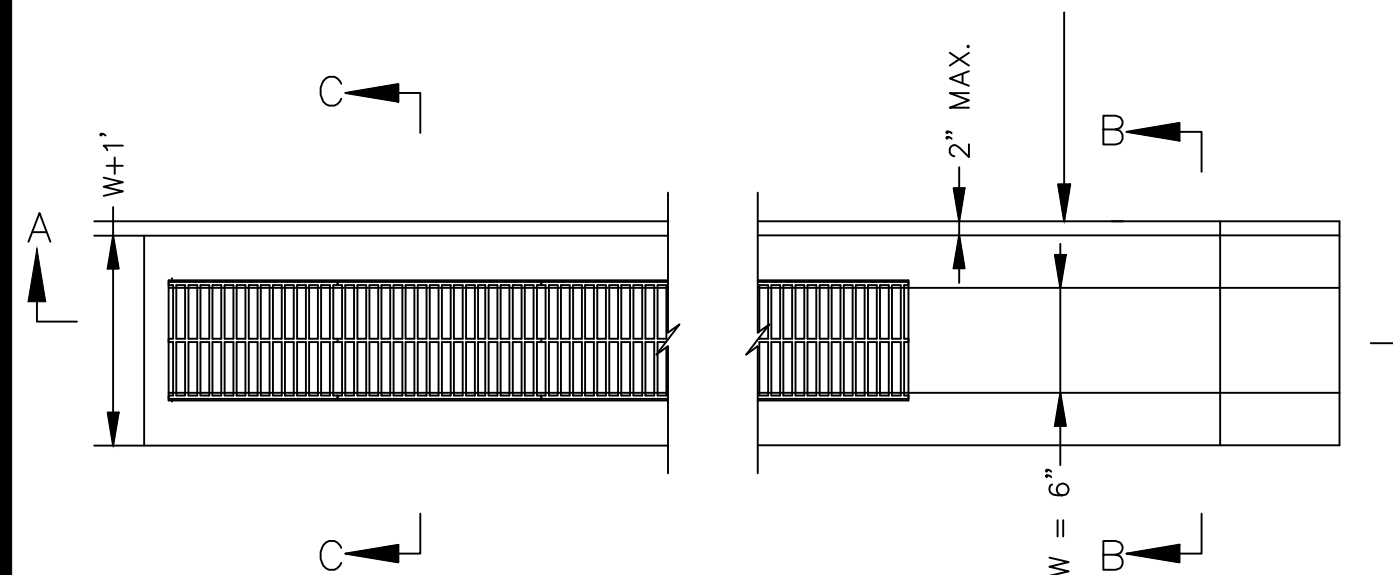
DETAIL A



SECTION B-B



SECTION C-C



PLAN

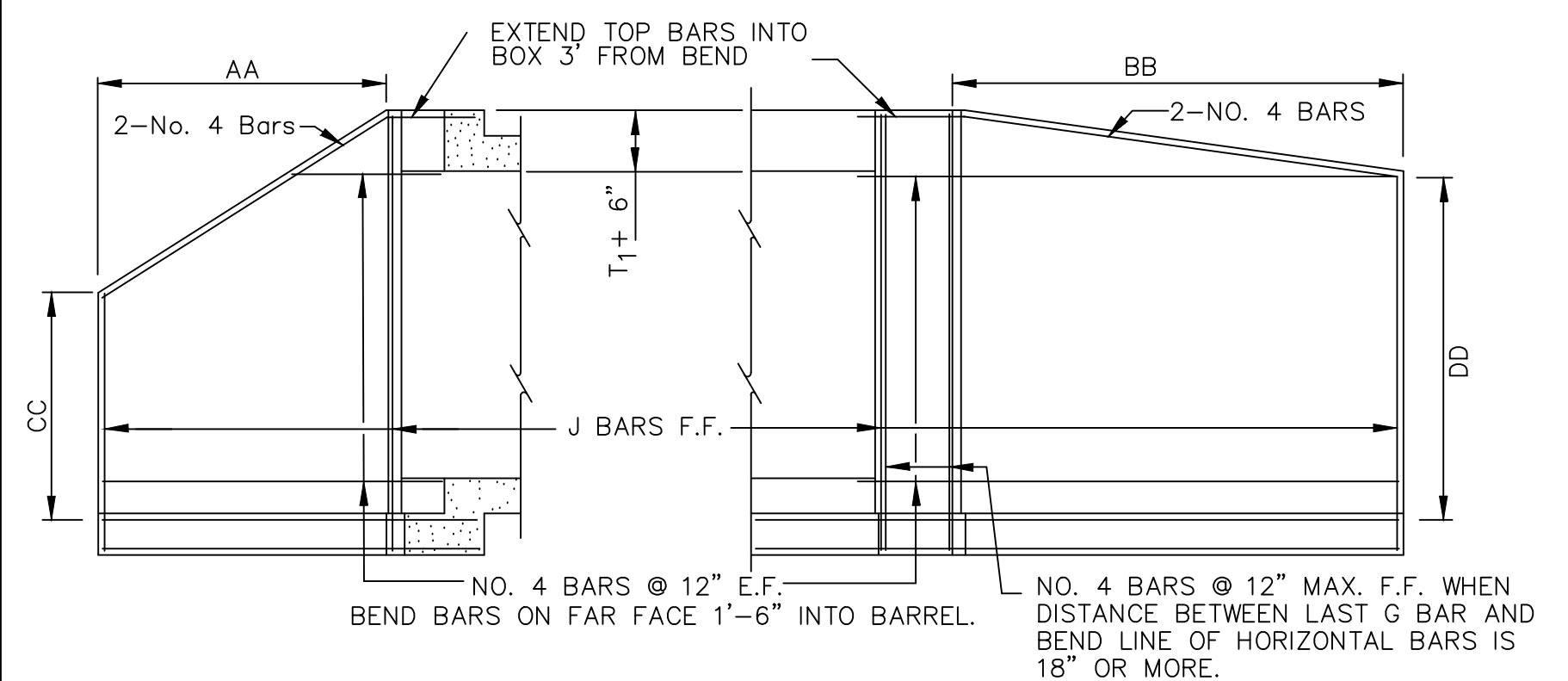
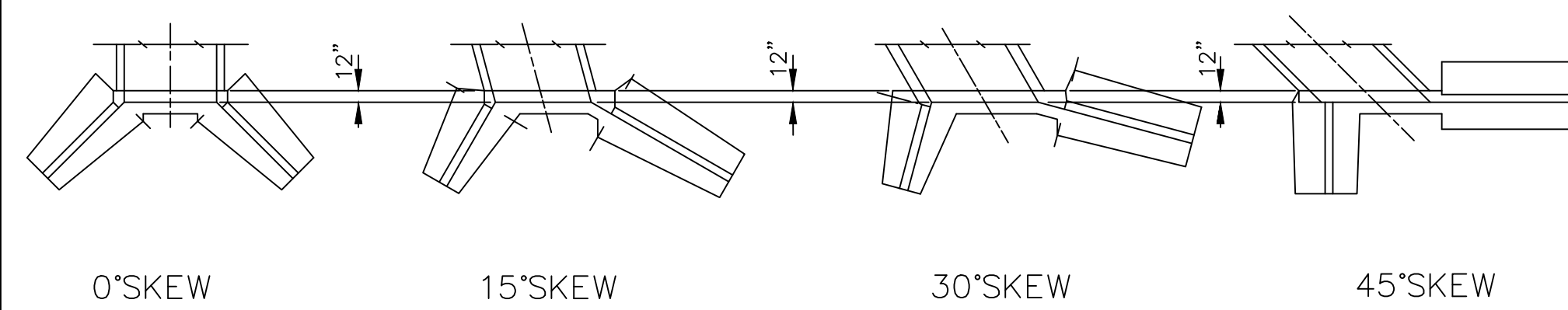
TRENCH DRAIN NOTES:

1. TRENCH DRAIN PRODUCTS SHALL BE ABT TRENCHFORMER OR APPROVED EQUAL. PRODUCTS SHALL BE FROM NDOT QUALIFIED PRODUCT LIST (QPL) FOUND AT http://www.nevadadot.com/About_NDOT/NDOT_Divisions/Planning/Research/Qualified_Products_List.aspx
2. REVISIONS REQUIRE APPROVAL BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
3. CONSTRUCTION OF THE TRENCH DRAIN SHALL FOLLOW THE MANUFACTURERS RECOMMENDATIONS.
4. TRENCH DRAIN GRATE TO BE 1/4" TO 3/8" BELOW ADJACENT PAVEMENT SURFACE.
5. ALL CONCRETE SHALL BE CLASS A OR AA.
6. GRATE SHALL BE H-20 LOAD RATED AND BICYCLE SAFE.
7. ALL GRATES SHALL BE REMOVABLE. USE TWO-PIECE GRATES THROUGHOUT.
8. TRENCH DRAIN SHALL BE CONNECTED DIRECTLY INTO ROCK LINED CHANNEL. OUTLET SHALL BE AT LEAST 0.5 FT ABOVE CHANNEL FLOWLINE.
9. FORM TRENCH DRAIN OUTLET TO BLEND WITH ROCK LINE CHANNEL SIDE SLOPE.

TRENCH DRAIN

SCALE: N.T.S.

1
D-5

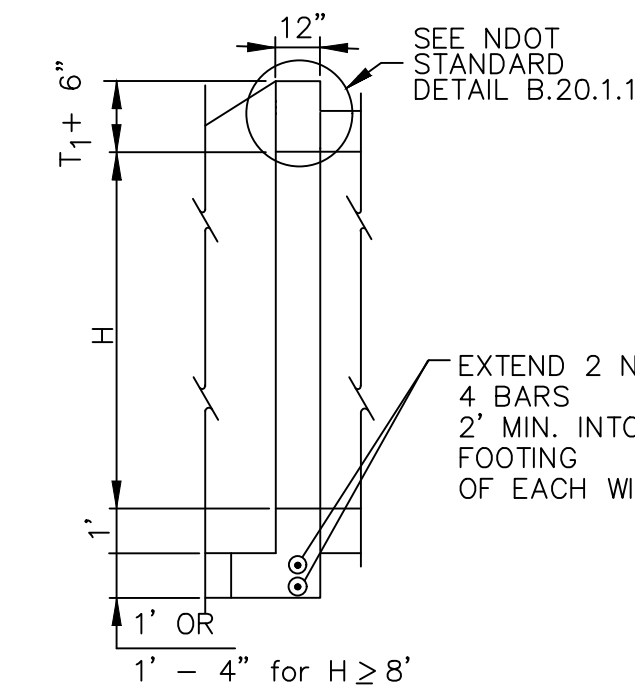


FOR BOXES WITH 0° SKEW BOTH WINGS ARE AS SHOWN FOR WING A.

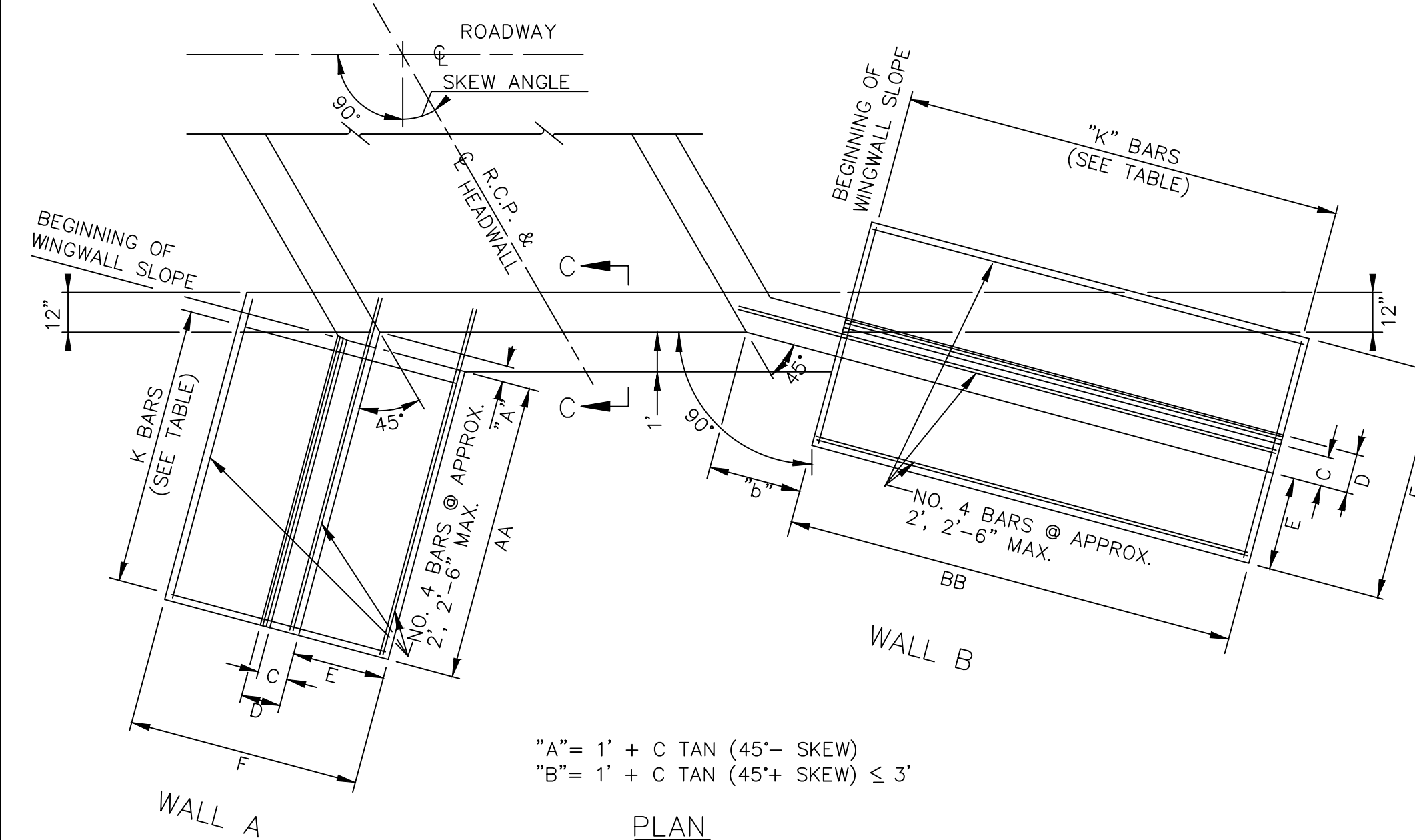
WALL A

WALL B

SECTION

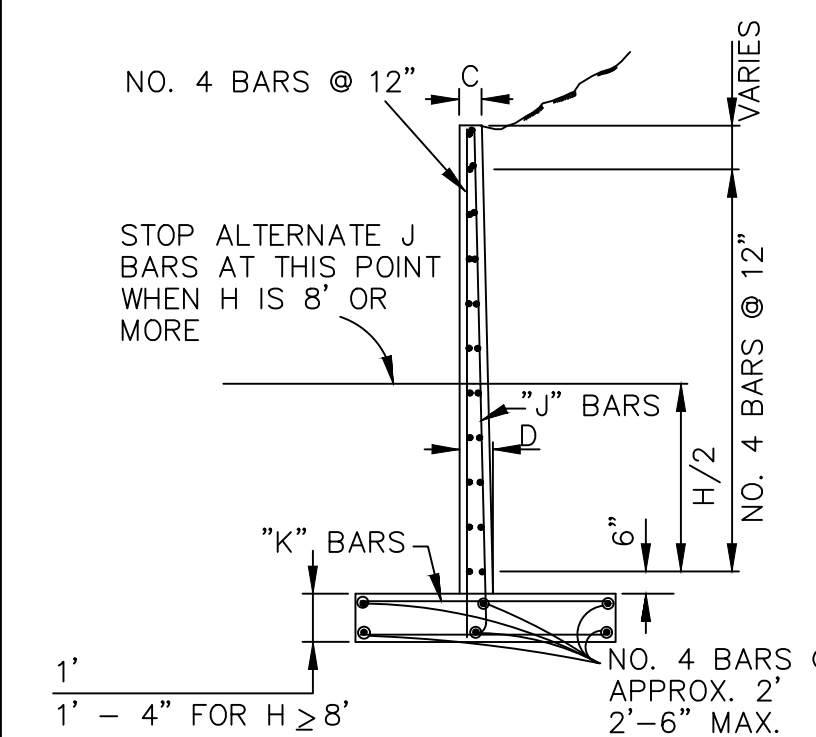


SECTION C-C
(T₁ = Minimum 9")



"A" = 1' + C TAN (45°- SKEW)
"B" = 1' + C TAN (45°+ SKEW) ≤ 3'

PLAN



SECTION OF WALLS A AND B

TYPE 1 HEADWALL DIMENSIONS AND REINFORCING STEEL													
0 DEGREE SKEW, H=6'													
H	AA	BB	CC	DD	C	D	J	J	K	K	E	F	
[FT]	[FT IN]	[FT IN]	[FT IN]	[FT IN]	[IN]	[IN]	[SIZE]	[SPACING]	[SIZE]	[SPACING]	[FT IN]	[FT IN]	
6	10 9	10 9	4 10	4 10	8	12	5	6	5	6	1 0	3 3	

NDOT HEADWALL

SCALE: N.T.S.

2
D-5

90% DESIGN PLANS NOT FOR CONSTRUCTION

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PT
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D-5
14 OF 14