# NEVADA TAHOE CONSERVATION DISTRICT

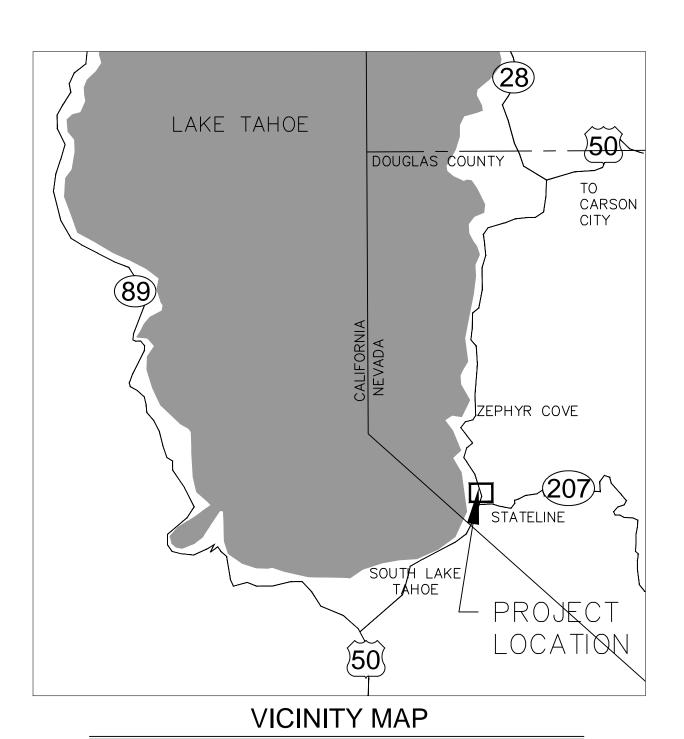
# BURKE CREEK HIGHWAY 50 CROSSING AND REALIGNMENT PROJECT - PHASE 1

IN THE COUNTY OF DOUGLAS



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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

# APPROVAL:

ERIK NILSSEN, P.E. **COUNTY ENGINEER** DOUGLAS COUNTY, NEVADA

MATTHEW NUSSBAUMER, P.E PRINCIPAL HYDRAULIC ENGINEER

DATE

NEVADA DEPARTMENT OF TRANSPORTATION

DESIGNED/DRAWN MK/MK CHECKED DATE 03/11/2016

CREEK HV REALIGNN PF

SCALE AS SHOWN PROJECT BCC

SHEET

**PLAN** 















- ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF NEVADA TAHOE CONSERVATION DISTRICT (NTCD) & THE NEVADA DEPARTMENT OF TRANSPORTATION (NDOT). IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND THE MOST RECENT STANDARD SPECIFICATIONS & PLANS FOR ROAD & BRIDGE CONSTRUCTION ("STANDARD SPECIFICATIONS"). AND CONSTRUCTION NOT SPECIFIED IN THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. 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.
- 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.
- 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.
- 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 IS REQUIRED AT ALL CROSS DRAIN OUTLETS. 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.
- 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.
- 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 FNGINFER. 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.
- 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.
- 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.
- 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.
- O. NTCD WILL PROVIDE INITIAL TESTING AND INSPECTION OF WORK AND MATERIAL AT NTCD'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.
- 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. NOISE GENERATING ACTIVITIES WILL BE LIMITED TO THE HOURS OF 8:00 AM TO 6:30 PM.
- 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.
- 13. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK TO WATER AREAS AS NECESSARY TO CONTROL DUST. THE CONTRACTOR WILL PROVIDE SWEEPING PER SPECIFICATION.
- 14. ALL TREES AND NATURAL VEGETATION TO REMAIN ON THE SITE SHALL BE PROTECTED PER TRPA.
- 15. 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.
- 16. 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.
- 17. 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.
- 18. 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.
- 19. NO WASHING OF VEHICLES OR HEAVY EQUIPMENT, INCLUDING CEMENT MIXERS, SHALL BE PERMITTED ANYWHERE ON THE SUBJECT PROPERTY UNLESS AUTHORIZED BY TRPA IN WRITING.
- 20. NO VEHICLE OR HEAVY EQUIPMENT SHALL BE ALLOWED IN A STREAM ENVIRONMENT ZONE OR WET AREA EXCEPT AS AUTHORIZED BY TRPA.
- 21. ALL CONSTRUCTION SHALL BE WINTERIZED BY OCTOBER 15 TO REDUCE THE WATER QUALITY IMPACTS ASSOCIATED WITH WINTER WEATHER.
- 22. 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
- 23. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE TRUCKEE MEADOWS CONSTRUCTION SITE BEST MANAGEMENT PRACTICE HANDBOOK.
- 24. 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.
- 25. 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 NVR100000, SECTION 1.B.1.g. AND THE PROJECT SWPPP

26. TRAFFIC CONTROL AND LANE CLOSURES WILL BE PER NDOT STANDARD SPECIFICATIONS.

27. ACCESS TO BUSINESSES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION

#### A D D D E \ // A T I O N I O

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

#### UTILITIES

CABLE TELEVISION CHARTER COMMUNICATIONS, (775) 588-1077 NATURAL GAS SOUTHWEST GAS, (877) 860-6022 ELECTRIC NV ENERGY, (775) 834-4444 STORM DRAIN DOUGLAS COUNTY PUBLIC WORKS (775) 782-9989 SEWER DOUGLAS COUNTY SEWER IMPROVEMENT DISTRICT (775) 588-3558 WATER KINSGBURY GID, (775) 588-3548 FRONTIER (775) 782-0966 PHONE USA DIGS (800) 642-2444 OR 811

#### **LEGEND**

NOTE: LEGENDS PROVIDED ON INDIVIDUAL PLAN SHEETS OVERRIDE THIS LEGEND

OR — CONCRETE

ASSESSOR PARCEL NUMBER

958 TYNER ST. PHYSICAL ADDRESS (PRIVATE LOT)

CONTROL POINT

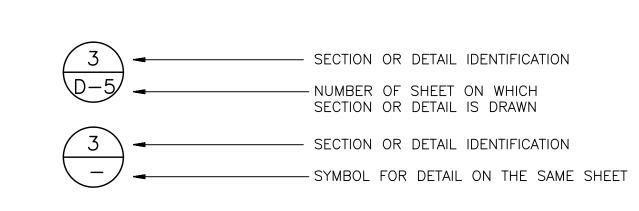
BUILDING

--- PRIVATE DRIVEWAY

ROCK LINED CHANNEL

EXISTING ROCK WALL

EXISTING	<u> </u>	PROPOSED	_
	- MAJOR CONTOUR		MAJOR CONTOUR
	MINOR CONTOUR		MINOR CONTOUR
6695	EXISTING MAJOR CONTOUR LABEL	6694	PROPOSED MAJOR CONTOUR LABEL
5+00	EXISTING ALIGNMENT	<del></del>	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	— CLF —	CONSTRUCTION LIMIT FENCE
— SD —	STORM DRAIN LINE	— FF —	FILTER FENCE
	CATCH BASIN	·	SEDIMENT ROLL
MH	STORM DRAIN MANHOLE		EROSION CONTROL BLANKET
W	- WATER LINE		STAGING AREA
[WM] W√	WATER METER/ VALVE		PROPOSED PIPE
SS	SANITARY SEWER LINE	30 St. 18	PROPOSED CONCRETE
SS	SANITARY SEWER MANHOLE	Ψ Ψ Ψ	PROPOSED VEGETATION/WILLOW
— ОН E—	OVERHEAD ELECTRIC LINE		ROCK LINED CHANNEL (PLAN VIEW)
-0-	POWER POLE	+ + + + + + +	SEDIMENT REMOVAL
UG T	UNDER GROUND TELEPHONE LINES		DOCK (SECTION MEW)
— ОН Т—	OVERHEAD TELEPHONE LINES		ROCK (SECTION VIEW)
—— UG F <del>O</del>	UNDERGROUND FIBER OPTIC LINES		ROCK DISSIPATER
—— GAS —	UNDERGROUND GAS LINES		PROJECT BOUNDARY
	- DRAINAGE		
-NIT	TREE	<del></del>	PROPOSED FENCE (TYPE SPECIFIED ON PLAN)
ENT 🂝	FIRE HYDRANT		



#### HORIZONTAL AND VERTICAL PROJECTION

VERTICAL CONTROL IS DATUM NGVD 29 US FEET; HORIZONTAL CONTROL IS NDOT CONTROL LINE LPN 907 HORIZONTAL DATUM NAD 83/94 (aka NAD 83HARN) STATE PLANE COORDINATE SYSTEM NEVADA ZONE WEST (U.S. FEET) AND MODIFIED TO GROUND COMBINED SCALE FACTOR OF 0.9997370692

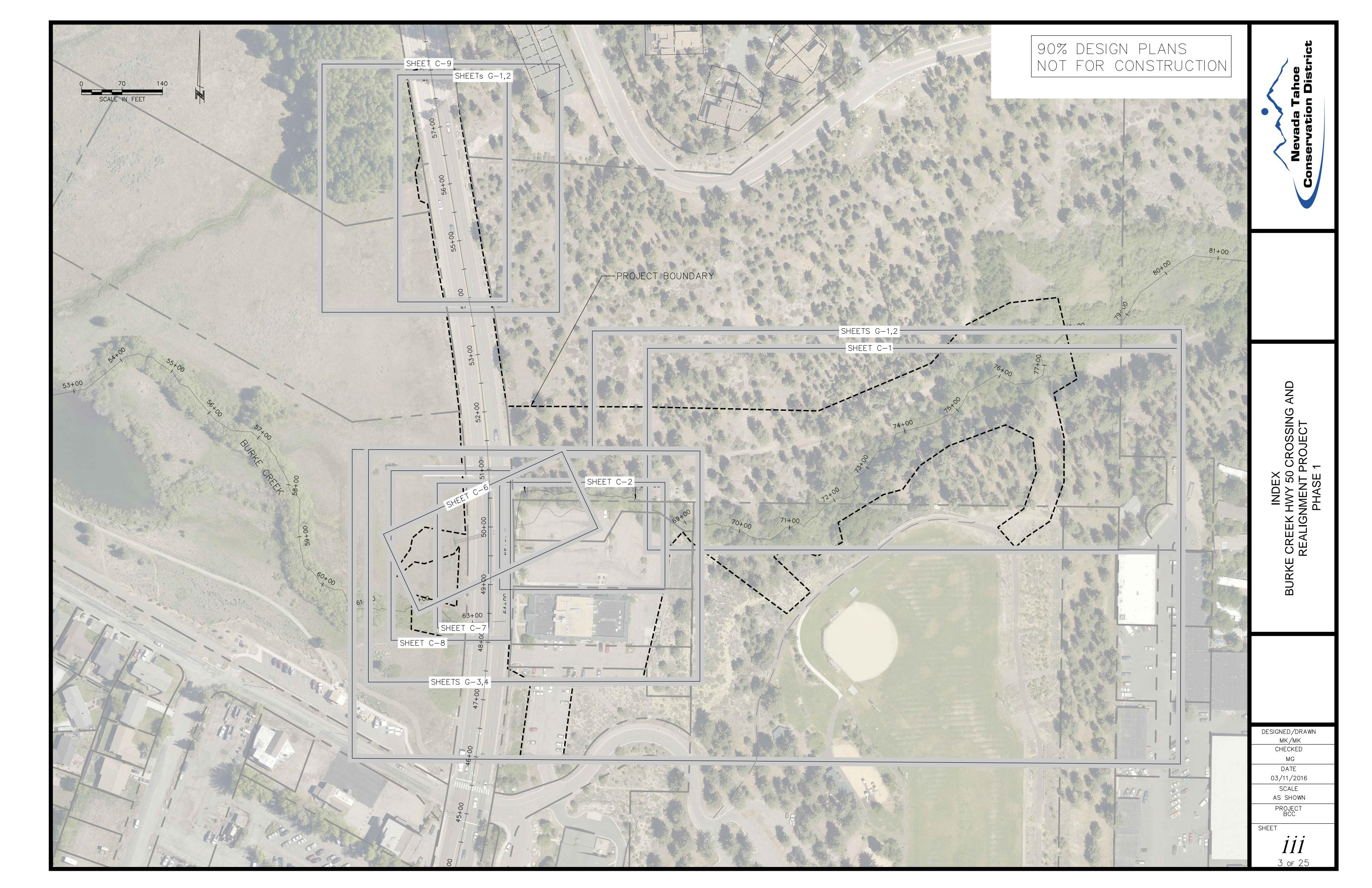
> 90% DESIGN PLANS NOT FOR CONSTRUCTION

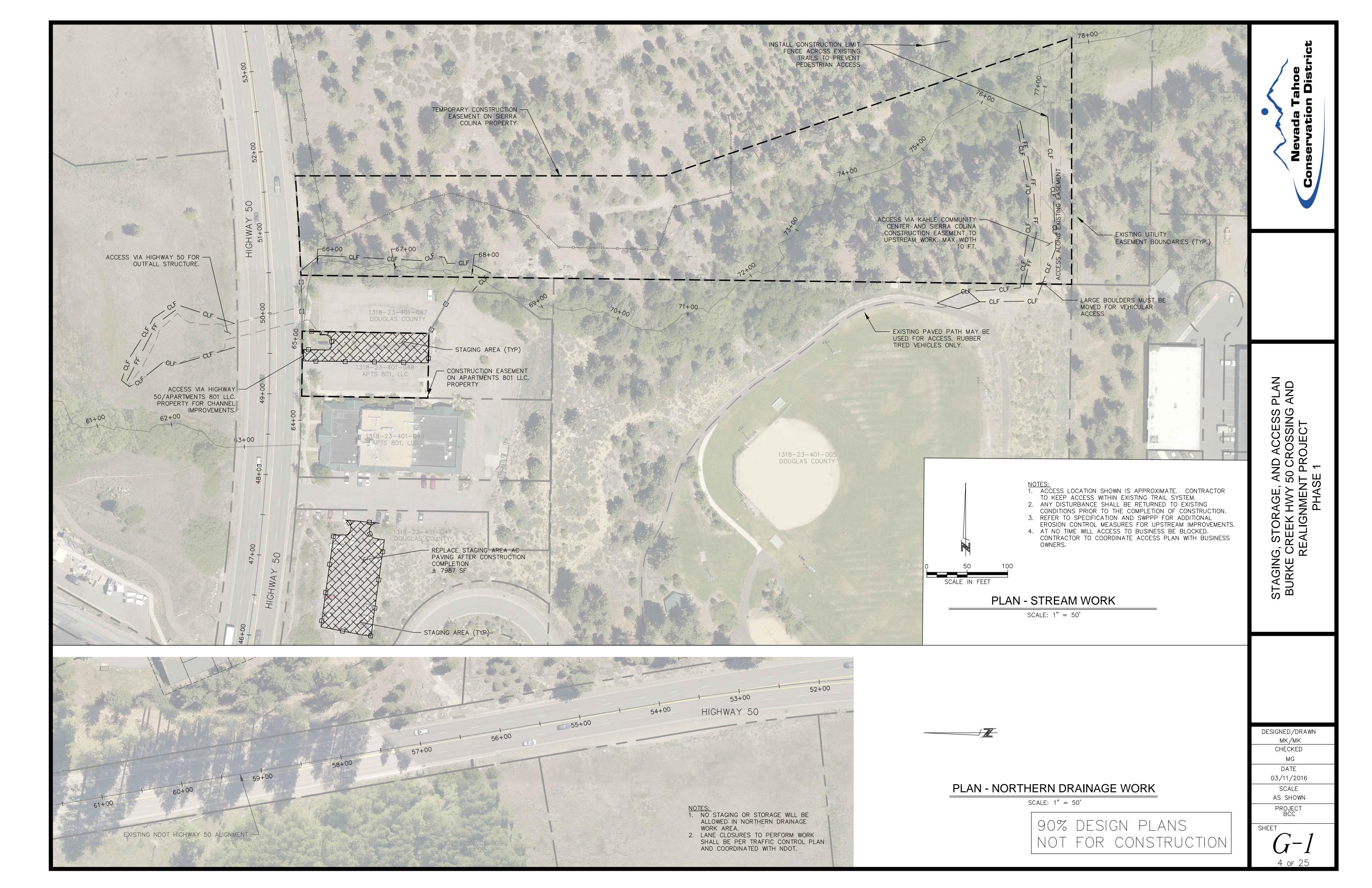


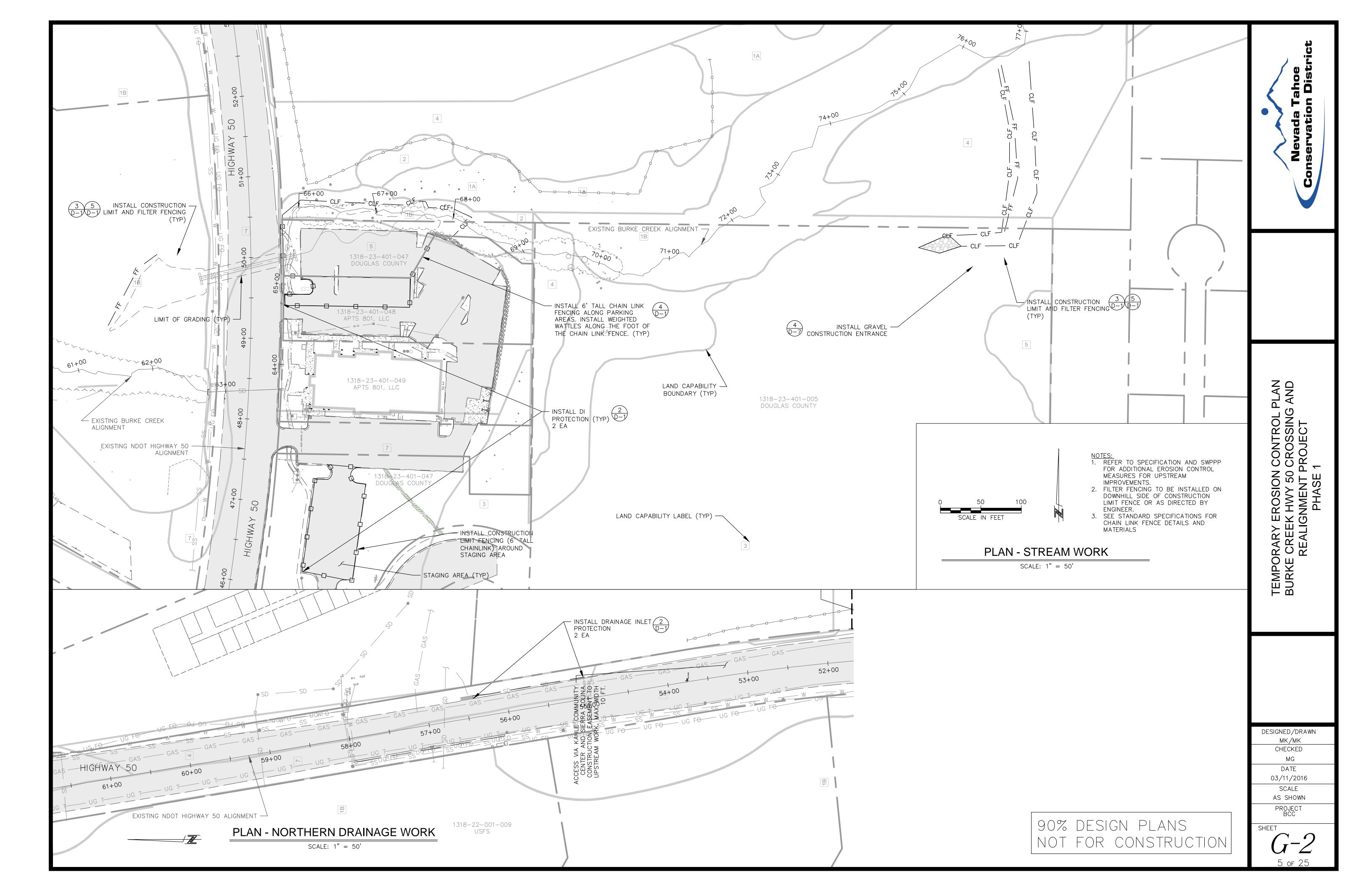
50 GENER REEK HI ALIGNIN PI R/ 

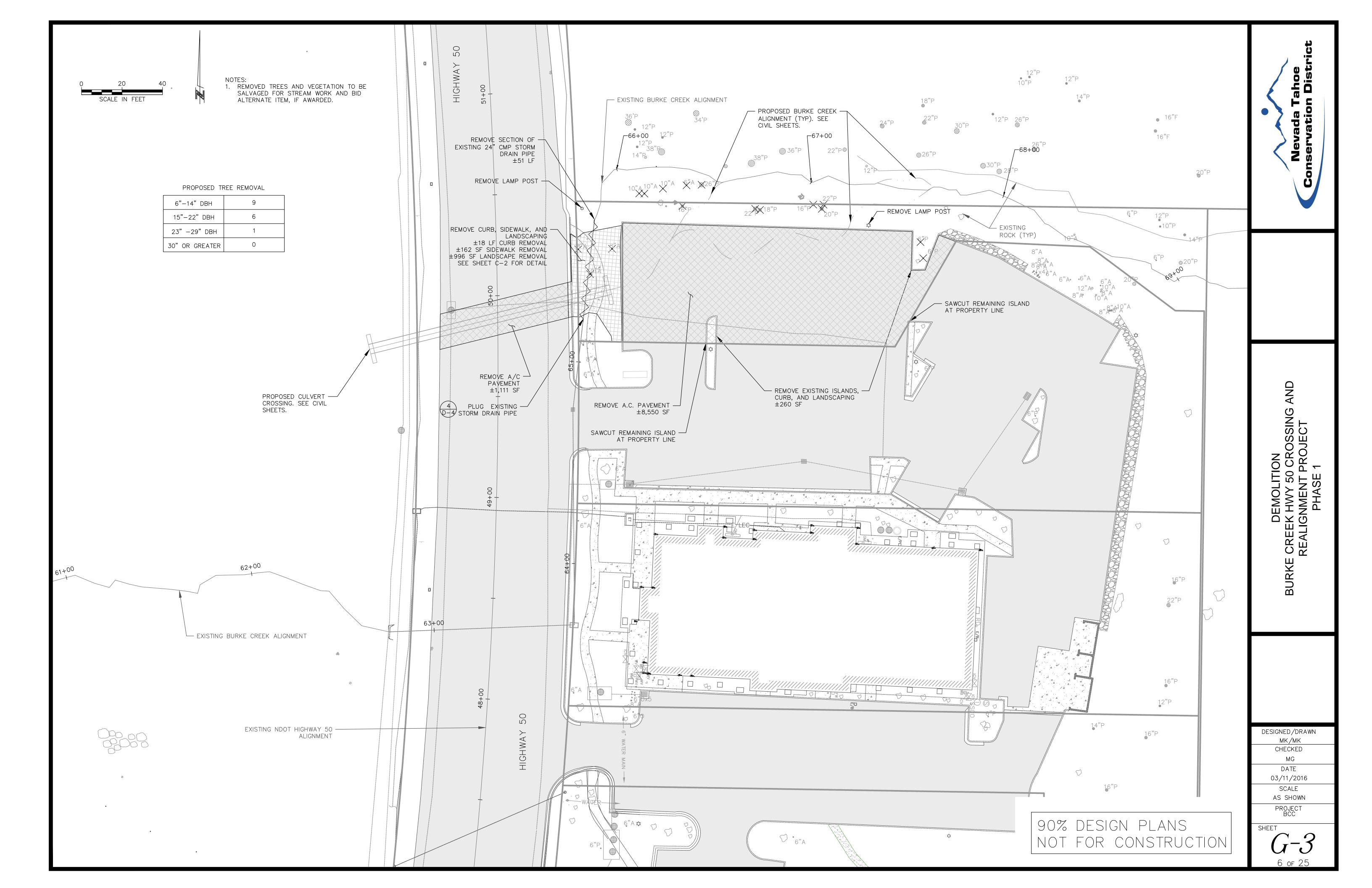
DESIGNED/DRAWN MK/MK CHECKED MG DATE 03/11/2016 SCALE AS SHOWN PROJECT BCC

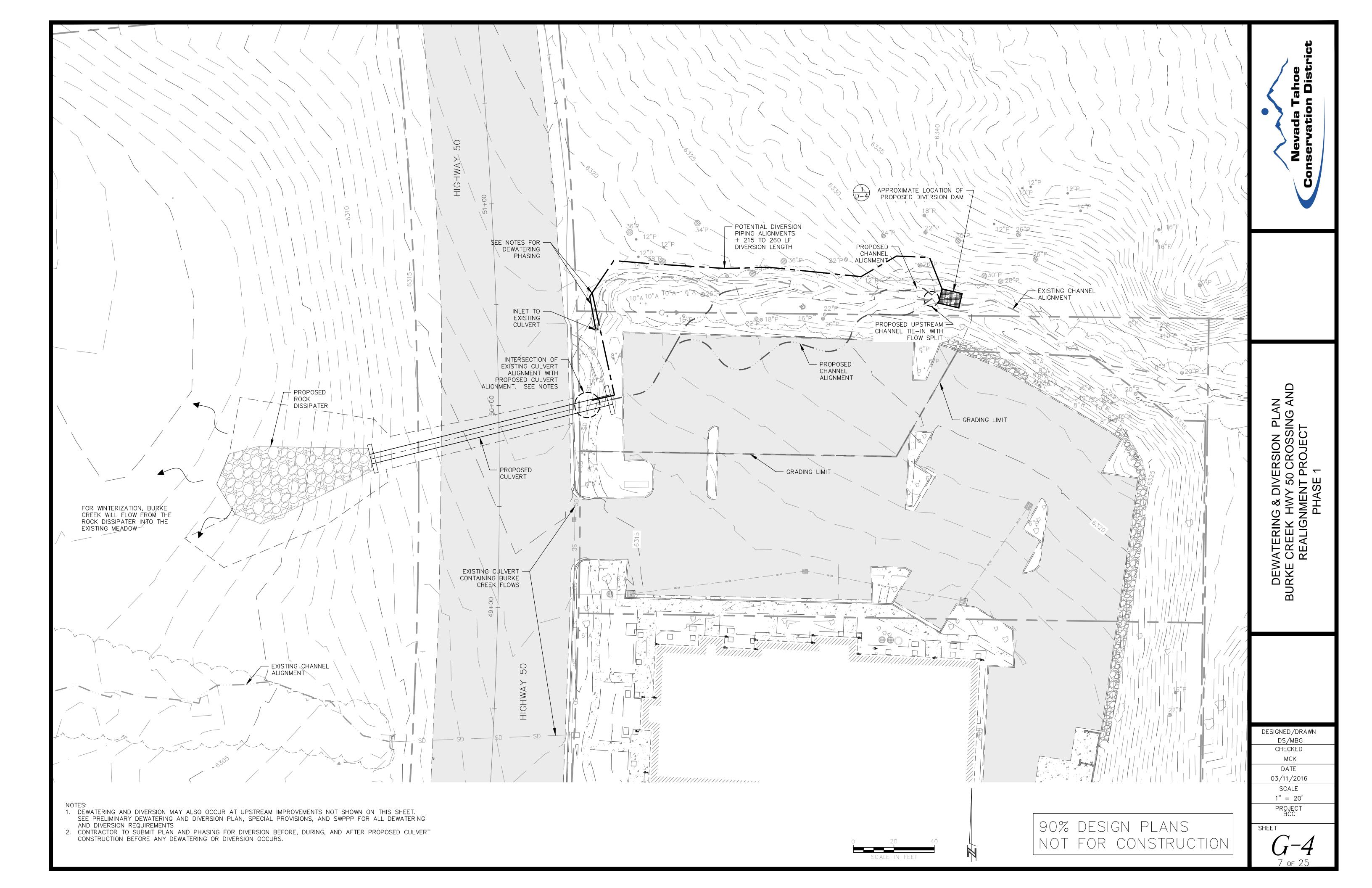
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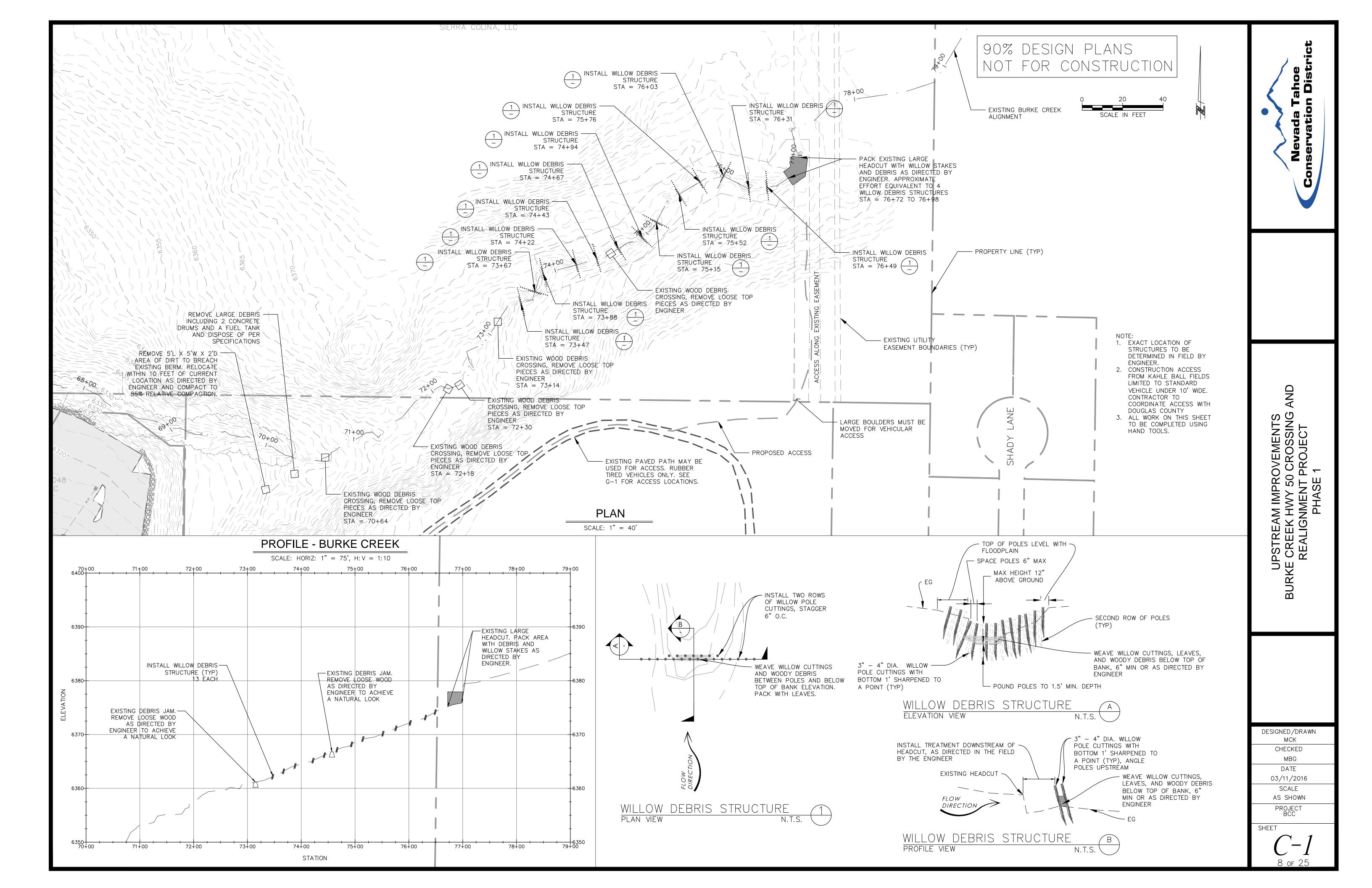


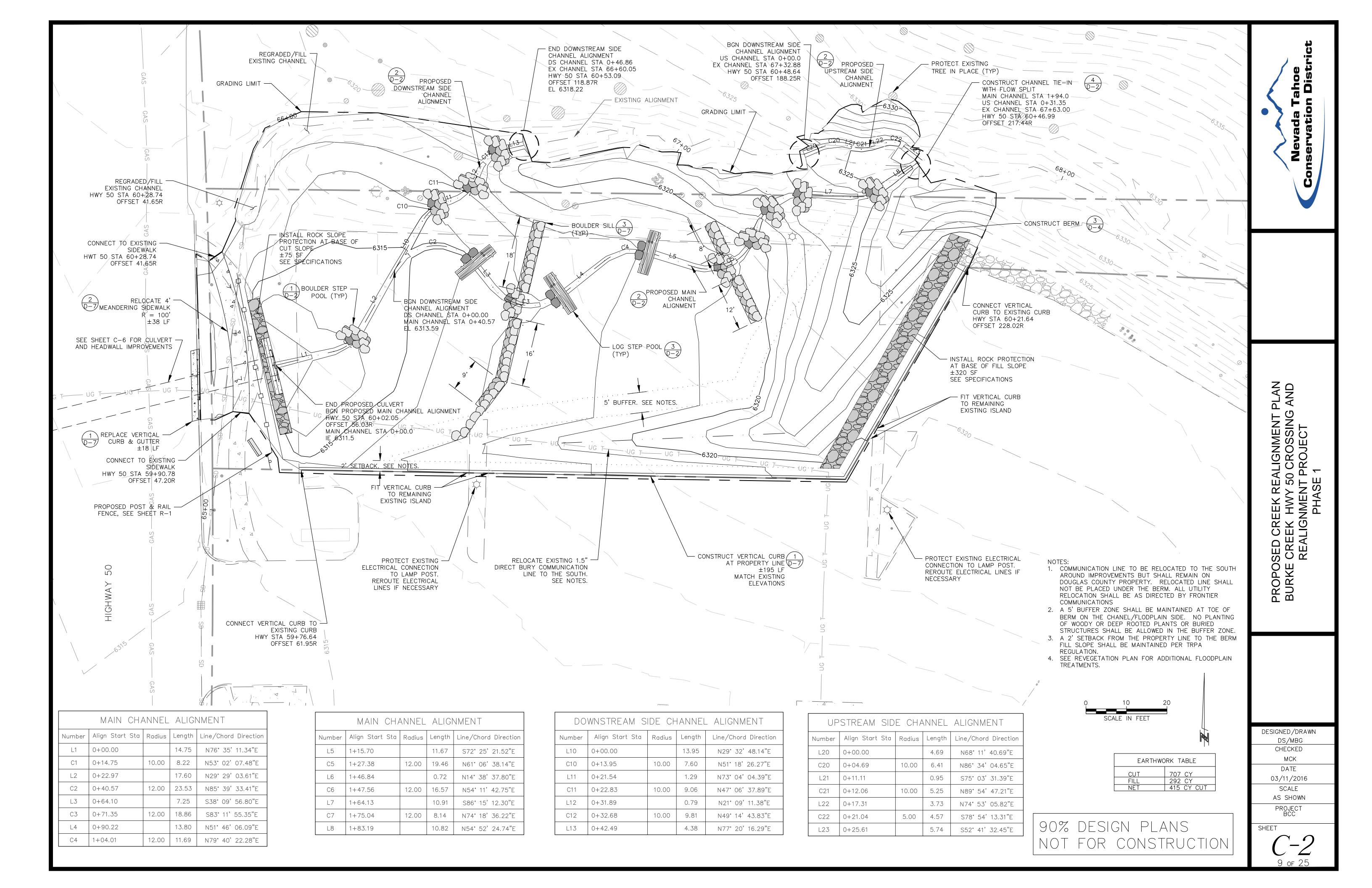


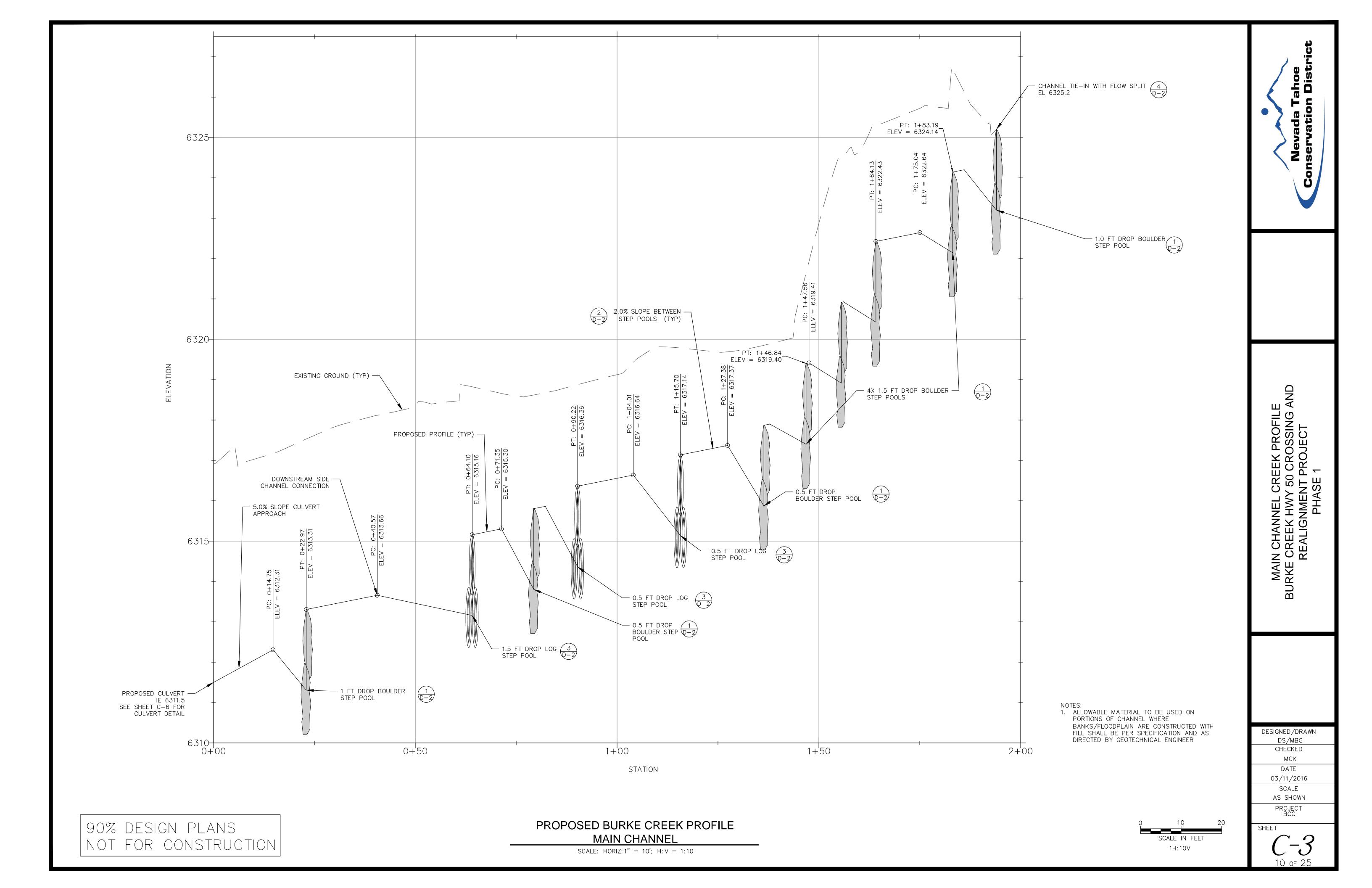


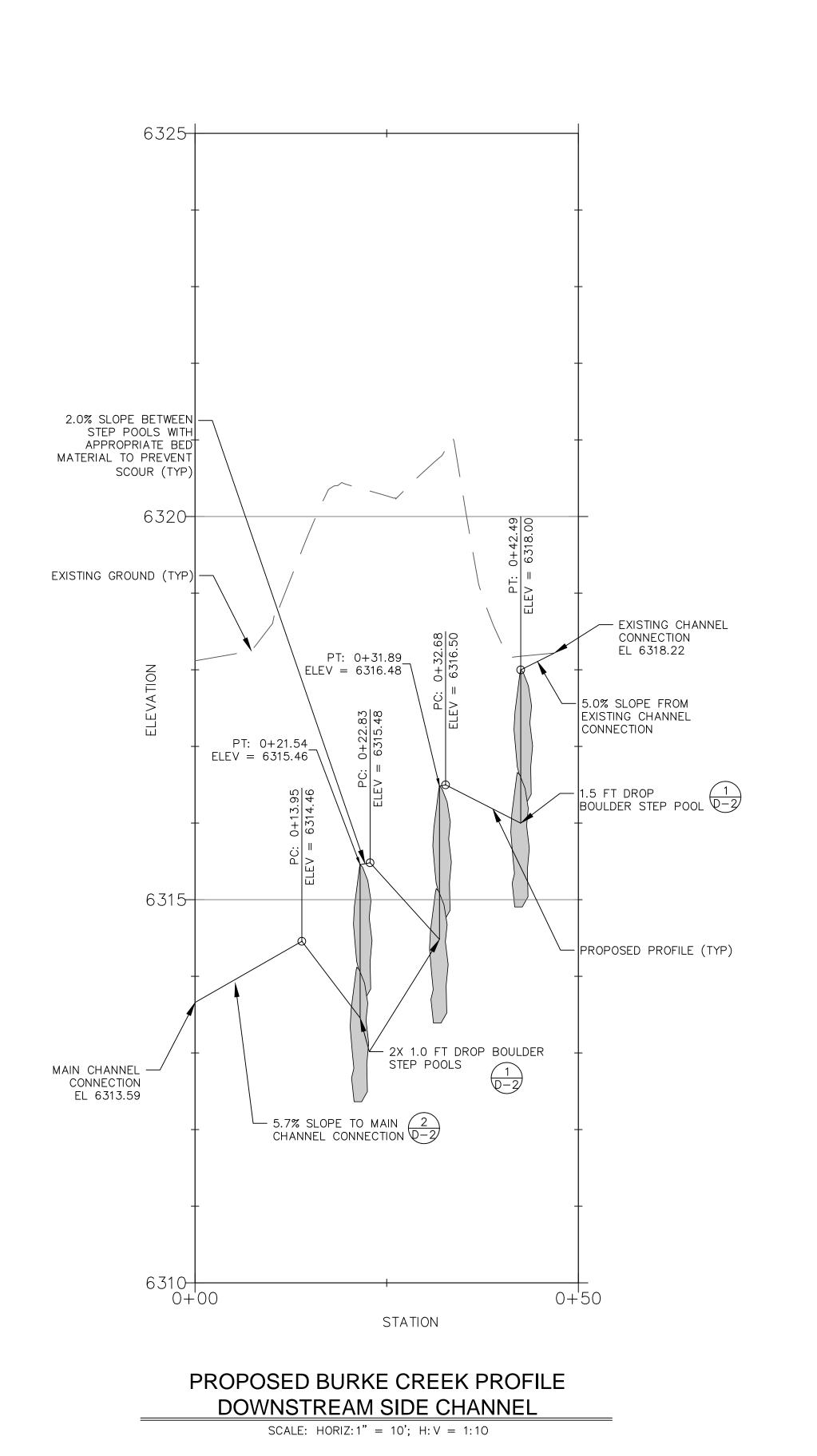


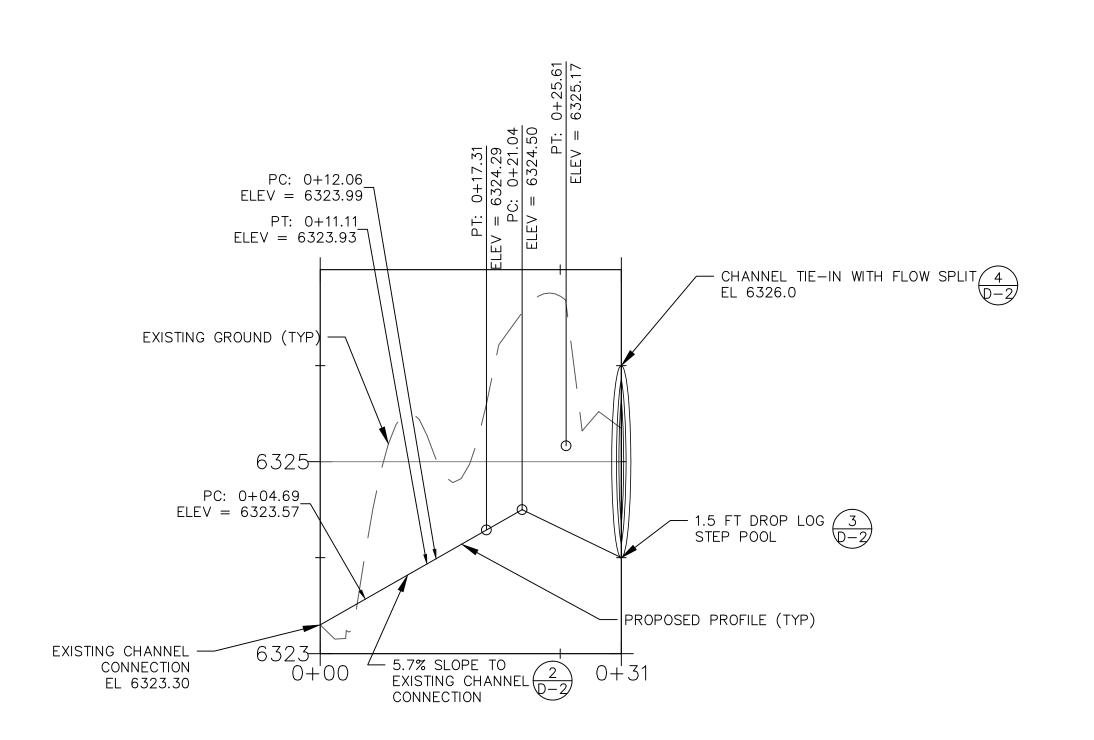












# PROPOSED BURKE CREEK PROFILE UPSTREAM SIDE CHANNEL

SCALE: HORIZ:1" = 10'; H:V = 1:10

0 10
SCALE IN FEET
1H:10V

90% DESIGN PLANS
NOT FOR CONSTRUCTION

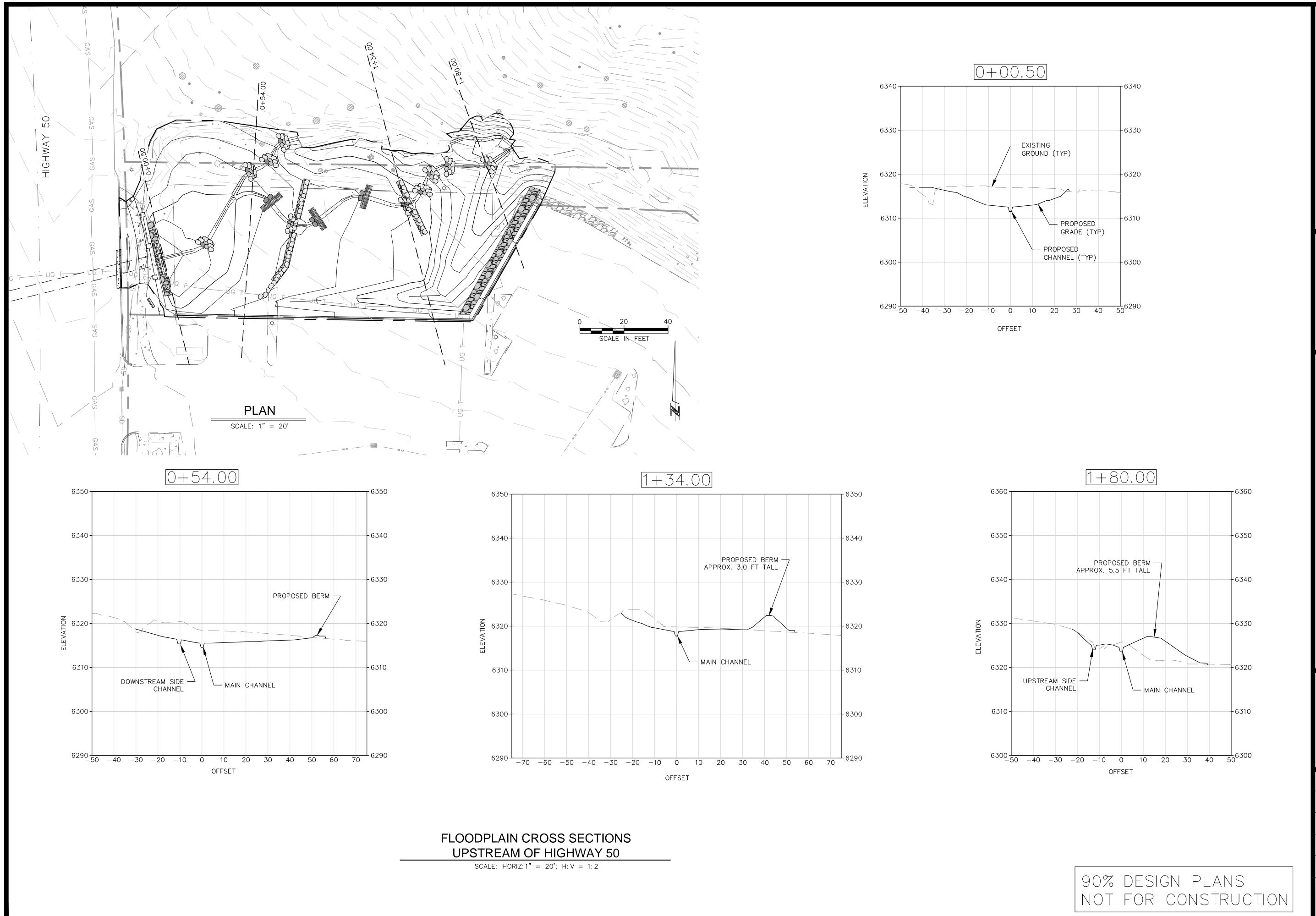
DESIGNED/DRAWN
DS/MBG
CHECKED
MCK
DATE
03/11/2016
SCALE
AS SHOWN
PROJECT
BCC

SIDE CHANNEL CREEK PROFILE BURKE CREEK HWY 50 CROSSING AND REALIGNMENT PROJECT PHASE 1

SHEET

-4

11 OF 25



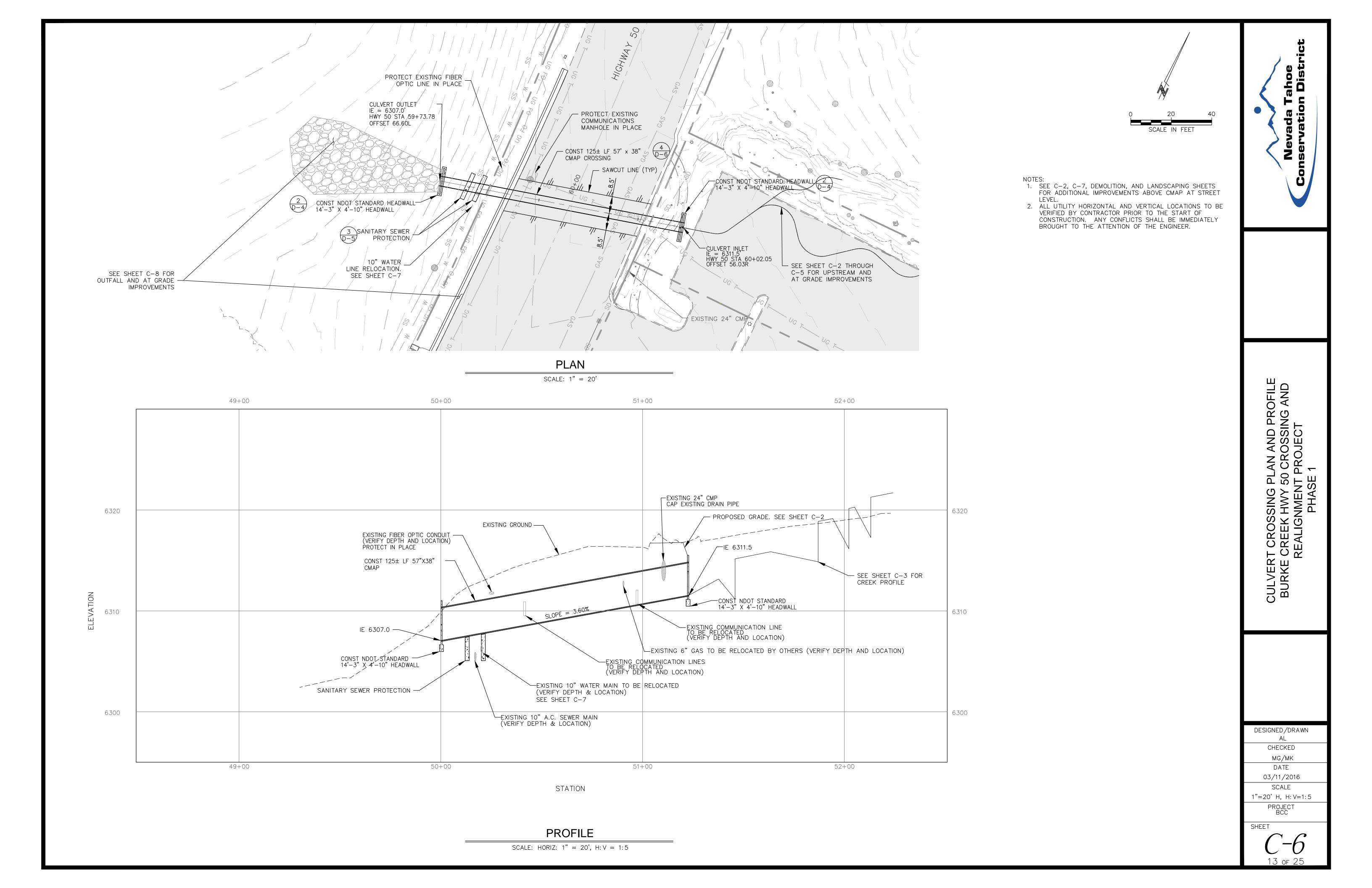
Nevada Tahoe
Conservation Distric

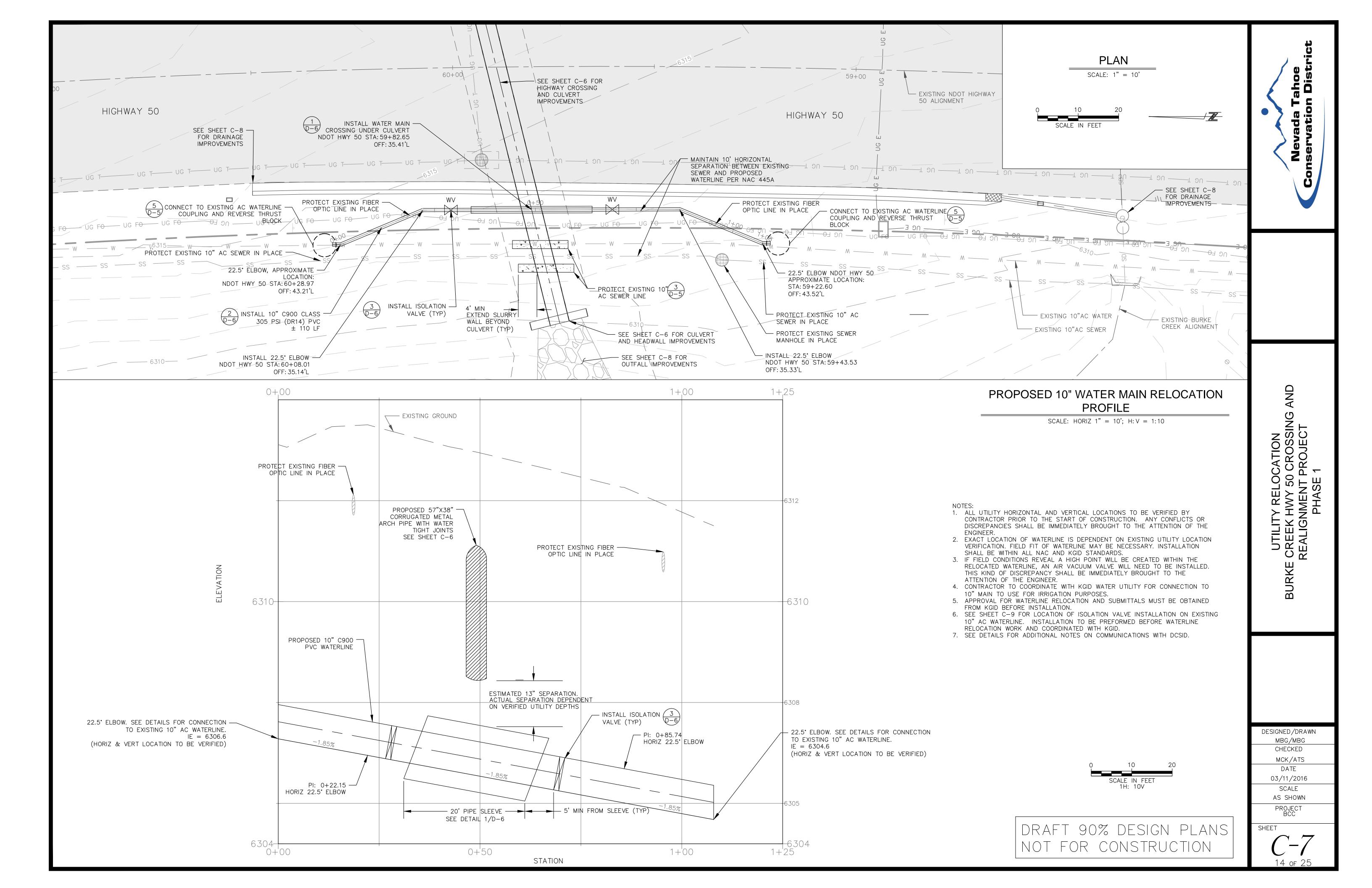
PROPOSED FLOODPLAIN CROSS SECTIONS
BURKE CREEK HWY 50 CROSSING AND
REALIGNMENT PROJECT
PHASE 1

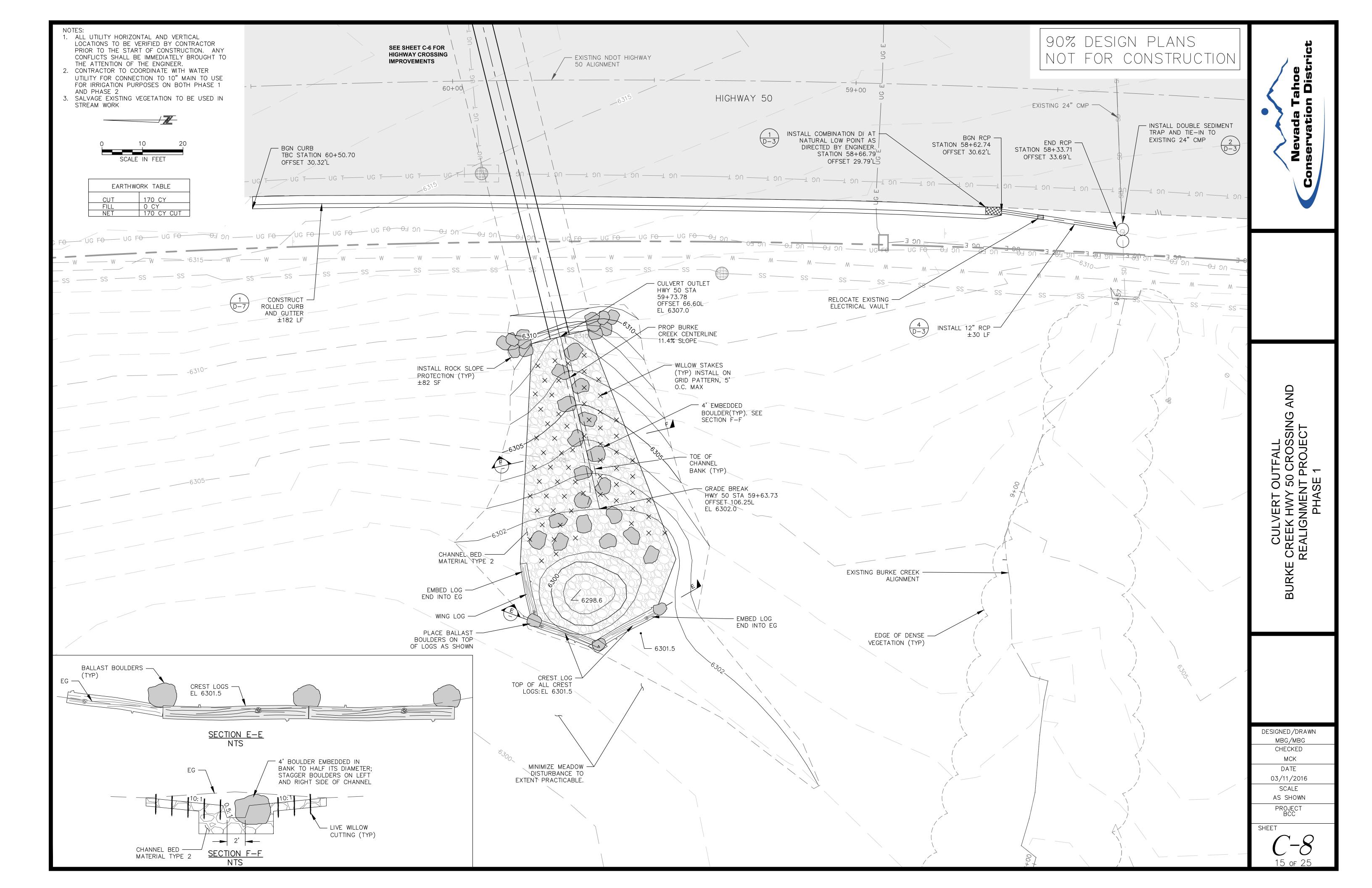
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MBG/MBG
CHECKED
MCK
DATE
03/11/2016
SCALE
AS SHOWN

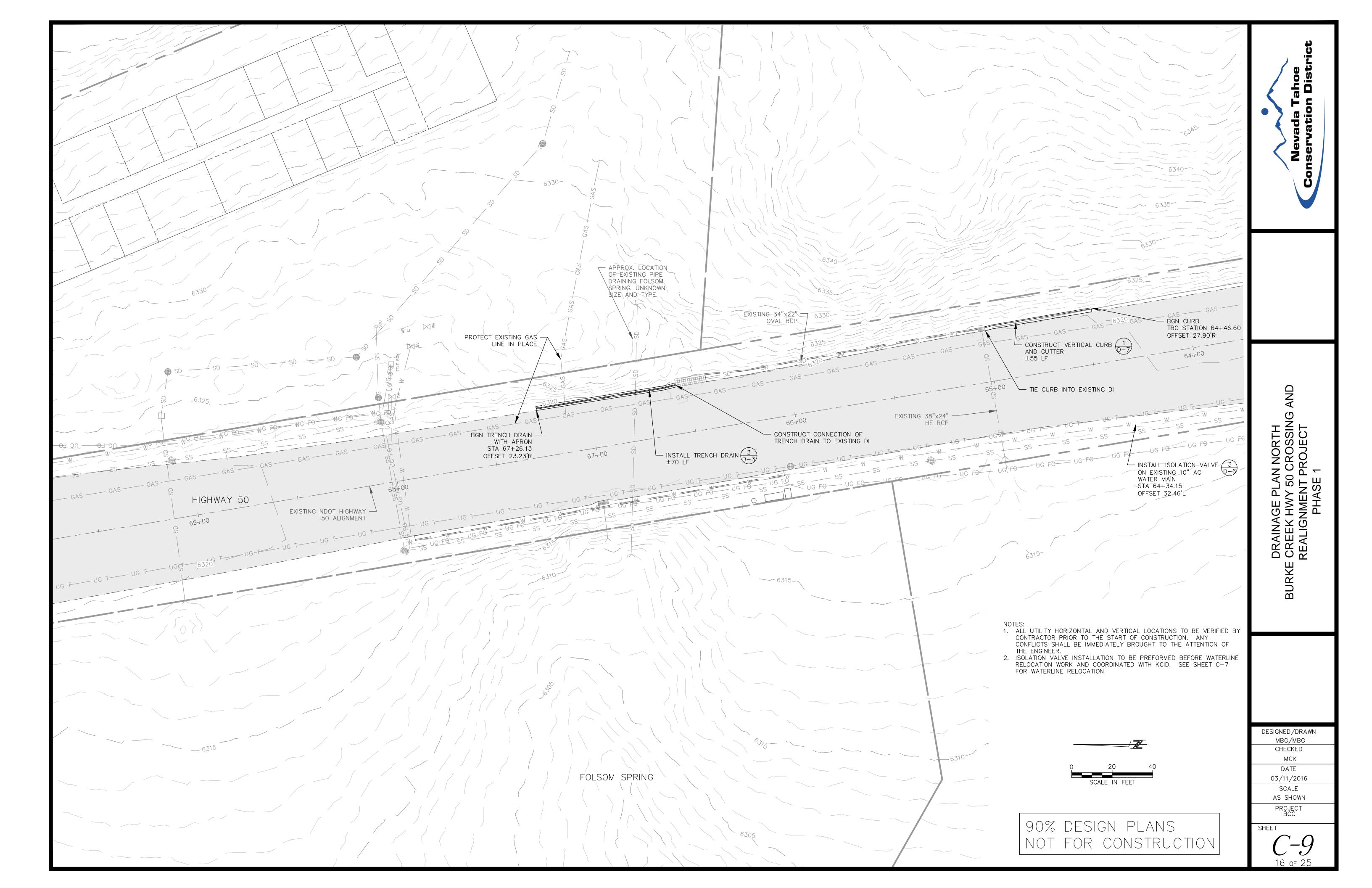
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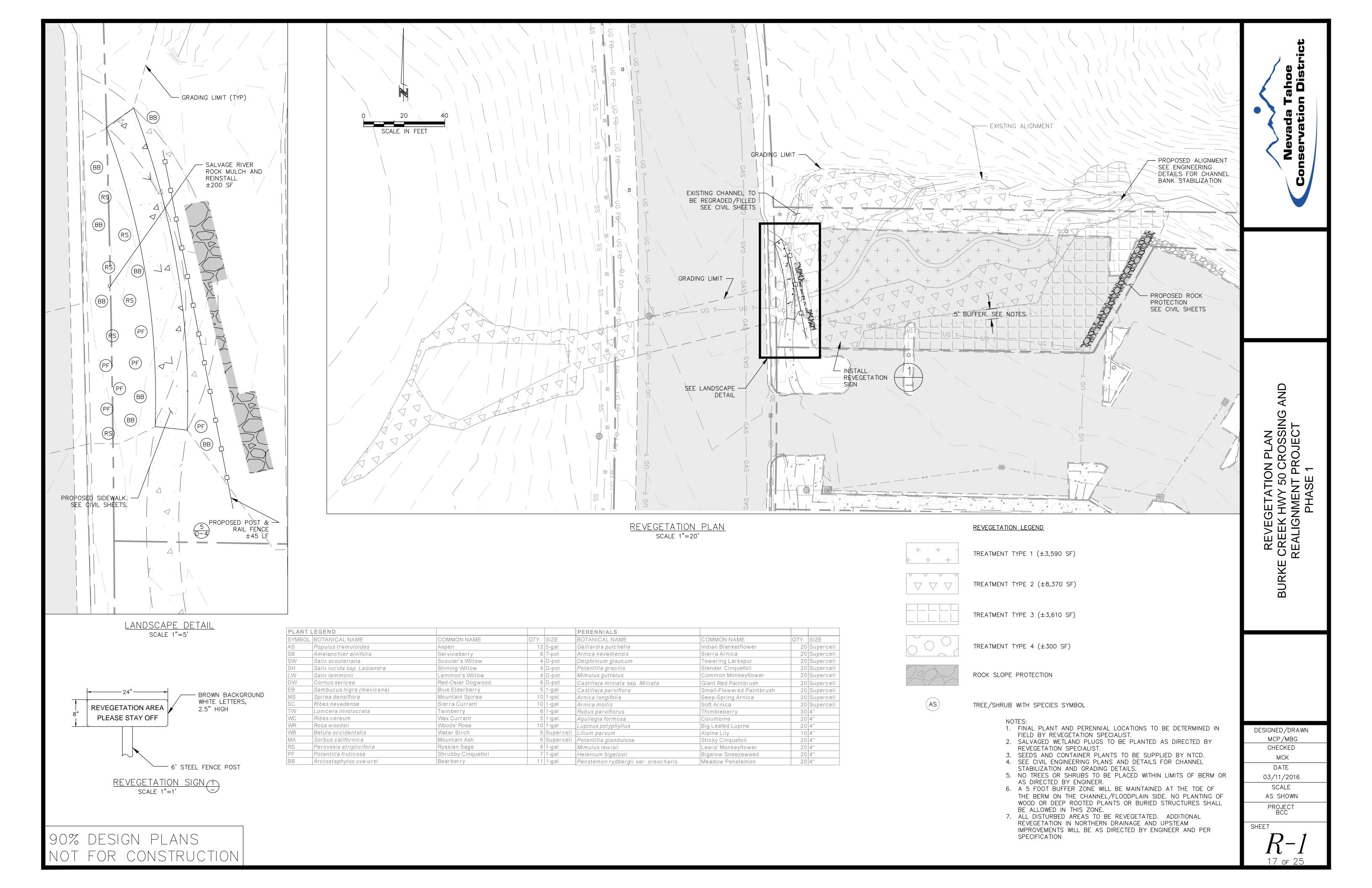
PROJECT BCC

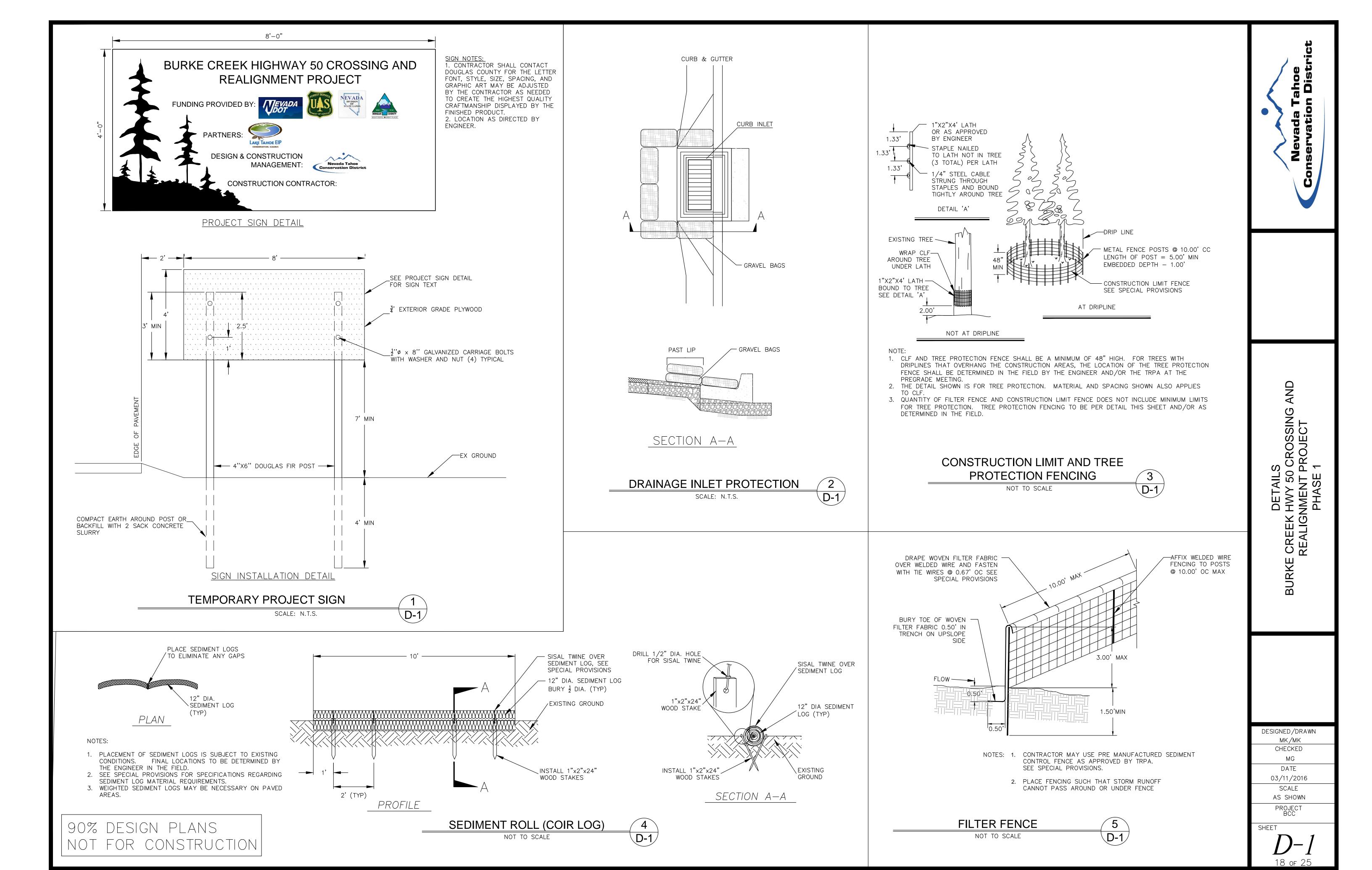


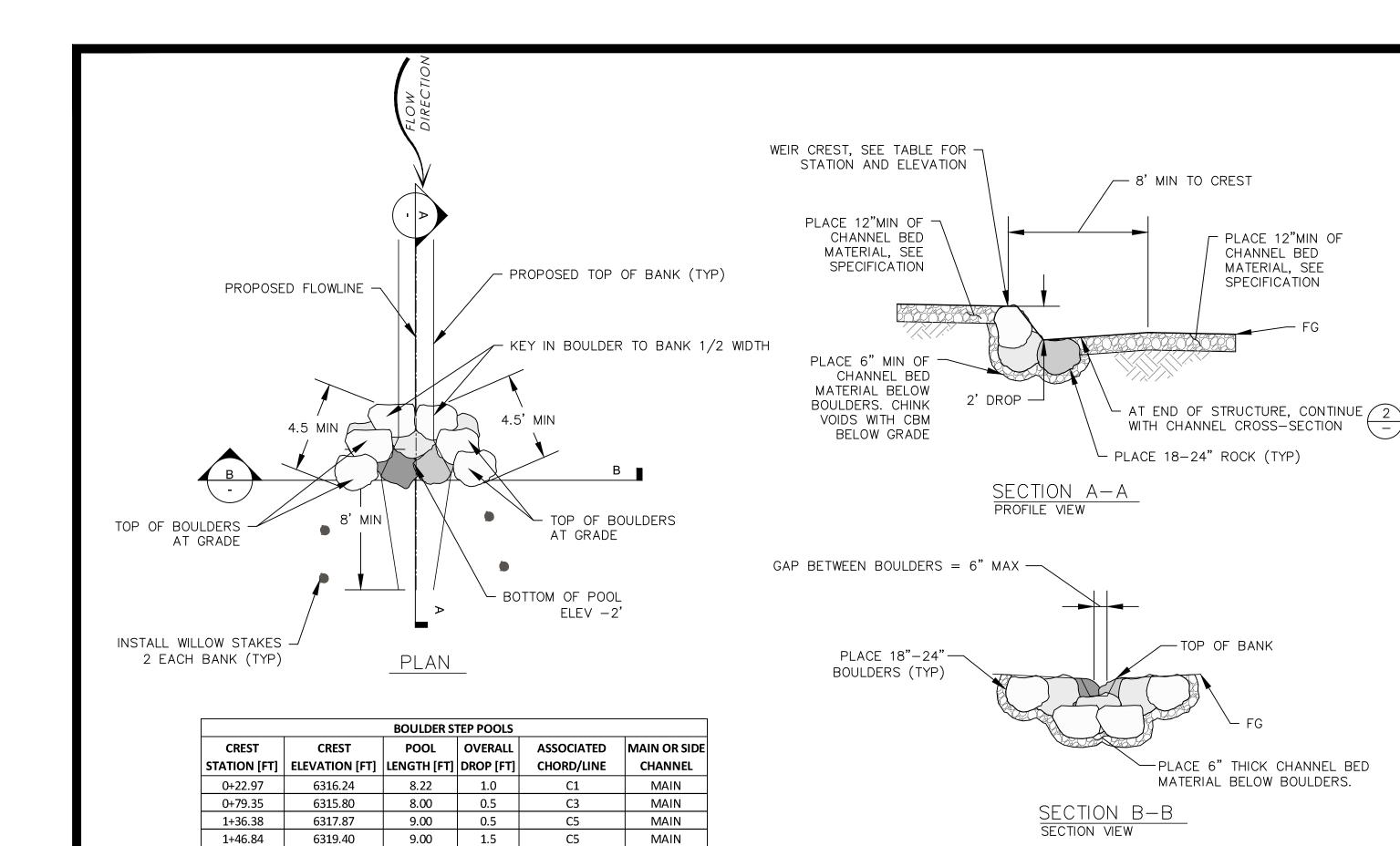












1+55.56

1+64.13

1+83.19

1+94.00

0+21.54

6320.91

6322.43

6324.14

6325.20

6315.46

8.00

8.00

8.14

8.00

7.59

1.5

1.5

1.5

1.0

1.0

C6

C6

C7

L8

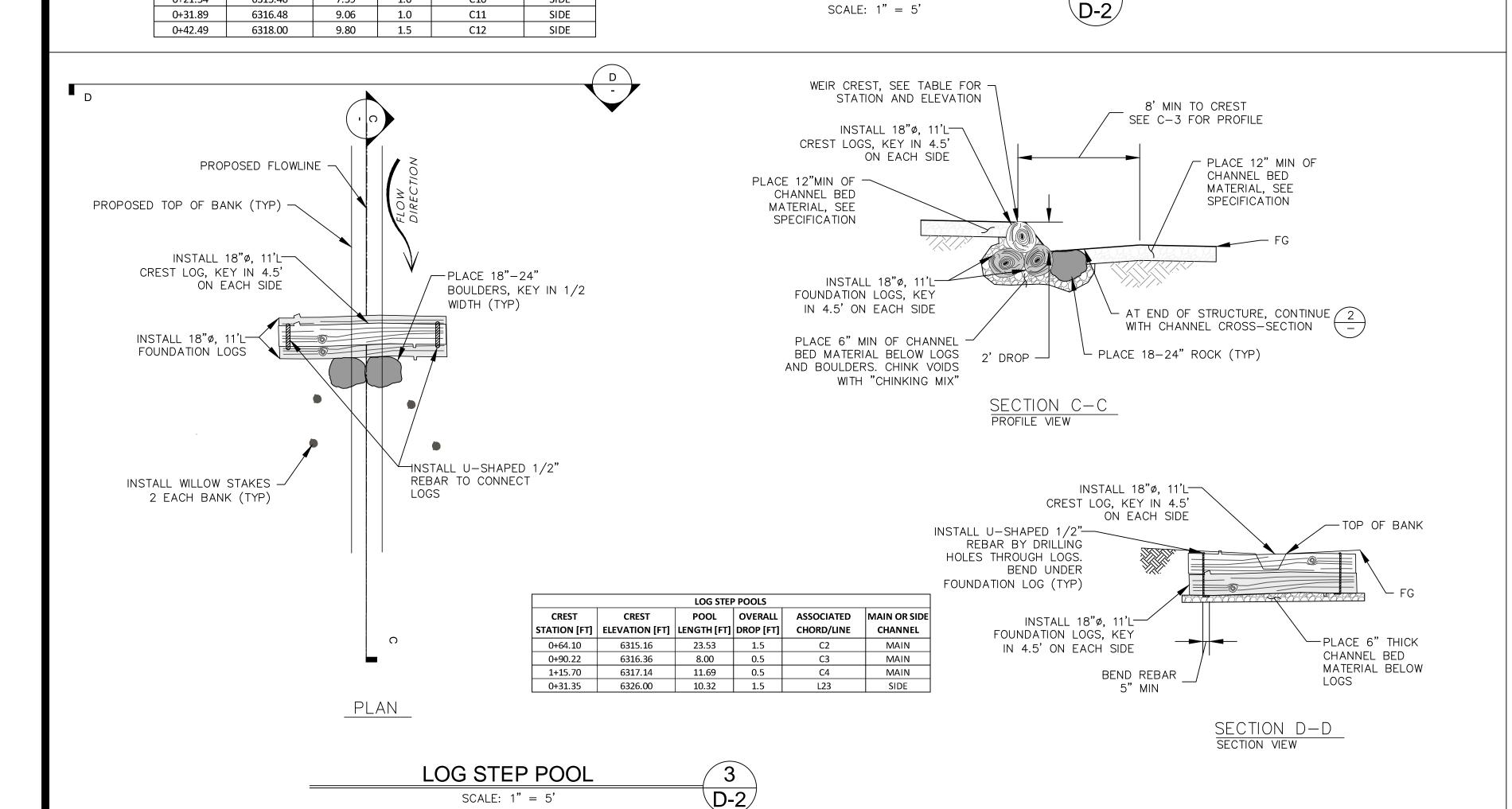
C10

MAIN MAIN

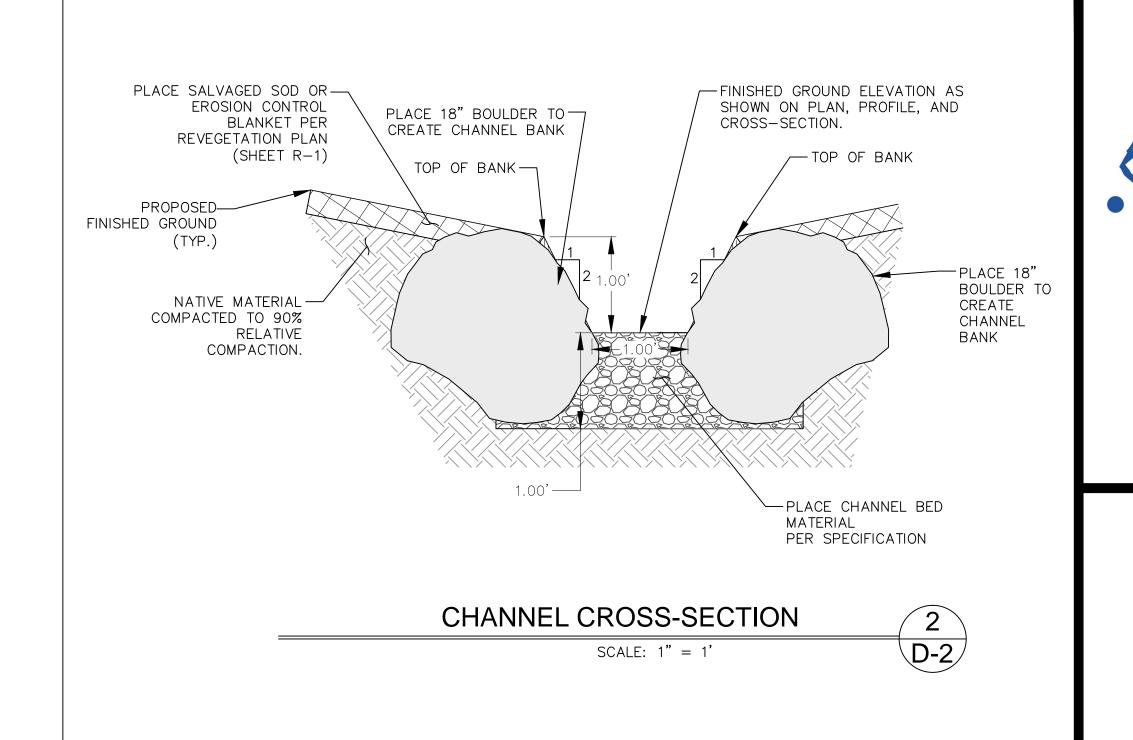
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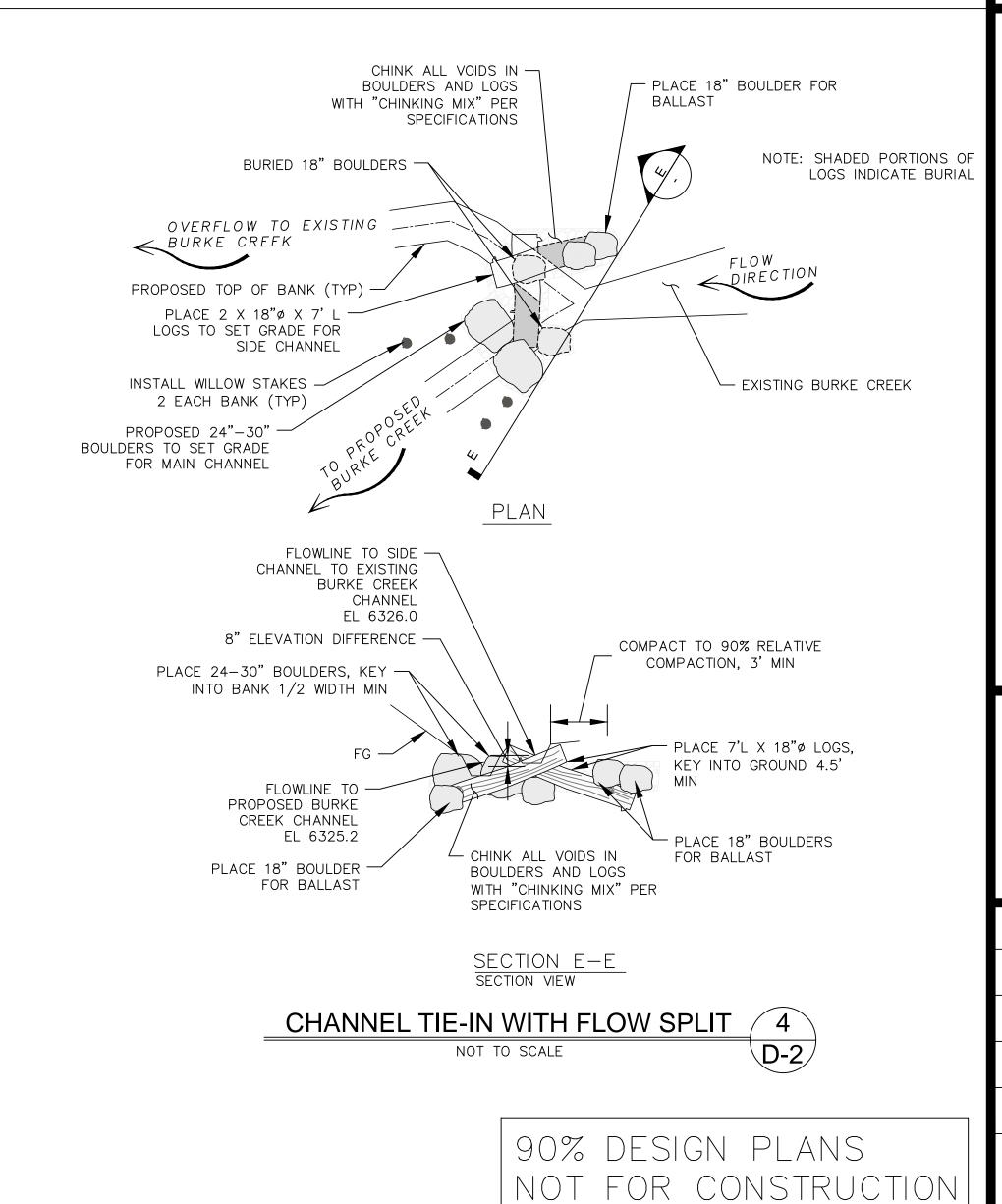
MAIN

SIDE



**BOULDER STEP POOL** 





SING

DETAILS IWY 50 CROSS MENT PROJEC PHASE 1

SEEK HI ALIGNIA

CRI

BURKE

DESIGNED/DRAWN

MCK

CHECKED

MBG

DATE

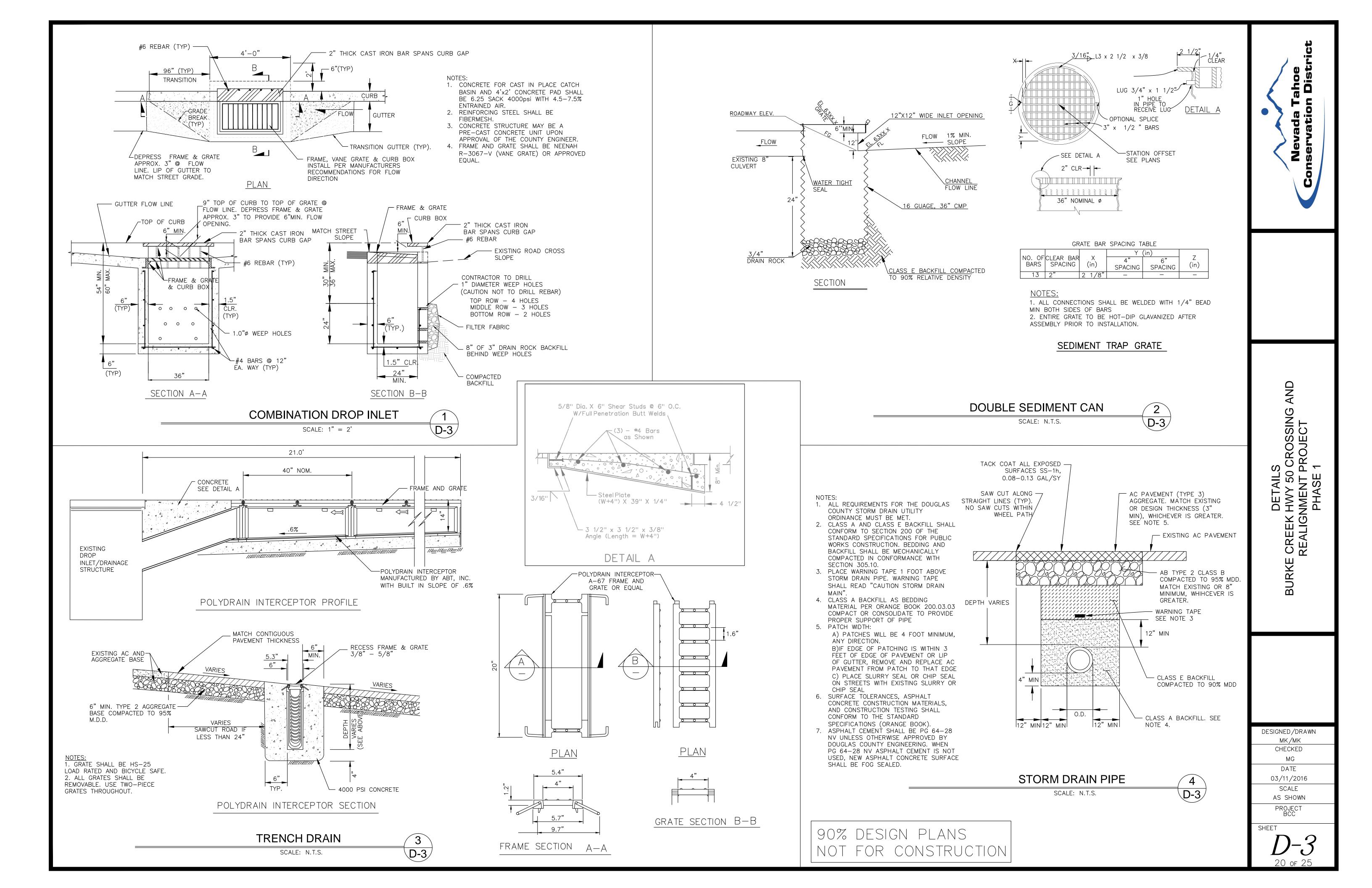
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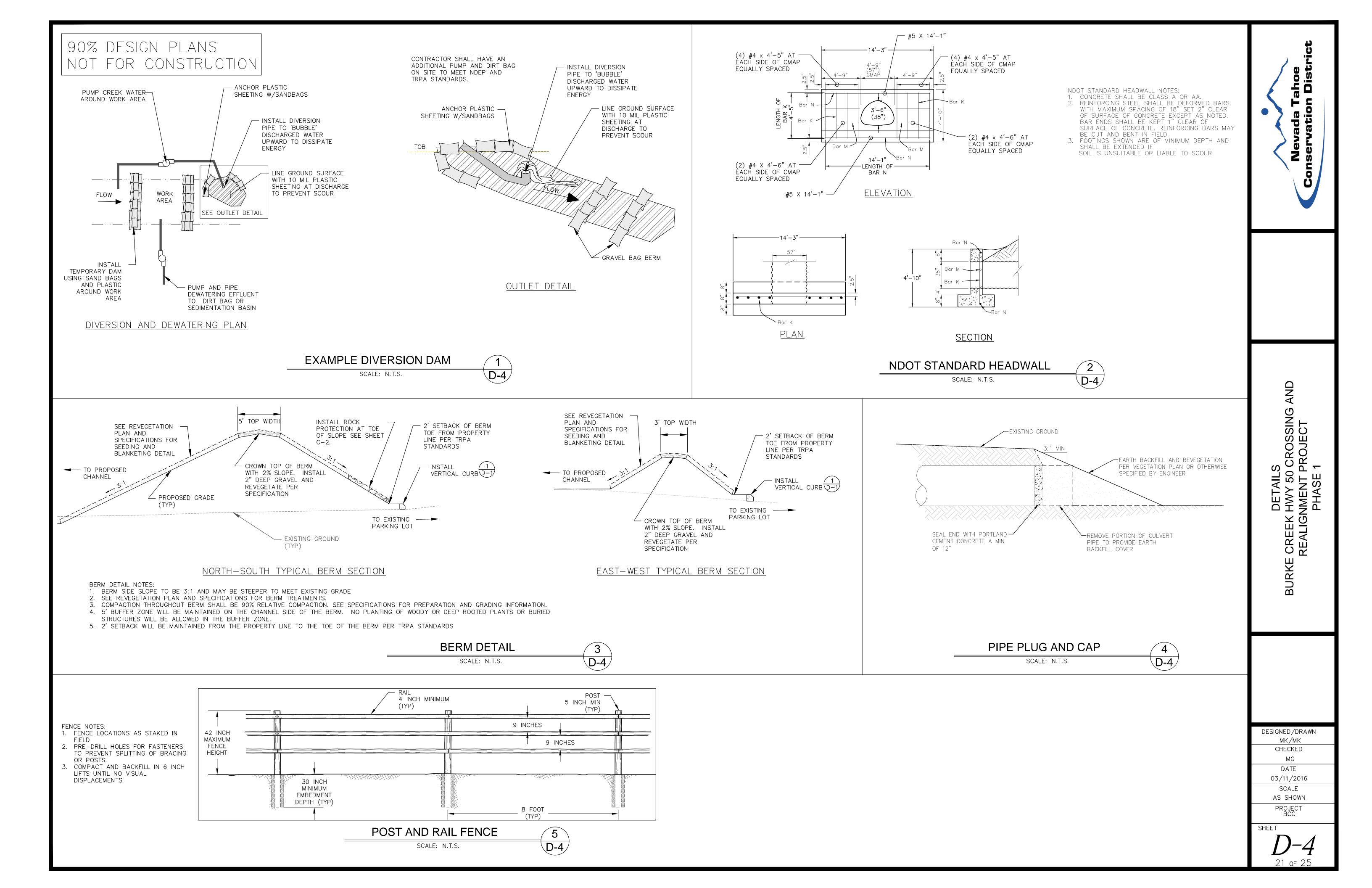
SCALE

AS SHOWN

PROJECT BCC

SHEET





VALVE BOX NOTES:

1. VALVE BOX MUST BE TRAFFIC RATED (CHRISTY G-5 BOX OR APPROVED

2. MINIMUM OF 10" INSIDE DIAMETER.

3. CAST IRON LID MARKED "WATER" FOR WATER LINE APPLICATIONS. CAST IRON LID MARKED "RECLAIMED WATER" OR "RCW" WHEN INSTALLED ON A RECLAIMED WATER MAIN. LID SHALL BE MARKED "SS FORCE MAIN" OR "SS FM" WHEN INSTALLED ON A SANITARY SEWER FORCE MAIN.

4. RISER OF 6" MAX PVC EXTENDED IN VALVE CAN A MINIMUM OF 6".
5. ALL NEW VALVE BOXES TO BE SET TO GRADE PER DETAIL 3/D-6.
6. SET VALVE BOX AND ONE POINT OF TRIANGULAR LID TO POINT IN DIRECTION OF WATER MAIN.



TYPE OF FITTING	90° BEND	45° BEND	11.25° OR 22.5° BEND	
TYPICAL INSTALLATION				
TYPE OF FITTING	TEE OR DEAD END	CROSS W/PLUG	TEE W/PLUG	
TYPICAL INSTALLATION				

	THRUST BLOCK BEARING AREA — SQUARE FEET						
TYPE FITT		90. BEND	45° BEND	11.25° OR 22.5° BEND	TEE OR DEAD END	CROSS W/PLUG	TEE W/PLUG
	4"	2	1	1	2	2	2
Щ	6"	5	3	2	4	5	5
PIPE	8"	8	5	3	6	8	8
OF	10"	13	7	4	9	13	13
SIZE	12"	18	10	5	13	18	18
S	14"	25	13	7	17	25	25
	16"	32	17	9	23	32	32

THRUST BLOCK NOTES:

1. CONCRETE FOR THRUST BLOCKS SHALL CONFORM TO SECTION 202 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

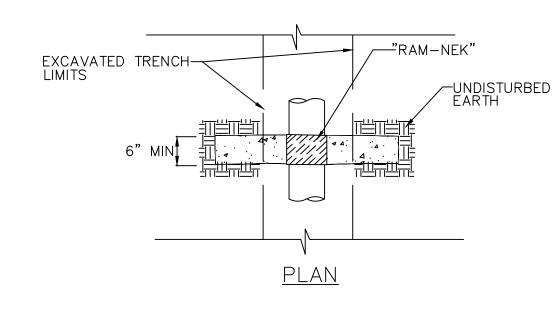
2. THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED SOIL.
3. JOINTS AND FACE OF PLUGS SHALL BE KEPT CLEAR OF CONCRETE.

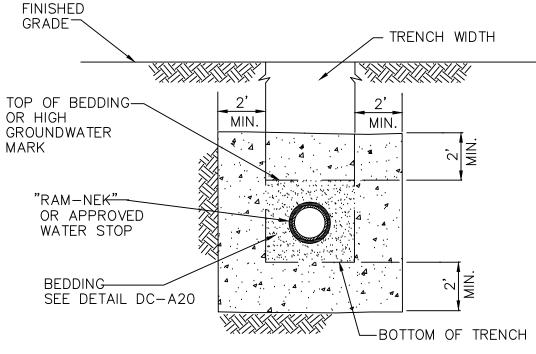
4. THRUST BLOCK BEARING AREAS ARE FOR A 150 PSI TEST PRESSURE WITH 2000 PSF BEARING CAPACITY, NOMINAL PIPE DIAMETER, AND A FACTOR OF SAFETY OF 1.5 INSTALLATIONS USING DIFFERENT TEST PRESSURES, AND/OR SOIL TYPES SHALL BE ADJUSTED BY THE DESIGN ENGINEER.

THRUST BLOCKS

SCALE: N.T.S.

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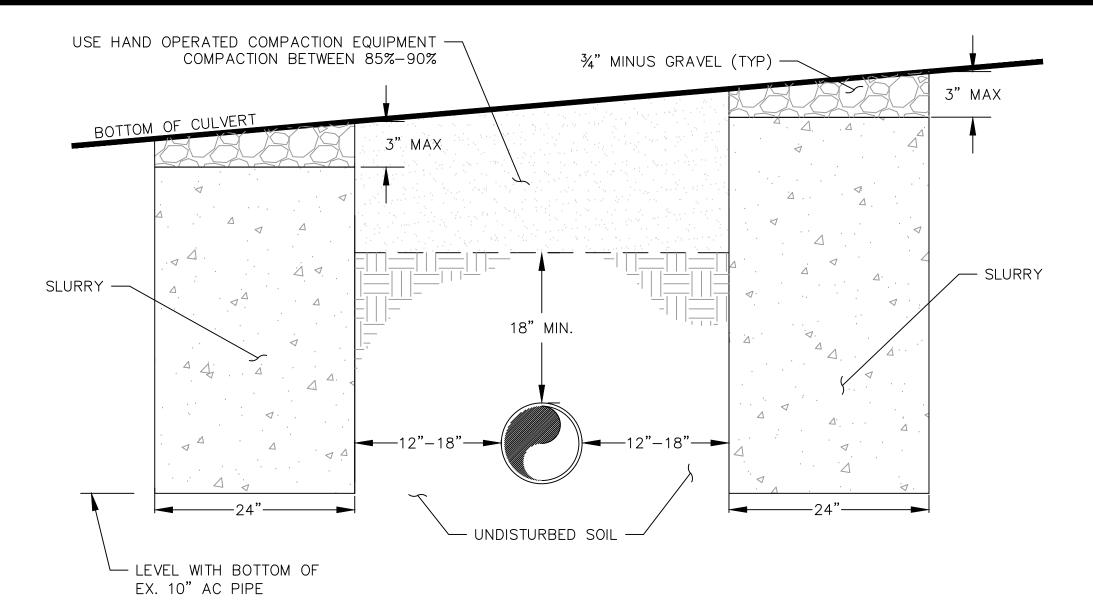
WATER STOP NOTES:

1. WATER STOPS SHALL BE CONSTRUCTED AT 200' MAXIMUM SPACING IN GROUNDWATER CONDITIONS AND WHERE TYPE "C" BEDDING IS USED, AS DIRECTED BY THE ENGINEERING DIVISION.

2. WRAP PIPE WITH "RAM-NEK" OR EQUIVALENT WHERE PIPE IS EXPOSED TO CONCRETE PRIOR TO POURING.

3. USE LIGHT CONCRETE, TWO SACK SLURRY. IF DRYWALL IS USED FOR CONCRETE FORMS, IT MAY BE LEFT IN PLACE.

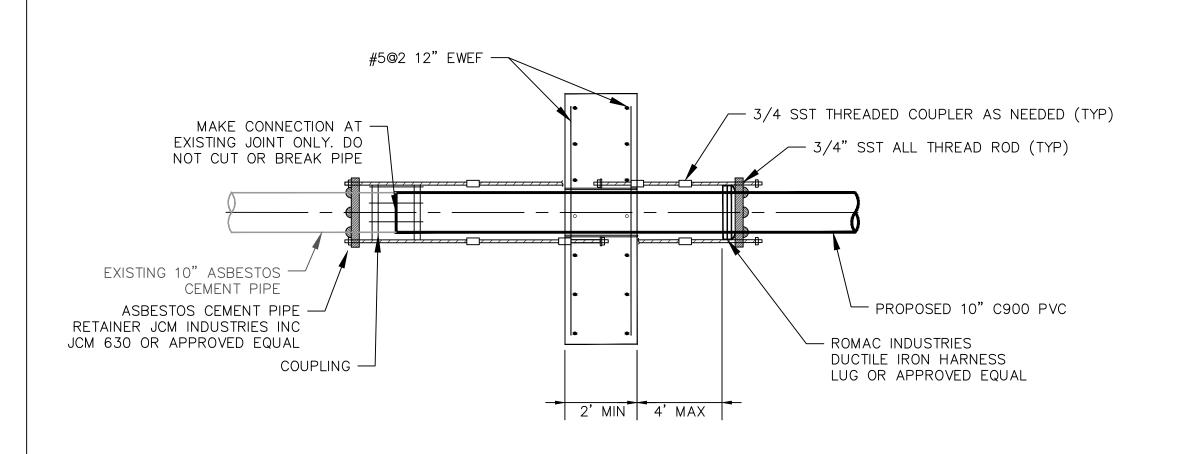




SEWER PROTECTION NOTES

- 1. PROVIDE 48 HOUR NOTIFICATION TO DCSID OF CONSTRUCTION SCHEDULE PRIOR TO COMMENCING CONSTRUCTION, AS WELL AS FOR ANY CHANGES TO THAT SCHEDULE, TO ALLOW DCSID THE OPPORTUNITY TO INSPECT EACH STEP OF CONSTRUCTION IN THE VICINITY OF THEIR INFRASTRUCTURE PRIOR TO IT BEING COVERED
- 2. LOCATE EXISTING PIPE AT EACH END OF SLURRY SUPPORTS BY EXPOSING IT USING A NON-FORCE METHOD SUCH AS A VACTOR TRUCK OR HYDRO-EXCAVATION
- 3. A PRE-CONSTRUCTION VIDEO WAS PERFORMED BY DCSID ON 10/7/15. ACCEPT THIS VIDEO AS PRE-PROJECT CONDITION OR PERFORM INDEPENDENT VIDEO PRIOR TO MOBILIZATION OF HEAVY EQUIPMENT
- 4. PERFORM POST—CONSTRUCTION VIDEO AFTER BACKFILL AND FINAL GRADING IS COMPLETE
  5. REPAIR ANY DAMAGE TO DCSID INFRASTRUCTURE TO THE SATISFACTION OF DCSID AND IN ACCORDANCE WITH DCSID APPROVED METHODOLOGY
- 6. LIMIT USE OF VIBRATORY EQUIPMENT WITHIN 5' (VERTICAL AND HORIZONTAL) FROM EXISTING PIPE
- 7. IN THE EVENT OF A PIPE FAILURE DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESULTING COSTS INCLUDING BUT NOT LIMITED TO EMERGENCY CONTAINMENT, ENVIRONMENTAL CLEANUP, BYPASS PUMPING, REPAIR, FINES, AND FEES
- 8. DCSID SHALL BE NOTIFIED IMMEDIATELY OF ANY DAMAGE TO OR ISSUES WITH THEIR INFRASTRUCTURE



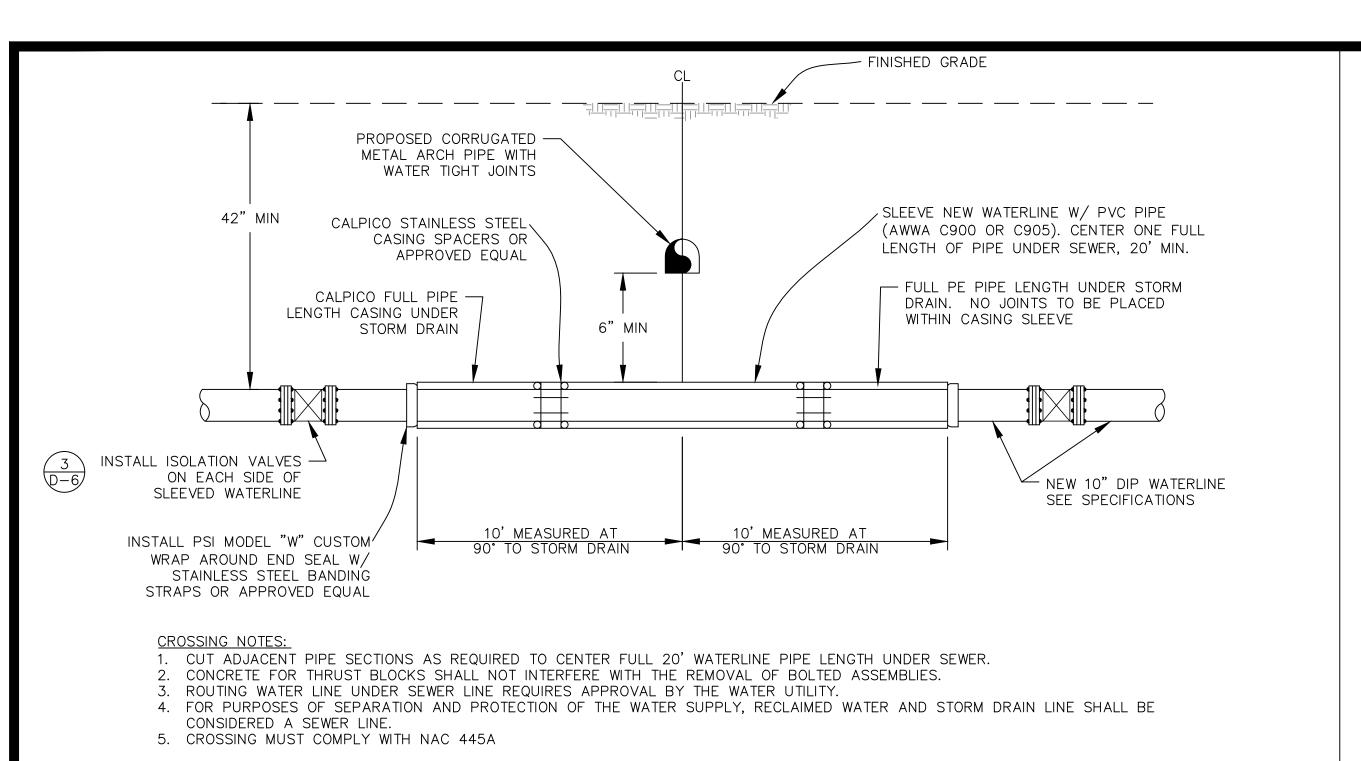




90% DESIGN PLANS NOT FOR CONSTRUCTION DETAILS
BURKE CREEK HWY 50 CROSSING /
REALIGNMENT PROJECT
PHACE 1

DESIGNED/DRAWN
MK/JB
CHECKED
MG
DATE
02/26/2016
SCALE
AS SHOWN
PROJECT
BCC

D-5



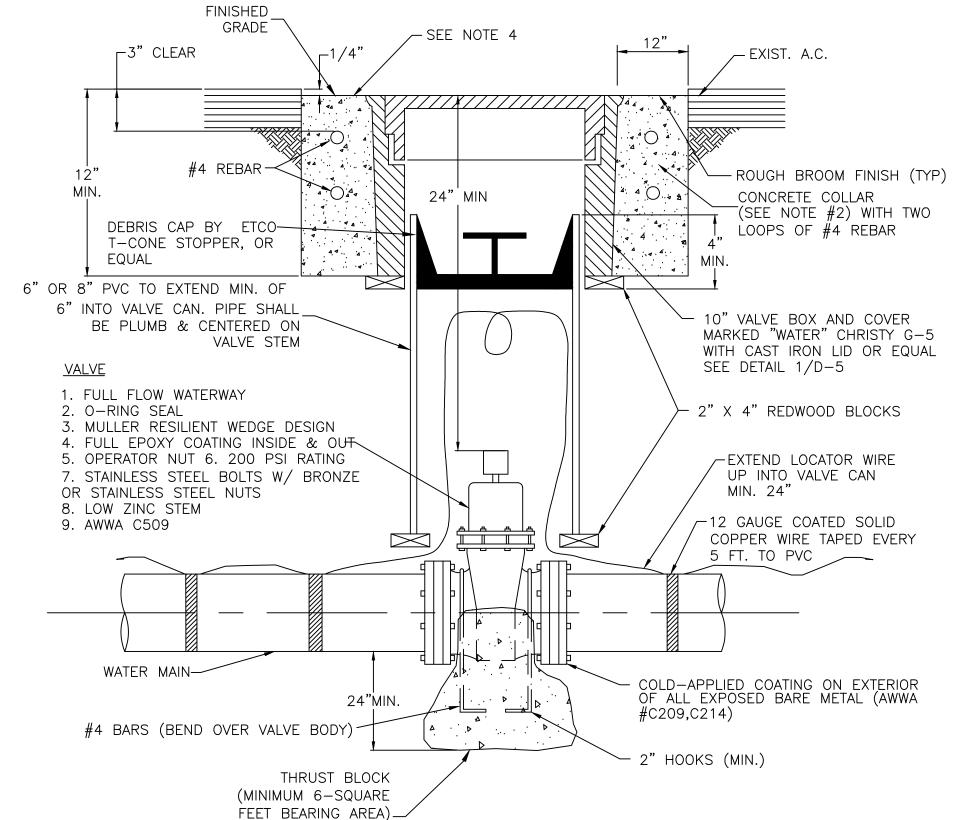
BACKFILL TO SUBGRADE WARNING TAPE 12 GAUGE COATED SOLID COPPER WIRE. SPLICES SHALL BE SOLDERED OR CONNECTED BY WIRE NUTS AND DOUBLE WRAPPED WITH U/L LISTING ELECTRICAL TAPE. FOR WATER AND RECLAIMED WATER INSTALLATIONS ONLY. 12"Min. BEDDING 6"Min. ─ MINIMUM TRENCH —— EXCAVATION LIMITS

WATER TRENCH NOTES:

- 1. BACKFILL SHALL MEET THE REQUIREMENTS FOR CLASS "E" BACKFILL AS SHOWN IN SUBSECTION 200.03.06 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OR AS SPECIFIED BY THE ENGINEERING DIVISION. MATERIAL SHALL BE PLACED IN LIFT THICKNESSES AND MECHANICALLY COMPACTED IN ACCORDANCE WITH SECTION 305 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- 2. BEDDING SHALL MEET THE REQUIREMENTS FOR CLASS "A" BACKFILL AS SHOWN IN SUBSECTION 200.03.02 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OR AS SPECIFIED BY THE ENGINEERING DIVISION. MATERIAL SHALL BE PLACED IN LIFT THICKNESSES AND MECHANICALLY COMPACTED IN ACCORDANCE WITH SECTION 305 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- BEDDING FOR GRAVITY SEWER LINES MAY BE CLASS "C" BACKFILL.
- 4. CLASS "C" BACKFILL WITH FILTER FABRIC MAY BE USED TO SUPPORT BEDDING IN HIGH GROUND- WATER OR UNSTABLE SOIL CONDITIONS WITH THE APPROVAL OF THE UTILITY DEPARTMENT.
- 5. FOR TRENCHES IN ROADWAY SECTION, SEE STREET CUT REPAIR DETAIL DC A25.
- 6. 6. SHORING OR SLOPED CUT SLOPES MAY BE NECESSARY. ALL EXCAVATIONS SHALL CONFORM TO THE MOST RECENT OSHA REQUIREMENTS.
- 7. PLACE WARNING TAPE 1 FT. ABOVE WATER, AND RECLAIMED WATER PIPE.
- 8. WATER STOPS SHALL BE USED IN HIGH GROUND- WATER CONDITIONS PER DETAIL DC A07.

WATER LINE TRENCH EXCAVATION AND BACKFILL 2 D-6 SCALE: N.T.S.

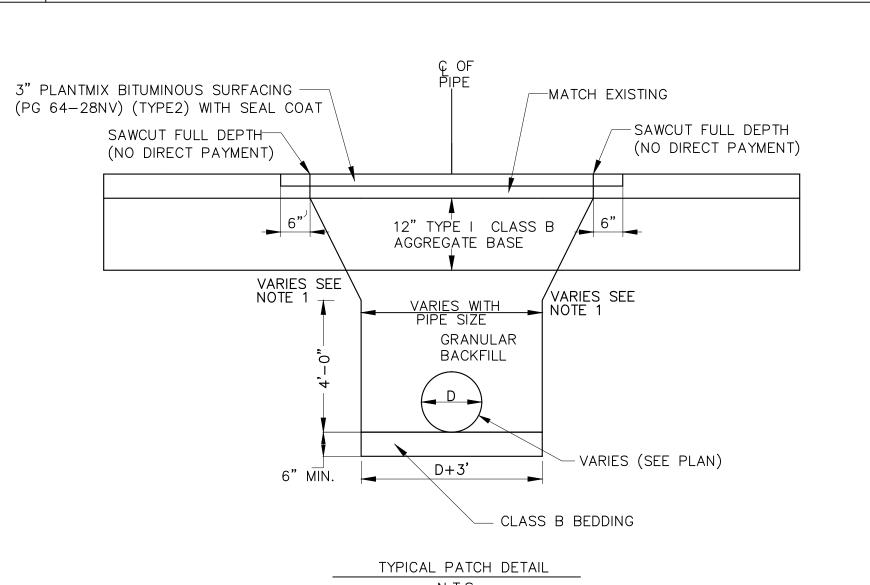
# WATER MAIN CROSSING \D-6 SCALE: N.T.S.

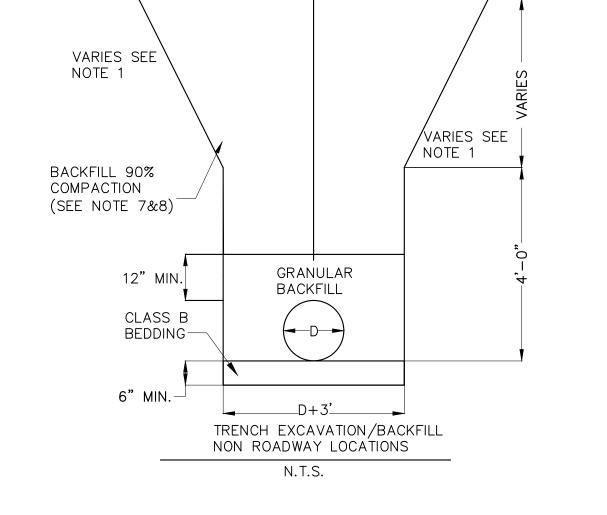


#### VALVE NOTES:

- 1. MATERIAL USED FOR THRUST BLOCKING SHALL NOT PREVENT ACCESS TO THE BOLT ASSEMBLY. 2. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 202.12 OF THE STANDARD SPECIFICATIONS.
- 3. IN ALL AREAS, LIDS SHALL BE SET FLUSH WITH FINISHED GRADE UNLESS OTHERWISE NOTED.
- 4. THE CONCRETE COLLAR SHALL BE 1/4" BELOW SURROUNDING PAVEMENT. APPLY BLACK COLORANT TO SURFACE OF
- 5. SPLICES IN WIRE SHALL BE CONNECTED BY SOLDER OR WIRE NUTS AND WRAPPED WITH UL LISTED ELECTRICAL TAPE. 6. PROVIDE AND INSTALL EXTENSION STEMS SO THAT VALVE OPERATING NUT IS NOT GREATER THAN FIVE (5) FEET
- BELOW FINISHED GRADE. 7. THRUST BLOCK MAY BE ELIMINATED FOR FLANGED VALVES WITH MUELLER AQUAGRIP OR APPROVED EQUAL FLANGED RESTRAINT ADAPTOR.
- 8. PROVIDE PIPE POLYETHYLENE PROTECTIVE WRAP ON ALL VALVES, 8-MILS MINIMUM, SECURED WITH 2-INCH WIDE PRESSURE SENSITIVE PLASTIC TAPE, 10-MILS MINIMUM.







Ç OF

PIPE

CMAP NOTES:

1. TRENCHES MORE THAN 4' DEEP SHALL BE SHORED, LAID BACK TO AT LEAST THE ANGLE OF REPOSE FOR EXISTING FIELD CONDITIONS, OR SOME OTHER MEANS OF PROTECTION SHALL BE PROVIDED.

2. IF HAZARDOUS FIELD CONDITIONS INDICATE GROUND MOVEMENT MAY BE EXPECTED, TRENCHES LESS THAN 4' DEEP SHALL BE PROTECTED AS INDICATED IN NOTE 1.

3. PAVING JOINTS IN ROADWAY ARE NOT ALLOWED IN WHEEL PATHS.

4. MATCH EXISTING STRIPING THROUGH LIMITS OF PATCH AREA.

5. A TRAVEL LANE SHALL BE MAINTAINED. TRENCH EXCAVATION INCLUDING SHIELD AND SHORING SYSTEMS SHALL COMPLY WITH CURRENT OSHA SAFETY REGULATIONS, FEDERAL REGISTER 29 CFR, PART 1926, SUBPART P.

6. ALL MATING SURFACES SHALL BE TACK COATED PRIOR TO PAVING (NO DIRECT PAYMENT).

7. SLURRY BACKFILL TRENCH TO BE USED WHEN UNABLE TO MAINTAIN A 12' TRAVEL LANE WITH THE STANDARD TRENCH OR AS DIRECTED BY THE ENGINEER.

8. COMPACTION SHALL BE PERCENT RELATIVE COMPACTION BASED ON THE MAXIMUM DRY DENSITY DETERMINED WITH TEST METHOD NO. NEV. T101.

9. IN HIGH GROUND WATER, GRANULAR BACKFILL WRAPPED IN AN APPROVED GEOTEXTILE MAY BE USED WITH THE APPROVAL OF THE ENGINEER.

10. FOR THE PURPOSE OF PAYMENT, STRUCTURE EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON THESE STANDARD DRAWINGS AND NO ADDITIONAL PAYMENT WILL BE MADE FOR SHORING.

11. THE LIMITS OF STRUCTURE EXCAVATION AND BACKFILL SHOWN HEREIN SHALL BE USED FOR THE METHOD OF MEASUREMENT AND PAYMENT ONLY. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR ANY ADDITIONAL EXCAVATION OR BACKFILL REQUIRED FOR EXCAVATIONS TO MEET OSHA REGULATIONS.

CMAP CROSSING TRENCH EXCAVATION AND BACKFILL

SCALE: N.T.S.



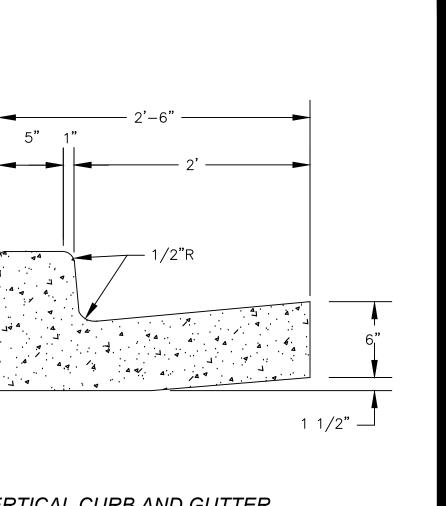
90% DESIGN PLANS NOT FOR CONSTRUCTION

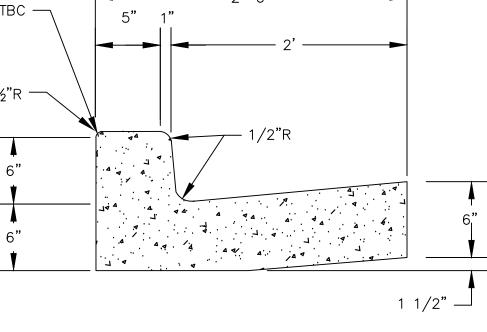
SING ΩШ CROS PROJI FAIL: NY 50 ( NT P REEK ALIGI い 照 BUI

> DESIGNED/DRAWN MK/JB CHECKED MG DATE 02/26/2016 SCALE AS SHOWN

SHEET

PROJECT BCC





VERTICAL CURB AND GUTTER (NDOT TYPE 1)

CURB NOTES: CURB TYPE PER PLAN.

EXISTING —

GROUND

BACKFILL WITH NATIVE

MATERIAL

SAW CUT ALONG STRAIGHT LINES. NO SAW CUTS WITHIN WHEEL PATH

SURFACE TOLERANCES FOR AC PAVEMENT REPAIR SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (ORANGE BOOK)

- VERTICAL CURB OR VERTICAL OR ROLLED CURB&GUTTER. SEE PLAN.

1/2" MIN -

1/4" —

MAX LIMITS OF PAY

PLANTMIX BITUMINOUS

SURFACE WITH FOG SEAL 12" BEYOND

— EXISTING AC

SAWCUT EXIST AC.

SEE NOTE 3.

TACK COAT

SURFACES

ALL EXPOSED

PATCH

- ASPHALT CONCRETE MATERIALS AND TESTING SHALL CONFORM THE THE CURRENT EDITION OF THE ORANGE BOOK. AGGREGATE BASE SHALL BE TYPE 2 CLASS B COMPACTED TO 95% MDD.
- COMPACTED SUBGRADE SHALL BE CLASS A OR CLASS E (NATIVE) BACKFILL COMPACTED TO 90% MDD TACKCOAT ALL EXPOSED SURFACES SS-1h, 0.07-0.13 GAL/SY

COMPACTED SUBGRADE

CURB INSTALLATION

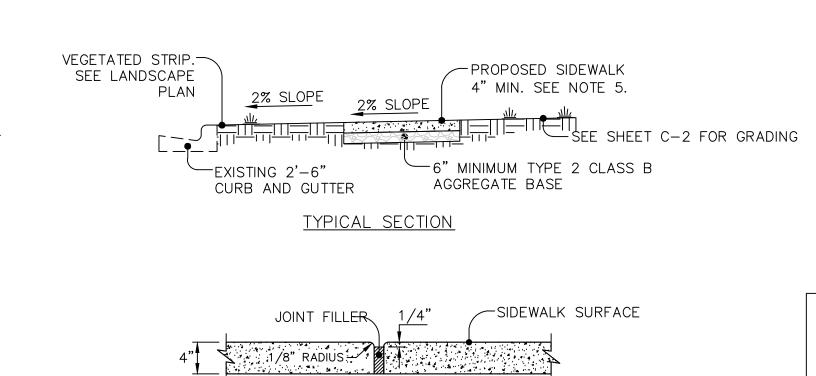
- PORTLAND CEMENT SHALL CONFORM TO SECTION 337.10.01.01 OF THE STANDARD SPECIFICATIONS (ORANGE BOOK) FOR
- CONCRETE EXPOSED TO FREEZE-THAW ENVIRONMENTS. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED EVERY 5 FEET. THE JOINTS SHALL PENETRATE TO A DEPTH OF 2 INCHES AND BE CONSTRUCTED IN CONFORMANCE WITH SECTION 312.09.02 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- 10. EXPANSION JOINTS SHALL BE CONSTRUCTED AT LOCATIONS DESIGNATED IN SECTION 312.09.01A OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.



FINISHED

12"

GRADE



TRANSVERSE EXPANSION JOINT

PLAN VIEW

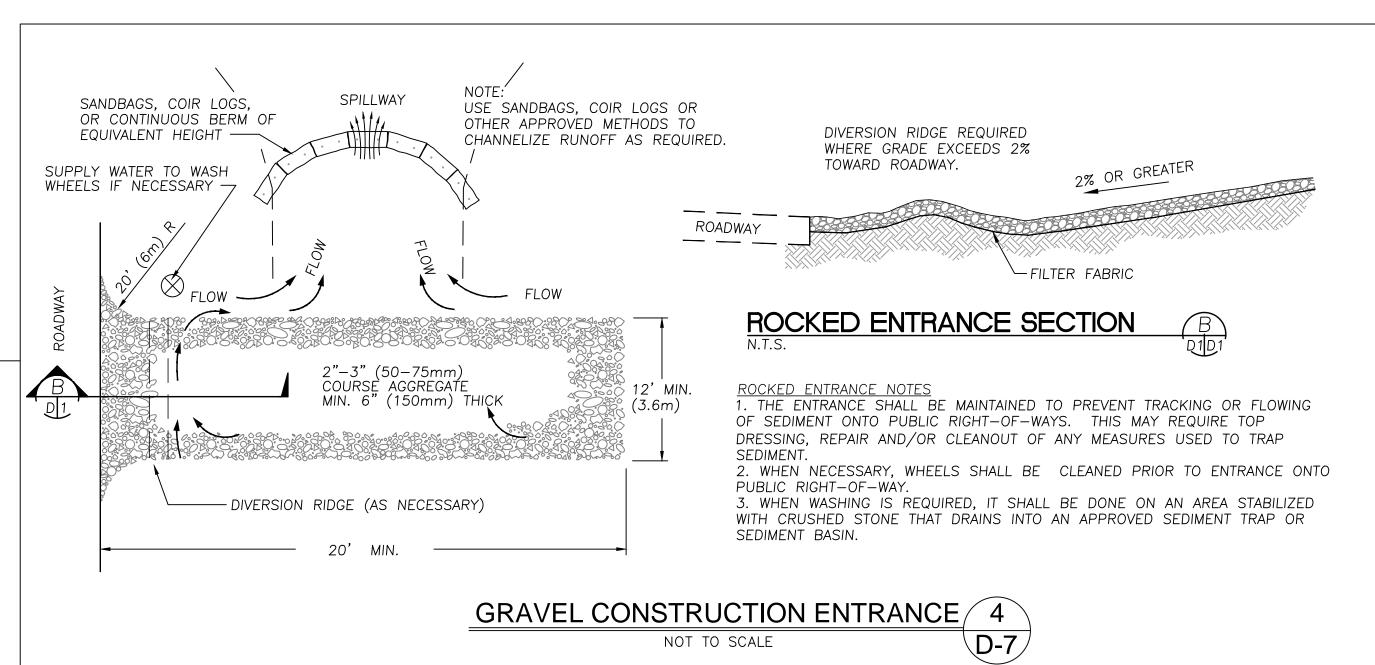
AND

## 1. ALL CONCRETE SHALL BE REMOVED AT EXISTING JOINTS. SEE SECTION 311.10.07 OF THE STANDARD SPECIFICATIONS "CONSTRUCTION

- JOINTS" FOR POURING CONCRETE NEXT TO EXISTING CONCRETE. 2. PORTLAND CEMENT CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 202 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR CONCRETE EXPOSED TO FREEZE-THAW ENVIRONMENTS.
- 3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED EVERY 5 FEET. THE JOINTS SHALL PENETRATE TO A DEPTH OF 2 INCHES AND BE
- CONSTRUCTED IN CONFORMANCE WITH SECTION 312.09.02 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. 4. EXPANSION JOINTS SHALL BE CONSTRUCTED AT LOCATIONS DESIGNATED IN SECTION 312.09.01A OF THE STANDARD SPECIFICATIONS
- FOR PUBLIC WORKS CONSTRUCTION. 5. TYPE 2, CLASS B AGGREGATE BASE SHALL CONFORM TO SETION 20 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS
- CONSTRUCTION AND SHALL BE MECHANICALLY COMPACTED IN CONFORMANCE WITH SECTION 308.05 OF THE STANDARD SPECIFICATIONS
- 6. CONCRETE SIDEWALKS ADJACENT TO DRIVEWAYS SHALL HAVE A MINIMUM THICKNESS OF 6". NO OBSTRUCTIONS, SUCH AS UTILITY POLES, SIGNAL POLES AND CONTROLS, WATER METER BOXES, PULL BOXES, ETC. ARE ALLOWED WITHIN SIDEWALKS.



90% DESIGN PLANS NOT FOR CONSTRUCTION

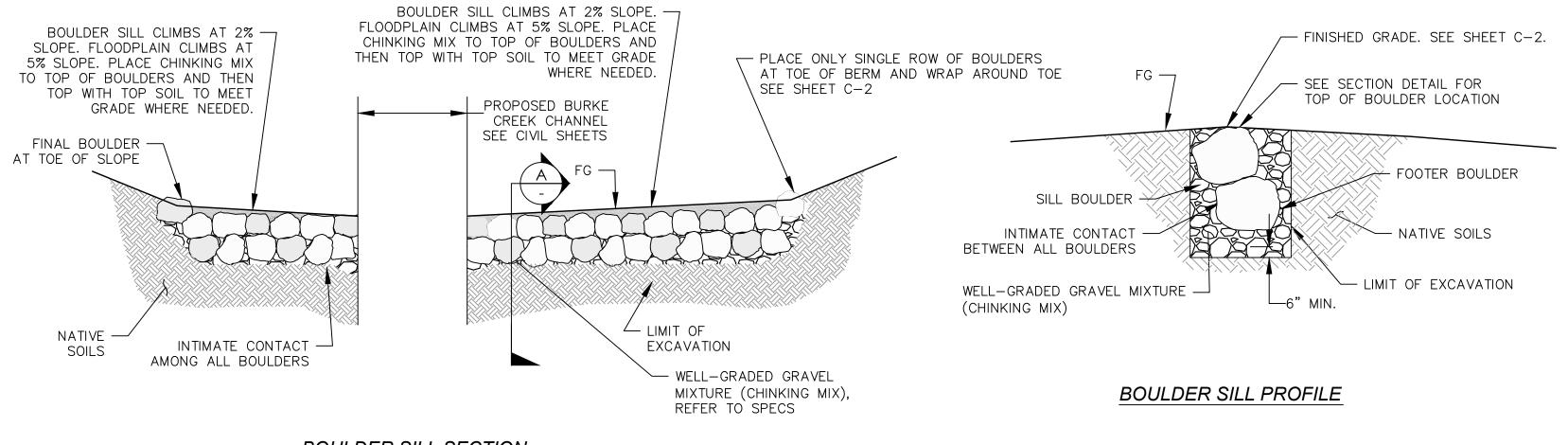


\* 2" WHEN POSITIONED ON LOW SIDE OF ROADBED. OTHERWISE

GUTTER CROSS SLOPE TO MATCH THAT ON ADJACENT ROADBED

ROLLED CURB AND GUTTER

(NDOT TYPE 6)



**BOULDER SILL SECTION** 

TBC -

½"R ⁻

ASPHALT

INSTALLATION DETAIL

FOR BASE/SUBBASE

SEE CURB

1"<u>R</u> ~

**VERTICAL CURB** 

CONCRETE MEET

EXISTING SURFACE

**BOULDER SILL NOTES:** 1. IF BEDROCK ENCOUNTERED DURING EXCAVATION, NOTIFY ENGINEER IMMEDIATELY. BOULDER SILL WILL BE CONSTRUCTED AROUND BEDROCK WITH BEDROCK TAKING PLACE OF SOME BOULDERS.

**BOULDER SILL** SCALE: NTS

D-7

DESIGNED/DRAWN MK/MK CHECKED MG DATE 03/11/2016 SCALE AS SHOWN PROJECT BCC

0 CROSSING /

REEK ALIGI

CRI

BURKE

SHEET

