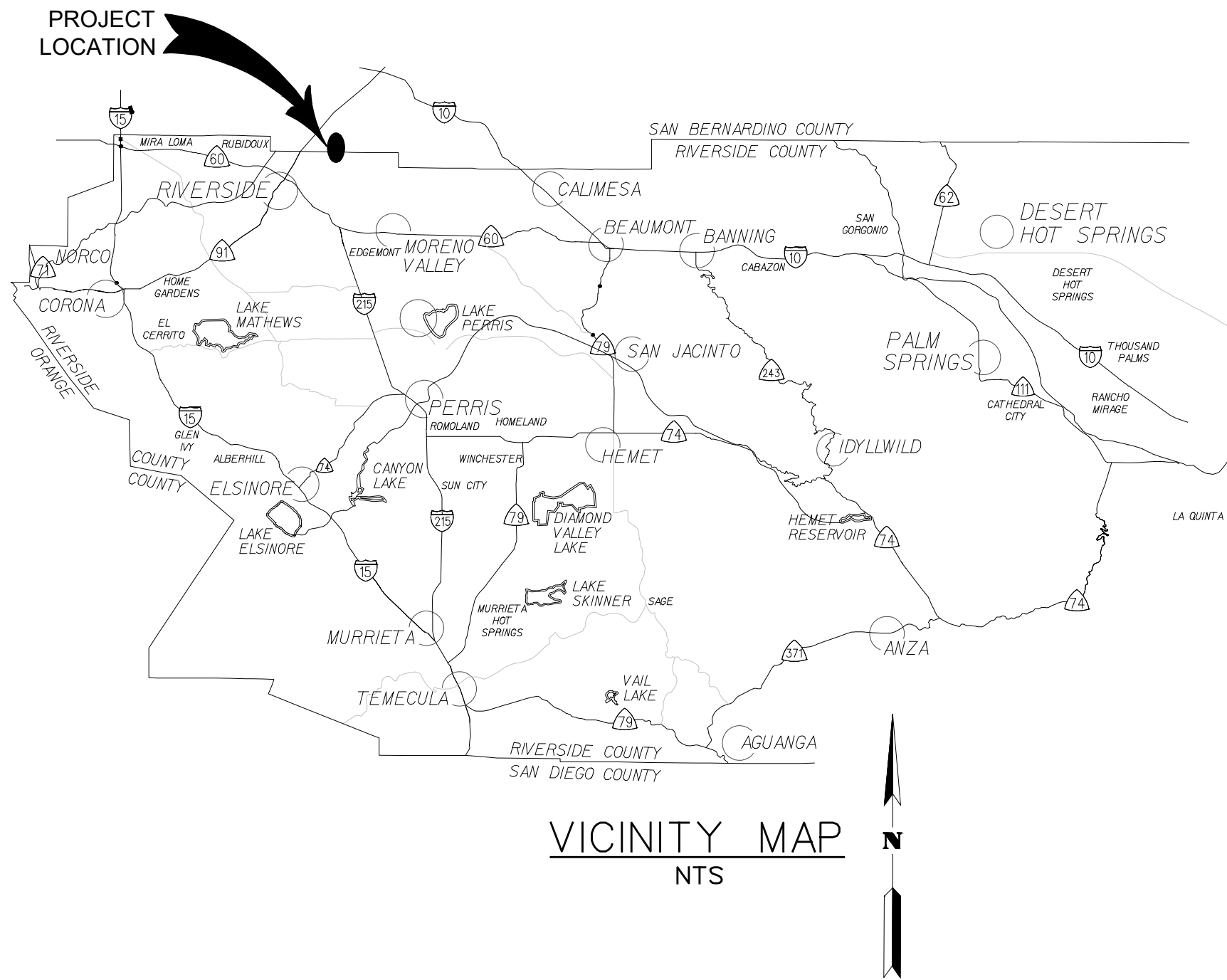
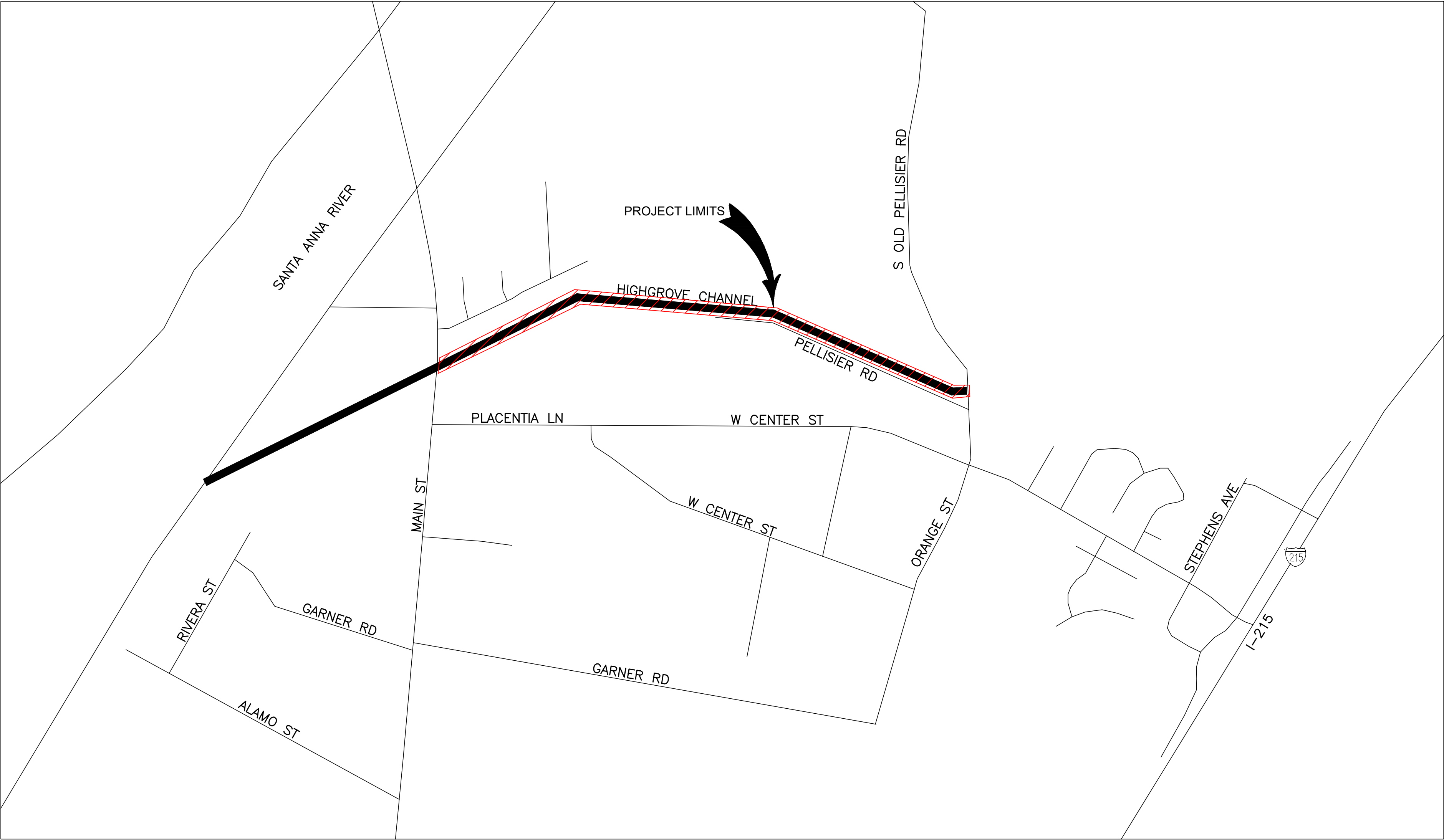


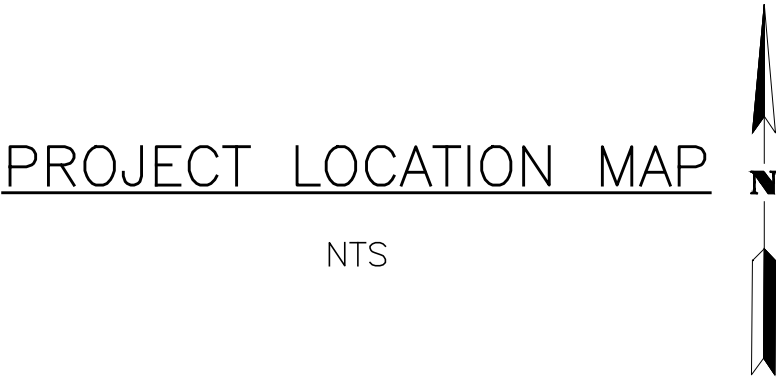
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

HIGHGROVE CHANNEL REPAIR



INDEX	SHEET NO.:
TITLE SHEET	1
SPECIFICATIONS	2-3
REPAIR AREA LOCATIONS	4
REPAIR PLANS	5-9
REPAIR DETAILS	10

R.C.F.C. & W.C.D. STANDARD DRAWINGS
CH326 TRAPEZOIDAL CONCRETE LINED CHANNEL DETAILS



 UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA CONTACT DIGALERT AT WWW.DIGALERT.ORG OR CALL 811 AT LEAST TWO WORKING DAYS BEFORE YOU DIG	REVISIONS			RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT			HIGHGROVE CHANNEL SLOPE REPAIRS TITLE SHEET	PROJECT NO. —
				DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:		DRAWING NO. —
				DRAWN BY: STK	CHIEF, OPERATIONS	GENERAL MANAGER-CHIEF ENGINEER		SHEET NO.
				DATE DRAWN: 7/15/2026	DATE: _____	DATE: _____		1 OF 10
	REF.	DESCRIPTION	APPR.	DATE	P8 NUMBER: 271351			

SPECIFICATIONS

REFERENCED SPECIFICATIONS

REFERENCES MADE IN THE FOLLOWING SPECIFICATIONS TO "CALTRANS SPECIFICATIONS" OR "CALTRANS STANDARDS" REFER TO STANDARD SPECIFICATIONS OR STANDARD PLANS OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, CURRENT EDITION.

REFERENCES MADE IN THESE SPECIFICATIONS TO THE "GREENBOOK SPECIFICATIONS" REFER TO THE "GREENBOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION, INCLUDING SUPPLEMENTS.

PROJECT SITE MAINTENANCE

THROUGH ALL PHASES OF CONSTRUCTION, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF SECTION 3–12, INCLUSIVE OF THE GREENBOOK SPECIFICATIONS. BEFORE FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL CLEAN THE WORK AND THE SITE OF THE WORK OF ALL FALSEWORK, TEMPORARY STRUCTURES, OTHER CONSTRUCTION MATERIALS AND EQUIPMENT, EXCESS MATERIALS AND RUBBISH, AND SHALL LEAVE THE WORK AND THE SITE IN A NEAT AND PRESENTABLE CONDITION. SUCH FINAL CLEANUP WORK SHALL BE PERFORMED WITHIN THE TIME SPECIFIED FOR COMPLETION OF ALL OF THE WORK.

PROTECTION OF EXISTING UTILITIES, FACILITIES, AND STRUCTURES

ALL EXISTING FACILITIES AND STRUCTURES SHALL BE PROTECTED IN PLACE AT ALL TIMES, EXCEPT AS NOTED OTHERWISE ON THE PLANS. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

CLEARING AND MISCELLANEOUS WORK

THE CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL VEGETATION, TREES, ROOTS, STUMPS, FENCES, PIPES, ALL ABANDONED FACILITIES AND THEIR APPURTENANCES, CULVERTS, ROCKS, STRUCTURES, CONCRETE, AND ANY DEBRIS LOCATED WITHIN THE PROJECT AREA, AS DIRECTED BY THE ENGINEER.

WATER CONTROL

SURFACE WATER IN VARYING QUANTITIES, AND GROUNDWATER CAN BE EXPECTED AT ANY TIME OF THE YEAR, AND SUBSTANTIAL RUNOFF CAN BE EXPECTED DURING PERIODS OF RAINFALL. WATER CONTROL INCLUDES CONTROL AND/OR DIVERSION OF SURFACE RUNOFF AS WELL AS GROUNDWATER WITHIN THE WORK AREA AS REQUIRED TO COMPLETE THE WORK. ALL WORK SHALL BE CARRIED ON IN AREAS FREE OF WATER. CARE SHOULD BE EXERCISED SO THAT RUNOFF OR DIVERSION FLOWS DO NOT ERODE, UNDERMINE OR OTHERWISE DAMAGE OR DEGRADE THE ADJACENT EXISTING STRUCTURES AND CONSTRUCTED FACILITIES, OR ALTER THE SUITABILITY OF THE SITE FOR THE PROPOSED WORK. THE RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING AND PROPOSED IMPROVEMENTS LIES WITH THE CONTRACTOR.

SURPLUS EXCAVATED MATERIAL

ANY STOCKPILING, GRADING OR DISPOSAL OF MATERIAL OUTSIDE OF THE PROJECT LIMITS IS NOT COVERED UNDER THE DISTRICT'S PERMITS AND IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REGULATORY PERMITS THAT MAY BE REQUIRED INCLUDE, BUT ARE NOT LIMITED TO, FEDERAL CLEAN WATER ACT (SECTIONS 401 AND 404), CALIFORNIA FISH AND GAME CODE (SECTION 1602) AND FEDERAL/STATE ENDANGERED SPECIES ACTS. ALL COSTS TO OBTAIN THESE REGULATORY PERMITS SHALL BE BORNE BY THE CONTRACTOR.

GENERAL REINFORCING STEEL REQUIREMENTS

REINFORCING STEEL FOR ALL REINFORCED CONCRETE STRUCTURES SHALL BE GRADE 60 LOW-ALLOY OR GRADE 60 BILLET-STEEL. THE REINFORCING STEEL FOR USE IN STRUCTURES CONSTRUCTED FROM STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD PLANS SHALL BE OF GRADE 60 OR AS CALLED FOR ON THOSE PLANS. CLEANING, BENDING, PLACING, AND SPACING OF REINFORCEMENT SHALL CONFORM TO THE APPLICABLE PROVISIONS OF SECTION 52 OF THE CALTRANS SPECIFICATIONS AND TO THE DRAWINGS. THE CONTRACTOR SHALL FURNISH A "CERTIFICATE OF COMPLIANCE" WITH THE SPECIFICATION OF ASTM A706/A OR ASTM A615/A. ALL SPLICES SHALL CONFORM TO THE REQUIREMENTS OF A.C.I. MANUAL, STANDARD 318, LATEST EDITION. SPLICES REQUESTED BY THE CONTRACTOR FOR HIS CONVENIENCE SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. LONGITUDINAL LAP SHALL BE 16 INCHES MINIMUM FOR #4 BARS AND 19 INCHES MINIMUM FOR #5 BARS. HEAVY MACHINERY, EQUIPMENT, AND VEHICLES SHALL BE KEPT OFF THE STEEL REINFORCEMENT WHEN STORED OR INSTALLED.

DUST ABATEMENT

IN THE IMPLEMENTATION OF DUST CONTROL MEASURES NECESSARY TO PREVENT HARM AND NUISANCE FROM DUST, THE CONTRACTOR SHALL COMPLY WITH ALL THE PROVISIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE 403. DUST ABATEMENT INCLUDES THE ACTION NECESSARY TO PREVENT, REDUCE OR CONTROL DUST WITHIN THE WORK AREA AS REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR SHALL CARRY OUT PROPER AND EFFICIENT MEASURES TO PREVENT HIS OPERATIONS FROM PRODUCING DUST IN AMOUNTS DAMAGING TO PROPERTY OR CAUSING A NUISANCE, OR HARM TO PERSONS LIVING NEARBY OR OCCUPYING BUILDINGS IN THE VICINITY OF THE WORK. THE METHODS TO BE USED FOR CONTROLLING DUST IN THE CONSTRUCTION AREA AND ALONG HAUL ROADS SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING ANY WORK INCLUDED IN THIS CONTRACT. THE RULE 403 IMPLEMENTATION HANDBOOK PUBLISHED BY THE SCAQMD CONTAINS A DETAILED LISTING OF REASONABLY AVAILABLE DUST CONTROL MEASURES AND IS AVAILABLE FOR INSPECTION AT THE DISTRICT OFFICE.

EXCAVATION AND BACKFILL

EXCAVATION SHALL BE IN CONFORMANCE WITH SECTION 300–7 OF THE GREENBOOK SPECIFICATIONS. THE FOUNDATION FOR CONCRETE CHANNELS AND SIDESLOPES WILL BE INSPECTED AND TESTED AFTER EXCAVATION. NO STRUCTURES, FILL, OR BACKFILL WILL BE PERMITTED UNTIL THE FOUNDATION HAS BEEN INSPECTED AND APPROVED BY THE ENGINEER. WORK COMPLETED WITHOUT INSPECTION OF THE FOUNDATION MAY, AT THE DISCRETION OF THE ENGINEER, BE REQUIRED TO BE REMOVED AND REPLACED AT THE SOLE COST OF THE CONTRACTOR. THE SUBGRADE SHALL BE 90 PERCENT RELATIVE COMPACTION PRIOR TO THE PLACEMENT OF THE STRUCTURE OR EMBANKMENT. SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED SHALL BE FREE OF DEBRIS, MUD, OR PONDED WATER. IF SUBGRADE COMPACTION IS DEFICIENT, SUBGRADE SHALL BE SCARIFIED. MOISTURE CONDITIONED TO OR SLIGHTLY ABOVE OPTIMUM MOISTURE CONTENT, AND THE SURFACE PROOF ROLLED TO A MINIMUM 90 PERCENT RELATIVE COMPACTION. SUBGRADE PREPARATION WILL NOT BE MEASURED OR PAID SEPARATELY AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED UNLESS OVEREXCAVATION IS DIRECTED BY ENGINEER.

THE EXCAVATION AND FILL REQUIRED TO OBTAIN THE CHANNEL AND ACCESS ROAD CROSS SECTIONS AS SHOWN HEREON THESE DRAWINGS AND ON RCFC STD. CH326 OF THE DISTRICT STANDARD DRAWINGS AND THE PLACEMENT OF MATERIAL IN THE MANDATORY FILL AREAS AND AREAS WHERE STRUCTURES HAVE BEEN REMOVED.

MATERIAL WHICH WILL NOT PROVIDE A SUITABLE FOUNDATION SHALL BE REMOVED AND REPLACED WITH COMPACTED SELECT MATERIAL AS DIRECTED BY THE ENGINEER.

ANY OVEREXCAVATION SHALL BE FILLED WITH SELECT MATERIAL COMPACTED TO 90 PERCENT RELATIVE COMPACTION, UNLESS OTHERWISE SPECIFIED, AND MEETING THE MATERIAL REQUIREMENTS FOR BACKFILL.

THE CONTRACTOR SHALL LEGALLY REMOVE SLIDES AND MATERIALS ERODING INTO THE WORK, AND THE SLOPES AND GRADES REFINISHED TO ORIGINAL GRADES AS SPECIFIED.

THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL SURPLUS EXCAVATED MATERIAL OUTSIDE OF THE LIMITS OF THE CONSTRUCTION EASEMENTS AND PERMANENT RIGHTS OF WAY.

BACKFILL SHALL BE PERFORMED AS SET FORTH IN SECTIONS 300–4.1 TO 300–4.8 OF THE GREENBOOK SPECIFICATIONS.

NO BACKFILL MATERIALS SHALL BE PLACED AGAINST THE OUTSIDE WALLS OF CAST-IN-PLACE CONCRETE STRUCTURES UNTIL THE CONCRETE HAS DEVELOPED 80 PERCENT OF ITS DESIGN STRENGTH. NO FILL OR TRAFFIC WILL BE PERMITTED ON THE TOP OF ANY CAST-IN-PLACE CONCRETE STRUCTURE UNTIL THE CONCRETE IN THE STRUCTURE HAS ATTAINED ITS DESIGN STRENGTH. COMPRESSIVE STRENGTH WILL BE DETERMINED BY TEST CYLINDERS TAKEN BY THE ENGINEER. A MAXIMUM OF 6 TEST CYLINDERS PER STRUCTURE WILL BE MADE AND PAID BY THE DISTRICT FOR THE FOLLOWING DAY BREAKS: 7, 14, 21, 28 (X2), AND ONE BREAK TO BE AGREED UPON BY THE ENGINEER AND CONTRACTOR. THE TWO CYLINDER BREAKS AT 28 DAYS ARE TO REPORT THE AVERAGE AS REQUIRED BY ACI. ANY ADDITIONAL TEST CYLINDERS REQUESTED BY CONTRACTOR SHALL BE DEDUCTED FROM THE MONTHLY PROGRESS PAYMENT AT A RATE OF \$500.00/CYLINDER.

REGARDLESS OF THE METHOD OF DENSIFICATION, BACKFILL MATERIAL SHALL NOT BE PLACED AGAINST ANY REINFORCED CONCRETE STRUCTURE UNTIL THE STRUCTURE HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE ENGINEER.

CONCRETE CLASS "A"

CONCRETE FOR ALL PURPOSES SHALL BE COMPOSED OF PORTLAND CEMENT, AGGREGATES, AND WATER OF THE QUANTITIES AND QUALITIES HEREIN SPECIFIED AND IN THE REQUIRED PROPORTIONS. THE INGREDIENTS ARE TO BE WELL MIXED (A MINIMUM OF 70 DRUM REVOLUTIONS, AND A MAXIMUM OF 250 DRUM REVOLUTIONS ARE REQUIRED TO PROVIDE SUFFICIENT AGITATION TO THE CONCRETE MIX) AND BROUGHT TO THE PROPER CONSISTENCY AND TO HAVE A COMPRESSIVE STRENGTH AT THE AGE OF 28 DAYS OF NOT LESS THAN 3,500PSI WITH A COMBINED AGGREGATE GRADING OF 1" MAXIMUM.

ALL CONCRETE MATERIALS, METHODS, FORMS, AND PROPORTIONING SHALL CONFORM TO SECTIONS 51 AND 90, AND ADDITIONALLY, CURB CONSTRUCTION SHALL CONFORM TO SECTION 73 OF THE CALTRANS SPECIFICATIONS. CONCRETE TEST SPECIMENS WILL BE MADE IN ACCORDANCE WITH ASTM C31 AND ASTM C172. TEST FOR CONCRETE COMPRESSIVE STRENGTHS WILL BE PERFORMED IN ACCORDANCE WITH ASTM C39.

WATER REDUCING AGENTS MEETING ASTM DESIGNATION: C-494 WILL BE PERMITTED IN AMOUNTS RECOMMENDED BY THE SUPPLIER AND APPROVED BY THE ENGINEER IN WRITING. NO OTHER ADMIXTURE SHALL BE USED IN ANY CLASS OF CONCRETE WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

PRIOR TO PLACEMENT OF ANY CONCRETE THE CONTRACTOR SHALL SUBMIT MIX DESIGNS, FOR ALL TYPES OF CONCRETE TO BE PLACED, TO THE ENGINEER FOR APPROVAL. CONCRETE DELIVERED TO THE JOB SITE SHALL BE ACCOMPANIED BY A TICKET CONTAINING THE WEIGHT OF EACH OF THE INDIVIDUAL INGREDIENTS IN THE MIX.

CONCRETE SHALL NOT BE PLACED EXCEPT IN THE PRESENCE OF THE ENGINEER OR INSPECTOR. THE CONTRACTOR SHALL GIVE REASONABLE NOTICE TO THE ENGINEER EACH TIME HE INTENDS TO PLACE CONCRETE. SUCH NOTICE SHALL BE FAR ENOUGH IN ADVANCE TO GIVE THE ENGINEER ADEQUATE TIME TO INSPECT THE SUBGRADE, FORMS, STEEL REINFORCEMENT AND OTHER PREPARATIONS FOR COMPLIANCE WITH THE SPECIFICATIONS BEFORE CONCRETE IS DELIVERED FOR PLACING.

FORMED CONCRETE SHALL BE PLACED IN HORIZONTAL LAYERS IN LIFTS OF NOT MORE THAN 20 INCHES. HOPPERS AND CHUTES, PIPES AND "ELEPHANT TRUNKS" SHALL BE USED AS NECESSARY TO PREVENT SEGREGATION OF THE CONCRETE.

SUPPLEMENTING SECTION 90-1.01 OF THE CALTRANS SPECIFICATIONS, PRIOR TO PLACEMENT OF ANY CONCRETE, THE CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR ALL TYPES OF CONCRETE TO BE PLACED TO THE ENGINEER FOR APPROVAL. SUPPLEMENTING SECTION 90-1.02G(3) OF THE CALTRANS SPECIFICATIONS, CONCRETE DELIVERED TO THE JOB SITE SHALL BE ACCOMPANIED BY A TICKET CONTAINING THE WEIGHT OF EACH OF THE INDIVIDUAL INGREDIENTS IN THE MIX.

FORM REMOVAL AND FINISH

FORMS SHALL BE REMOVED ONLY WHEN THE ENGINEER HAS GIVEN HIS APPROVAL. FORMS SHALL BE REMOVED IN SUCH A WAY AS TO PREVENT DAMAGE TO THE CONCRETE. SUPPORTS SHALL BE REMOVED IN A MANNER THAT WILL PERMIT THE CONCRETE TO TAKE STRESSES DUE TO ITS OWN WEIGHT UNIFORMLY.

FORMS SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING MINIMUM TIME OR STRENGTH AFTER THE CONCRETE IS PLACED. THESE TIMES REPRESENT CUMULATIVE NUMBER OF DAYS AND FRACTIONS OF DAYS, NOT NECESSARILY CONSECUTIVE, DURING WHICH THE TEMPERATURE OF THE AIR ADJACENT TO THE CONCRETE IS ABOVE 50 DEGREES FAHRENHEIT. IF THE TEMPERATURE FALLS BELOW 50 DEGREES FAHRENHEIT AT ANY TIME AFTER THE CONCRETE IS PLACED IN THE FORMS, THE ENGINEER WILL ADVISE THE CONTRACTOR OF ADDITIONAL TIME REQUIRED BEFORE FORMS CAN BE REMOVED. FOR ALL STRUCTURES– 16 HOURS

THE FINISH ON ALL EXPOSED FORMED SURFACES SHALL CONFORM TO SECTION 51–1.03F(3) CLASS 1 SURFACE FINISH OF THE CALTRANS SPECIFICATIONS. THE EXPOSED CONCRETE SURFACES SHALL BE BROOMED IN A TRANSVERSE DIRECTION WITH A FINE TEXTURED HAIR PUSH BROOM TO PRODUCE A UNIFORM SURFACE AND ELIMINATE FLOAT MARKS. BROOMING SHALL BE DONE WHEN THE SURFACE IS SUFFICIENTLY SET TO PREVENT DEEP SCARRING. IF DIRECTED BY THE ENGINEER, A FINE SPRAY OF WATER SHALL BE APPLIED TO THE SURFACE IMMEDIATELY IN ADVANCE OF BROOMING.

EXPOSED CORNERS OF ALL CONCRETE STRUCTURES SHALL BE FINISHED WITH A 3/4" CHAMFER.

CONCRETE FLATWORK SHALL MATCH ADJACENT SURFACES. THE CONCRETE SHALL BE STRUCK OFF AND TAMPED OR VIBRATED UNTIL A LAYER OF MORTAR HAS BEEN BROUGHT TO THE SURFACE. THE TOP SURFACE SHALL BE FINISHED TO MATCH ADJACENT SURFACES.

CURING

ALL CONCRETE SHALL BE PREVENTED FROM DRYING FOR A CURING PERIOD OF AT LEAST SEVEN (7) DAYS AFTER IT IS PLACED. SURFACES EXPOSED TO AIR DURING THE CURING PROCESS SHALL BE KEPT CONTINUOUSLY MOIST FOR THE ENTIRE PERIOD OR UNTIL CURING COMPOUND IS APPLIED.

FORMED SURFACES SHALL BE THOROUGHLY WETTED IMMEDIATELY AFTER FORMS ARE REMOVED AND SHALL BE KEPT WET UNTIL PATCHING AND REPAIRS ARE COMPLETED. WATER OR COVERING SHALL BE APPLIED IN SUCH A WAY THAT THE CONCRETE SURFACE IS NOT ERODED OR OTHERWISE DAMAGED. WATER FOR CURING SHALL BE CLEAN AND FREE FROM ANY SUBSTANCES THAT WILL CAUSE DISCOLORATION OF THE CONCRETE.

CONCRETE MAY BE COATED WITH CURING COMPOUND IN LIEU OF THE CONTINUED APPLICATION OF MOISTURE. THE CURING COMPOUND SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 90–1.03B(3) OF THE CALTRANS SPECIFICATIONS AND ASTM DESIGNATION C–309. THE CURING COMPOUND SHALL BE NO. 2 WHITE PIGMENTED CURING COMPOUND, TYPE 2, CLASS B FOR ALL CONCRETE SURFACES.

THE CURING COMPOUND SHALL BE SPRAYED ON THE MOIST CONCRETE SURFACES AS SOON AS FREE WATER HAS DISAPPEARED, BUT SHALL NOT BE APPLIED TO ANY SURFACE UNTIL PATCHING, REPAIRS AND FINISHING OF THAT SURFACE ARE COMPLETED. THE CURING COMPOUND SHALL BE THOROUGHLY MIXED IMMEDIATELY BEFORE APPLYING, AND SHALL BE APPLIED AT A UNIFORM RATE OF NOT LESS THAN ONE GALLON PER 150 SQUARE FEET OF SURFACE. NO SEPARATE PAYMENT WILL BE MADE FOR THE CURING COMPOUND OR ITS APPLICATION.

JOINTS

JOINTS SHALL BE MADE AT THE LOCATIONS SHOWN ON THE DRAWINGS, OR AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL CONSTRUCT, IN ONE CONTINUOUS CONCRETE PLACING OPERATION, ALL WORK COMPRISED BETWEEN SUCH JOINTS. JOINTS SHALL BE KEPT MOIST UNTIL ADJACENT CONCRETE IS PLACED.

ALL CONSTRUCTION JOINTS HAVING A KEYED, STEPPED, OR ROUGHENED SURFACE SHALL BE CLEANED BY SANDBLASTING PRIOR TO PLACEMENT OF THE ADJACENT CONCRETE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED AS SET FORTH IN SECTION 51–1.03D(4) OF THE CALTRANS SPECIFICATIONS.

USE OF THE CHANNEL INVERT OR FARMERS BRIDGE

NO VEHICLES, INCLUDING DUMP TRUCKS, CONCRETE TRUCKS, EARTH MOVING EQUIPMENT (WHETHER FULL OR EMPTY), CRANES, ETC. WILL BE ALLOWED TO OPERATE ON THE INVERT OF THE CHANNEL AT ANY TIME.



	REVISIONS			RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT			HIGHGROVE CHANNEL SLOPE REPAIRS SPECIFICATIONS	PROJECT NO. —
				DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:		DRAWING NO. —
				DRAWN BY: STK	SENIOR CIVIL ENGINEER	CHIEF, OPERATIONS		SHEET NO. 2 OF 10
				DATE DRAWN: 7/15/2026	DATE: _____	DATE: _____		
	REF.	DESCRIPTION	APPR.	DATE	P8 NUMBER: 271351			

SPECIFICATIONS

EXTRA DIRECTED WORK

A. GENERAL

THE DISTRICT RESERVES AND SHALL HAVE THE RIGHT, FOR ANY REASON WHATSOEVER, OR WHEN CONFRONTED WITH UNFORSEEN CONDITIONS, UNFORESEEN EVENTS, OR EMERGENCIES, TO REVISE THE DETAILS OF THE CONTEMPLATED WORK, OR TO ADD WORK OF A DIFFERENT CHARACTER OR FUNCTION WHICH HAVE NO BEARING UPON SUCH REVISED OR ADDED WORK AS "EXTRA WORK." WHEN SUCH EXTRA WORK IS CONSIDERED BY THE CHIEF ENGINEER TO BE APPURTENANT TO THE SATISFACTORY COMPLETION OF THE PROJECT.

"EXTRA WORK"IS DEFINED AS ADDED WORK OF A DIFFERENT CHARACTER OR FUNCTION AND FOR WHICH NO BASIS FOR PAYMENT IS PRESCRIBED. INITIAL OR DRAWING REVISIONS OF THE DETAILS OF THE WORK IN SUCH MANNER AS TO RENDER INEQUITABLE PAYMENT UNDER ITEMS OF THE WORK, OR THE INCLUSION OF THAT WORK WHICH IS NOT IMMEDIATE IN THE SUMMARY OR PAYMENT, AND IS SPECIFICALLY DESIGNATED AS EXTRA WORK IN THE PLANS AND SPECIAL PROVISIONS.

THE SIGNING OF THE CONTRACT BY THE CONTRACTOR WILL BE DEEMED TO BE AN AGREEMENT ON HIS PART TO PERFORM EXTRA WORK, AS AND WHEN ORDERED BY THE CHIEF ENGINEER. NOTICE TO THE SURETIES ON THE CONTRACTOR'S BONDS WILL NOT BE GIVEN UNLESS THE EXTRA WORK ELEMENTS OF THE CONTRACT, AS CHANGED OR SUPPLEMENTED, SHALL EXCEED THE ORIGINAL TOTAL BID PRICE BY MORE THAN 25%.

B. PROCEDURE FOR EXTRA WORK

1. EXTRA WORK MAY NOT BE DONE BY THE CONTRACTOR WITHOUT PRIOR REQUEST AND PROPER WRITTEN ORDER BY THE CHIEF ENGINEER. UPON RECEIPT OF A WRITTEN REQUEST FOR EXTRA WORK FROM THE CHIEF ENGINEER TO THE CONTRACTOR, ACQUAINTING HIM WITH THE REQUIREMENTS OF THE NEW WORK, INCLUDING THE DESCRIPTION, LOCATION AND TIME WITHIN WHICH SAME SHALL BE COMPLETED, OR IN CASE OF EMERGENCY, A VERBAL REQUEST OR DIRECTION, THE CONTRACTOR SHALL CONFIRM SUCH VERBAL REQUEST IN WRITING TO THE DISTRICT, STATING THAT THE CHIEF ENGINEER HAS ORDERED THE WORK IN THE BEST INTEREST OF THE DISTRICT. IF THE CONTRACTOR DOES NOT RECEIVE THE WRITTEN REQUEST FOR THE EXTRA WORK WITHIN 7 DAYS OF THE VERBAL REQUEST, THE CONTRACTOR MAY PROCEED TO SHOW THAT THE COST WILL NOT EXCEED 10.

2. THE PRICES FOR EXTRA WORK SHALL BE PREPARED BY THE CONTRACTOR AS REQUESTED BY THE CHIEF ENGINEER. SUBMIT TO THE CHIEF ENGINEER FOR A STATED LUMP SUM OR UNIT-PRICE SUM AMOUNT BASED UPON CURRENT PREVAILING FAIR PRICES FOR MATERIALS, LABOR, PLANT, OVERHEAD AND PROFIT.

3. UPON RECEIPT OF THE CONTRACTOR'S PRICE, THE CHIEF ENGINEER WILL MAKE AN ANALYSIS THEREOF AND ADOPT ONE OF THE FOLLOWING PROCEDURES:

a. ACCEPT THE CONTRACTOR'S PRICE FOR LUMP SUM OR UNIT PRICE AMOUNT IN THE ORIGINAL OR AMENDED FORM. ORDER HIM TO PROCEED WITH THE WORK; OR DIRECT HIM TO PERFORM THE WORK ON A FORCE-ACCOUNT BASIS.

b. HAVE THE WORK PERFORMED BY DISTRICT'S FORCES OR SEPARATE CONTRACT, WHICHEVER IS MORE ECONOMICAL TO THE CONTRACTOR AND WITHOUT CLAIM OR SUIT BY THE CONTRACTOR FOR DAMAGES ON ACCOUNT THEREOF.

c. ORDER THE CONTRACTOR TO PROCEED WITH THE WORK AND ACCEPT PAYMENT THEREFOR IN THE AMOUNT AS ADJUDICATED LATER IN A COURT OF LAW.

4. THE PRICE AGREED TO BY THE CONTRACTOR FOR THE EXTRA WORK SHALL BE FULL COMPENSATION TO THE CONTRACTOR FOR ALL LABOR, MATERIALS, EQUIPMENT OR OTHER COSTS RELATED TO THE EXTRA WORK.

STORM WATER AND NON-STORM WATER POLLUTION CONTROL

THIS SECTION COVERS THE CONTRACT ITEMS STORMWATER AND NON-STORMWATER POLLUTION CONTROL; THE CONTRACT ITEM STORMWATER AND NON-STORMWATER POLLUTION CONTROL SHALL INCLUDE PREPARING, OBTAINING APPROVAL OF, AMENDING, AND IMPLEMENTING CONTRACTOR'S POLLUTION PREVENTION PLAN (PPP).

THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF STATE-WIDE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT (BOARD ORDER NO. 2009-0009-DWQ, NPDES NO. CAS000002 AS AMENDED BY BOARD ORDER NO. 2022-0057-DWQ) FOR STORMWATER DISTURBANCE ACTIVITIES.THE CONTRACTOR SHALL IMPLEMENT SITE SPECIFIC POLLUTION PREVENTION BEST MANAGEMENT PRACTICES (BMP) AS OUTLINED IN THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA) BMP HANDBOOK DURING AND AFTER CONSTRUCTION TO MINIMIZE THE POTENTIAL POLLUTION OF STORMWATER AND NON-STORMWATER RUNOFF AND DOWNSTREAM RECEIVING WATERS.THE IDENTIFIED BMPS SHALL BE PRACTICES DESIGNED TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE AND CONTRACTOR'S CONSTRUCTION ACTIVITIES, INCLUDING, BUT NOT LIMITED TO:

-GOOD HOUSEKEEPING PRACTICES FOR SOLID AND SANITARY/SEPTIC WASTE MANAGEMENT, VEHICLE AND EQUIPMENT CLEANING/MAINTENANCE, AND MATERIAL HANDLING AND STORAGE.
-CONSTRUCTION PROCEDURES SUCH AS STABILIZED CONSTRUCTION ACCESS POINTS, SCHEDULING/PHASING TO MINIMIZE AREAS OF SOIL DISTURBANCE, SOIL STABILIZATION AND EROSION/SEDIMENT CONTROL.

STORM WATER AND NON-STORM WATER POLLUTION CONTROL

GENERAL REQUIREMENTS

STORMWATER AND NON-STORMWATER POLLUTION CONTROL WORK SHALL CONFORM TO THE REQUIREMENTS IN THE LATEST VERSION OF CALTRANS STORM WATER QUALITY HANDBOOKS, ENTITLED "CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMPS) MANUAL"AND "STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND WATER POLLUTION CONTROL PROGRAM (WPCP) PREPARATION MANUAL." COPIES OF THE "CONSTRUCTION SITE BMPS MANUAL"AND "SWPPP AND WPCP PREPARATION MANUAL", HEREAFTER REFERRED TO COLLECTIVELY AS THE "CALTRANS HANDBOOKS", MAY BE OBTAINED FROM THE CALIFORNIA DEPARTMENT OF TRANSPORTATION PUBLICATION DISTRIBUTION UNIT, 1900 ROYAL OAKS DRIVE, SACRAMENTO, CALIFORNIA, 95815-3800. TELEPHONE: 916.445.3520. COPIES OF THE CALTRANS HANDBOOKS CAN ALSO BE DOWNLOADED FROM THE CALTRANS INTERNET SITE AT [HTTP://WWW.DOT.CA.GOV/HQ/CONSTRUC/STORMWATER/MANUALS/HTM](http://www.dot.ca.gov/hq/construc/stormwater/manuals/htm). IN ADDITION, COPIES OF THE CALTRANS HANDBOOKS ARE AVAILABLE FOR REVIEW AT THE DISTRICT'S OFFICE. THE POLLUTION PREVENTION PLAN (PPP) SHALL IDENTIFY SITE SPECIFIC BMPS TO BE IMPLEMENTED DURING AND AFTER CONSTRUCTION TO MINIMIZE THE POTENTIAL POLLUTION OF STORMWATER RUNOFF AND RECEIVING WATERS. THE IDENTIFIED BMPS SHALL BE PRACTICES DESIGNED TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE AND CONTRACTOR'S CONSTRUCTION ACTIVITIES, INCLUDING, BUT NOT LIMITED TO:

1. GOOD HOUSEKEEPING PRACTICES FOR SOLID AND SANITARY/SEPTIC WASTE MANAGEMENT, VEHICLE AND EQUIPMENT CLEANING/MAINTENANCE, AND MATERIAL HANDLING AND STORAGE.

2. CONSTRUCTION PROCEDURES SUCH AS STABILIZED CONSTRUCTION ACCESS POINTS, SCHEDULING/PHASING TO MINIMIZE AREAS OF SOIL DISTURBANCE, SOIL STABILIZATION, AND EROSION/SEDIMENT CONTROL.

THE PPP SHALL ALSO STIPULATE AN ONGOING PROGRAM FOR MONITORING AND MAINTENANCE OF ALL BMPS.

FOR THE CONVENIENCE OF THE CONTRACTOR AND TO EXPEDITE THE PPP PREPARATION AND APPROVAL, A "90%"PPP TEMPLATE HAS BEEN PREPARED BY THE DISTRICT. THIS "90%"PPP TEMPLATE HAS BEEN TAILORED TO THE REFERENCED PROJECT AND CAN BE DOWNLOADED FROM https://content.rcflood.org/documents/PPP_Template_6000030.pdf. THE AWARDED CONTRACTOR WILL BE PROVIDED A WORD DOCUMENT OF THE "90%"PPP TEMPLATE TO AMEND. THE CONTRACTOR SHALL REVIEW AND AMEND THIS "90%"PPP TEMPLATE BASED ON THE REQUIREMENTS OF THE GENERAL PERMIT AND PER THE CONSTRUCTION SCHEDULE AND WORK PLAN PROPOSED BY THE CONTRACTOR. THE CONTRACTOR SHALL THEN SUBMIT A PPP CERTIFIED BY THE CONTRACTOR'S QUALIFIED SWPPP DEVELOPER (QSD) FOR DISTRICT REVIEW AND APPROVAL. THE CONTRACTOR SHALL AMEND AND FINALIZE THE COMPLETE "90%"PPP TEMPLATE REFERENCED ABOVE. THE CONTRACTOR SHALL, AT A MINIMUM, PROVIDE AND/OR PREPARE THE FOLLOWING:

1. NAME AND CONTACT INFORMATION FOR THE CONTRACTOR'S QUALIFIED SWPPP PRACTITIONER (QSP) AND QSD
2. CONTRACTOR NAME AND CONTACT INFORMATION
3. CONTRACTOR SITE CONTACT PERSON AND EMERGENCY CONTACT PERSON INFORMATION
4. VERIFICATION OF DISTURBANCE AREA DUE TO CONSTRUCTION
5. CONSTRUCTION COMMENCEMENT DATE
6. ANTICIPATED CONSTRUCTION COMPLETION DATE
7. CONSTRUCTION ACTIVITY SCHEDULE/BMPS INSTALLATION SCHEDULE
8. LIST AND CONTACT INFORMATION FOR PERSONNEL RESPONSIBLE FOR PRE-STORM, POST-STORM AND STORM EVENT BMP INSPECTIONS -THIS SHOULD BE THE PROJECT'S QSP
9. NAME AND CONTACT INFORMATION FOR SUBCONTRACTORS THAT WILL BE WORKING ON THE PROJECT
10. REVIEW AND FINALIZE WATER POLLUTION CONTROL DRAWINGS

IN THE EVENT THE DISTRICT INCURS ANY ADMINISTRATIVE CIVIL LIABILITY OR MANDATORY MINIMUM PENALTY (FINE) IMPOSED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, AS A RESULT OF THE CONTRACTOR'S FAILURE TO FULLY IMPLEMENT THE PROVISIONS OF THIS SECTION AND PERMIT REQUIREMENTS, "STORMWATER AND NON-STORMWATER POLLUTION CONTROL", THE ENGINEER MAY, IN THE EXERCISE OF HIS SOLE JUDGMENT AND DISCRETION, WITHHOLD FROM PAYMENTS OTHERWISE DUE CONTRACTOR A SUFFICIENT AMOUNT TO COVER THE CIVIL LIABILITY FOR THE "KNOWING VIOLATIONS"MAY BE IN AN AMOUNT UP TO \$10,000 PER DAY EACH OCCURRENCE WHILE "KNOWING VIOLATIONS"CAN RESULT IN FINES AS HIGH AS \$250,000 AND IMPRISONMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND FOR ANY LIABILITY IMPOSED BY LAW AS A RESULT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS SET FORTH IN THIS SECTION, STORMWATER AND NON-STORMWATER POLLUTION CONTROL, INCLUDING, BUT NOT LIMITED TO, COMPLIANCE WITH THE APPLICABLE PROVISIONS OF THE CALTRANS HANDBOOKS, AND FEDERAL, STATE, AND LOCAL REGULATIONS. FOR THE PURPOSE OF THIS PARAGRAPH, COSTS AND LIABILITIES INCLUDE, BUT ARE NOT LIMITED TO, FINES, PENALTIES, AND DAMAGES, WHETHER ASSESSED AGAINST THE DISTRICT OR THE CONTRACTOR, INCLUDING THOSE LEVIED UNDER THE FEDERAL CLEAN WATER ACT AND THE STATE PORTER-COLOGNE WATER QUALITY ACT.

THE CONTRACTOR SHALL BECOME FULLY INFORMED OF AND COMPLY WITH THE APPLICABLE PROVISIONS OF THE CALTRANS HANDBOOKS, AND FEDERAL, STATE, AND LOCAL REGULATIONS THAT GOVERN THE CONTRACTOR'S ACTIVITIES AND OPERATION PERTAINING TO BOTH STORMWATER AND NON-STORMWATER DISCHARGES FROM BOTH THE PROJECT SITE AND AREAS OF DISTURBANCE WITHIN THE PROJECT LIMITS BEFORE CONSTRUCTION. THE CONTRACTOR SHALL, AT ALL TIMES, KEEP COPIES OF THE APPROVED PPP AND ALL AMENDMENTS AT THE PROJECT SITE. THE PPP SHALL BE MADE AVAILABLE UPON REQUEST OF A REPRESENTATIVE OF THE STATE WATER RESOURCES CONTROL BOARD (SWRCB), CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (CRWQCB), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) OR LOCAL STORMWATER MANAGEMENT AGENCY. REQUESTS BY THE PUBLIC SHALL BE DIRECTED TO THE ENGINEER.

STORM WATER AND NON-STORM WATER POLLUTION CONTROL

THE CONTRACTOR IS SOLELY AND EXCLUSIVELY RESPONSIBLE FOR ANY ARRANGEMENTS MADE BETWEEN THE CONTRACTOR AND OTHER PROPERTY OWNERS OR ENTITIES THAT RESULT IN DISTURBANCE OF AREAS OR CONSTRUCTION ACTIVITIES BEING CONDUCTED OUTSIDE THE LIMITS OF THE DESIGNATED RIGHTS OF WAY AND TEMPORARY CONSTRUCTION EASEMENTS AS SHOWN ON THE DRAWINGS.

POLLUTION PREVENTION PLAN (PPP) PREPARATION AND APPROVAL
THE CONTRACTOR SHALL PREPARE AND OBTAIN APPROVAL OF THE PPP AS PART OF THE STORMWATER AND NON-STORMWATER POLLUTION CONTROL WORK FOR THIS CONTRACT. THE CONTRACTOR SHALL PREPARE THE PPP USING THE PROVIDED "95% TEMPLATE".

IN CASE OF CONFLICT BETWEEN THE CALTRANS HANDBOOKS AND THESE DETAILED SPECIFICATIONS, THE DETAILED SPECIFICATIONS SHALL GOVERN.

THE OBJECTIVES OF THE PPP SHALL BE TO IDENTIFY ALL POLLUTION SOURCES ASSOCIATED WITH CONTRACTOR'S CONSTRUCTION ACTIVITIES THAT MAY ADVERSELY AFFECT THE QUALITY OF STORMWATER DISCHARGES AND RECEIVING WATERS; TO IDENTIFY ALL NON-STORMWATER DISCHARGES; TO IDENTIFY, CONSTRUCT, IMPLEMENT, AND MAINTAIN WATER POLLUTION CONTROL BEST MANAGEMENT PRACTICES, HEREAFTER REFERRED TO AS "BMPS", TO REDUCE TO THE MAXIMUM EXTENT PRACTICABLE POLLUTANTS IN BOTH STORMWATER AND AUTHORIZED NON-STORMWATER DISCHARGES FROM THE CONSTRUCTION SITE DURING CONSTRUCTION; AND TO DEVELOP A MAINTENANCE SCHEDULE FOR BMPS AFTER CONSTRUCTION IS COMPLETED UNDER THIS CONTRACT.

THE PPP SHALL INCORPORATE BMPS IN EACH OF THE FOLLOWING CATEGORIES:

SEDIMENT CONTROL PRACTICES
SEDIMENT TRACKING CONTROL PRACTICES
WIND EROSION CONTROL PRACTICES
NON-STORMWATER MANAGEMENT, AND WASTE MANAGEMENT AND DISPOSAL CONTROL PRACTICES

SPECIFIC OBJECTIVES AND MINIMUM REQUIREMENTS FOR EACH CATEGORY OF BMPS ARE CONTAINED IN THE CALTRANS HANDBOOKS. THE CONTRACTOR SHALL CONSIDER THE OBJECTIVES AND MINIMUM REQUIREMENTS PRESENTED IN THE CALTRANS HANDBOOKS FOR EACH OF THE ABOVE CATEGORIES. WHEN MINIMUM REQUIREMENTS OF THE LISTED BMPS REQUIRED TO MEET THE PPP AND THE IMPLEMENT THE PPP ON THE PROJECT TO MEET THE POLLUTION CONTROL OBJECTIVES FOR THE CATEGORIES. IN ADDITION, THE CONTRACTOR SHALL CONSIDER OTHER BMPS PRESENTED IN THE CALTRANS HANDBOOKS TO SUPPLEMENT THE MINIMUM BMPS REQUIRED, WHEN NECESSARY TO MEET ALL GOALS STATED IN THE PPP.

MEASUREMENT

EXCAVATION AND BACKFILL BEYOND THE LIMITS ESTABLISHED BY THE DRAWINGS AND STANDARD DRAWINGS, UNLESS ORDERED IN WRITING BY THE ENGINEER, WILL NOT BE MEASURED FOR PAYMENT.

THE EXCAVATED MATERIAL SHALL BE MEASURED FROM THE GROUND SURFACE EXISTING AT THE START OF EXCAVATION, AS DETERMINED FROM SURVEY DATA TAKEN BY THE DISTRICT TO THE LINES, GRADES AND DIMENSIONS SHOWN ON THE DRAWINGS. LONGITUDINAL LIMITS OF THE EXCAVATIONS AS SHOWN ON THE PROFILE DRAWINGS TERMINATE AT A VERTICAL PLANE AT THE LIMITS OF THE STRUCTURE, MEASURED ALONG THE LONGITUDINAL AXIS OF THE VARIOUS STRUCTURES. IT SHOULD BE NOTED THAT CLOSE COORDINATION BETWEEN THE CONTRACTOR AND THE ENGINEER IS REQUIRED TO ENSURE THAT THE NECESSARY SURVEYS ARE SCHEDULED AND CONDUCTED TO FACILITATE ACCURATE MEASUREMENTS FOR PAYMENT.

MEASUREMENT FOR PAYMENT FOR THE CONTRACT ITEM EXCAVATION WILL BE THE NUMBER OF CUBIC YARDS OF MATERIAL EXCAVATED AS SHOWN ON THE DRAWINGS. LONGITUDINAL LIMITS OF THE EXCAVATIONS TERMINATE AT A VERTICAL PLANE AT THE LIMITS OF PIPE OR STRUCTURES, MEASURED ALONG THE LONGITUDINAL AXIS OF THE PIPE OR STRUCTURE.

MEASUREMENT FOR PAYMENT FOR THE CONTRACT ITEM BACKFILL WILL BE THE NUMBER OF CUBIC YARDS OF FILL MATERIAL PLACED IN FINAL POSITION AS SPECIFIED AND WITHIN THE LIMITS OF THE PAYMENT LINES SHOWN ON THE DRAWINGS. VOLUMES OCCUPIED BY STRUCTURES, AGGREGATE BASE, ASPHALT CONCRETE, AND OTHER FEATURES FOR WHICH A SEPARATE PAYMENT IS MADE WILL BE DEDUCTED FROM THE GROSS VOLUME.

MEASUREMENT FOR PAYMENT FOR THE CONTRACT ITEM CLASS "A" CONCRETE WILL BE THE NUMBER OF CUBIC YARDS PLACED AS SPECIFIED, MEASURED TO THE NEAT LINES AS SHOWN ON THE DRAWINGS.

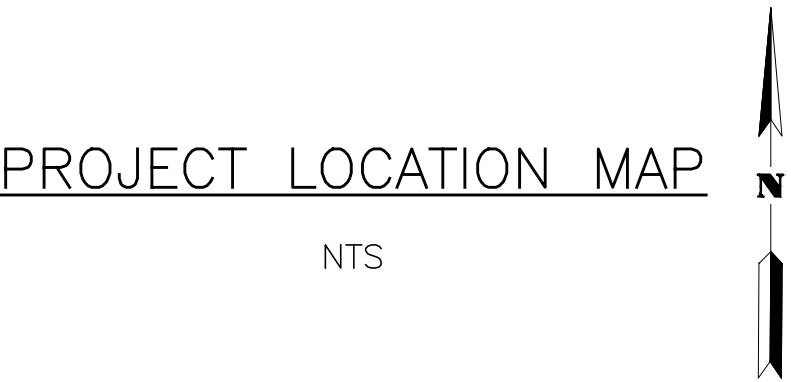
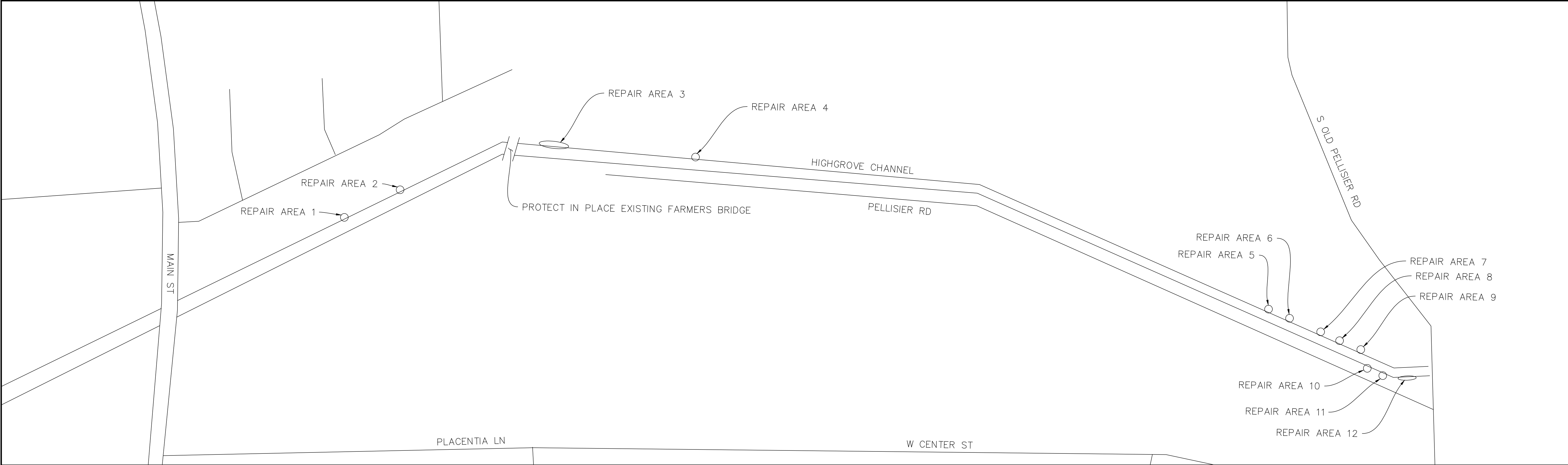
PAYMENT

THE CONTRACT PRICES PAID FOR MOBILIZATION, WATER CONTROL, TRAFFIC CONTROL, EXCAVATION, BACKFILL, AND CLASS "A" CONCRETE AND EXTRA DIRECTED WORK SHALL INCLUDE FULL COMPENSATION FOR ALL COSTS INCURRED UNDER THEIR RESPECTIVE SECTIONS.

THE CONTRACT LUMP SUM PRICES PAID FOR CLEARING AND MISCELLANEOUS WORK, STORM WATER AND NON-STORM WATER POLLUTION CONTROL, AND DUST ABATEMENT SHALL INCLUDE FULL COMPENSATION FOR ALL DIRECT AND INDIRECT COSTS INCURRED AND WILL BE MADE ON A BASIS OF THE PERCENTAGE OF WORK COMPLETED ON THE ENTIRE PROJECT OR AS DIRECTED BY THE ENGINEER.



	REVISIONS			RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT			HIGHGROVE CHANNEL SLOPE REPAIRS	SPECIFICATIONS	PROJECT NO. —
				DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:			DRAWING NO. —
				DRAWN BY: STK	SENIOR CIVIL ENGINEER	CHIEF, OPERATIONS			SHEET NO. 3 OF 10
				DATE DRAWN: 7/15/2026	DATE: _____	DATE: _____			
				DATE: _____	DATE: _____	DATE: _____			
	REF.	DESCRIPTION	APPR.	DATE	P8 NUMBER: 271351				



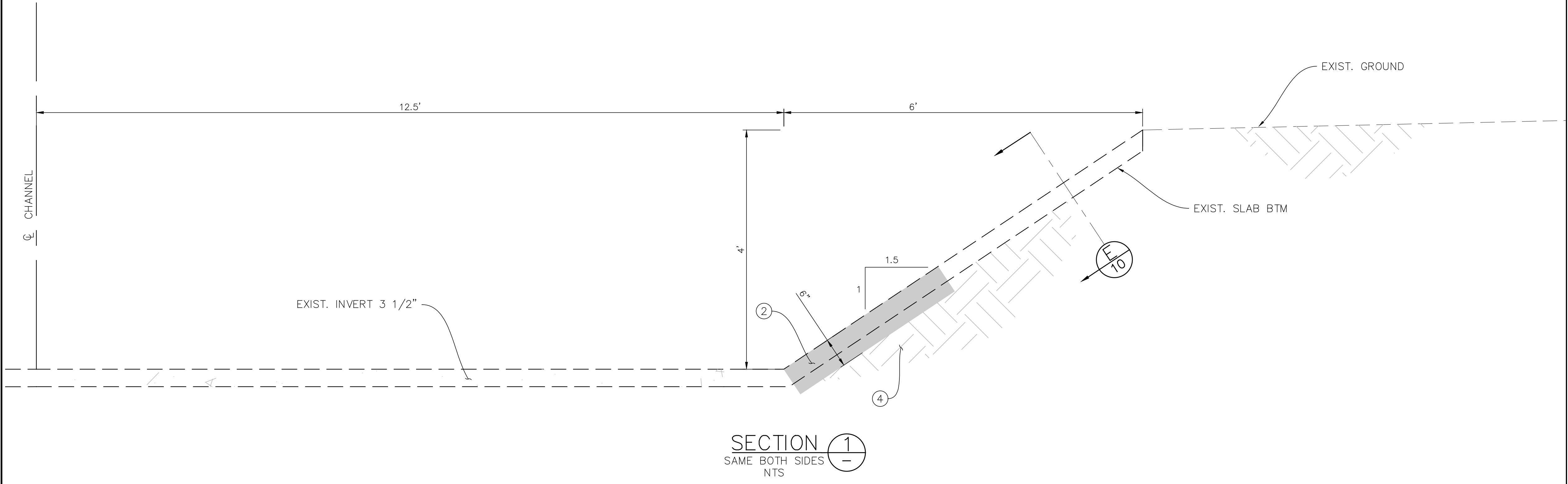
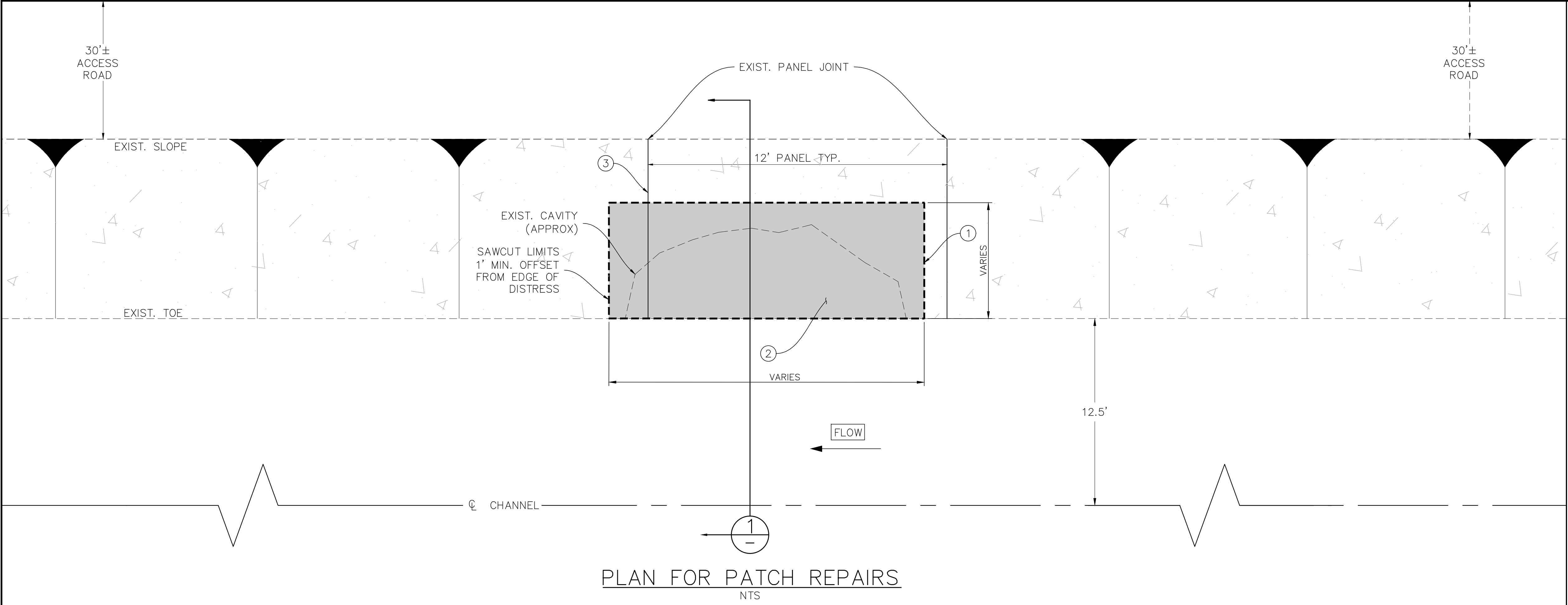
HIGHGROVE CHANNEL REPAIR AREA INFORMATION						
REPAIR AREA	LATITUDE±	LONGITUDE±	HEIGHT (FT)*	LENGTH (FT)	REPAIR METHOD	SHEET REFERENCE
1	34° 1'16.79"N	117°21'38.17"W	7.25	5.00	PANEL REPLACEMENT	SHEET 6
2	34° 1'17.10"N	117°21'36.88"W	7.25	24.00	PANEL REPLACEMENT	SHEET 6
3	34° 1'18.88"N	117°21'31.33"W	SEE SHEET 8	SEE SHEET 8	PANEL REPLACEMENT	SHEET 8 AND 9
4	34° 1'18.62"N	117°21'26.80"W	4.00	6.00	PATCH	SHEET 5
5	34° 1'13.83"N	117°21'3.81"W	7.25	12.00	PANEL REPLACEMENT	SHEET 6
6	34° 1'13.88"N	117°21'3.65"W	7.25	12.00	PANEL REPLACEMENT	SHEET 6
7	34° 1'13.66"N	117°21'2.69"W	7.25	6.00	PANEL REPLACEMENT	SHEET 6
8	34° 1'13.37"N	117°21'2.38"W	7.25	12.00	PANEL REPLACEMENT	SHEET 6
9	34° 1'13.20"N	117°21'1.97"W	7.25	12.00	PANEL REPLACEMENT	SHEET 6
10	34° 1'12.22"N	117°20'59.14"W	6.00	4.00	PATCH	SHEET 5
11	34° 1'12.29"N	117°20'58.90"W	4.00	4.00	PATCH	SHEET 5
12	34° 1'12.29"N	117°20'58.90"W	7.25	26.00	PANEL REPLACEMENT	SHEET 6

* VALUES REFER TO DIMENSIONS ALONG SIDESLOPE , NOT ACTUAL VERTICAL HEIGHT



	REVISIONS			RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT			HIGHGROVE CHANNEL SLOPE REPAIRS REPAIR AREA LOCATIONS	PROJECT NO. —
				DESIGNED BY: STK				DRAWING NO. —
				DRAWN BY: STK				SHEET NO. 4 OF 10
				DATE DRAWN: 7/15/2026				
				PB NUMBER: 271351				
REF.	DESCRIPTION	APPR.	DATE	RECOMMENDED FOR APPROVAL BY: SENIOR CIVIL ENGINEER DATE: _____		APPROVED BY: CHIEF, OPERATIONS DATE: _____		

CONSTRUCTION DRAWING SET DATED CONSTR DATE



- CONSTRUCTION NOTES
- ① SAWCUT AND REMOVED DAMAGED UNREINFORCED CONCRETE SLOPE. FIELD CONDITIONS MAY VARY, LIMITS TO BE DETERMINED BY THE ENGINEER.
 - ② REMOVAL ALL UNDESIREABLE MATERIAL AND FILL CAVITIES WITH SELECT MATERIAL FROM EXCAVATION OR IMPORT MATERIAL AS APPROVED BY ENGINEER. RECOMPACT SLOPE SUBGRADE TO ATLEAST 90% COMPACTION WITHIN SAWCUT LIMITS. RE-GRADE TO 6" UNDER CHANNEL SLOPE.
 - ③ REPAIR CONCRETE CHANNEL SIDESLOPE PER RCFC STD CH326.
 - ④ RE-ESTABLISH CONSTRUCTION JOINT IN PLACE.

PATCH REPAIR DIMENSIONS		
REPAIR AREA	HEIGHT (FT)	LENGTH (FT)
4	4	6
10	6	4
11	4	4

- LEGEND
- EXISTING CHANNEL BEYOND CUT SECTION
 - PROPOSED CONCRETE LINING
 - CENTERLINE
 - SAWCUT
 - EXISTING CONCRETE

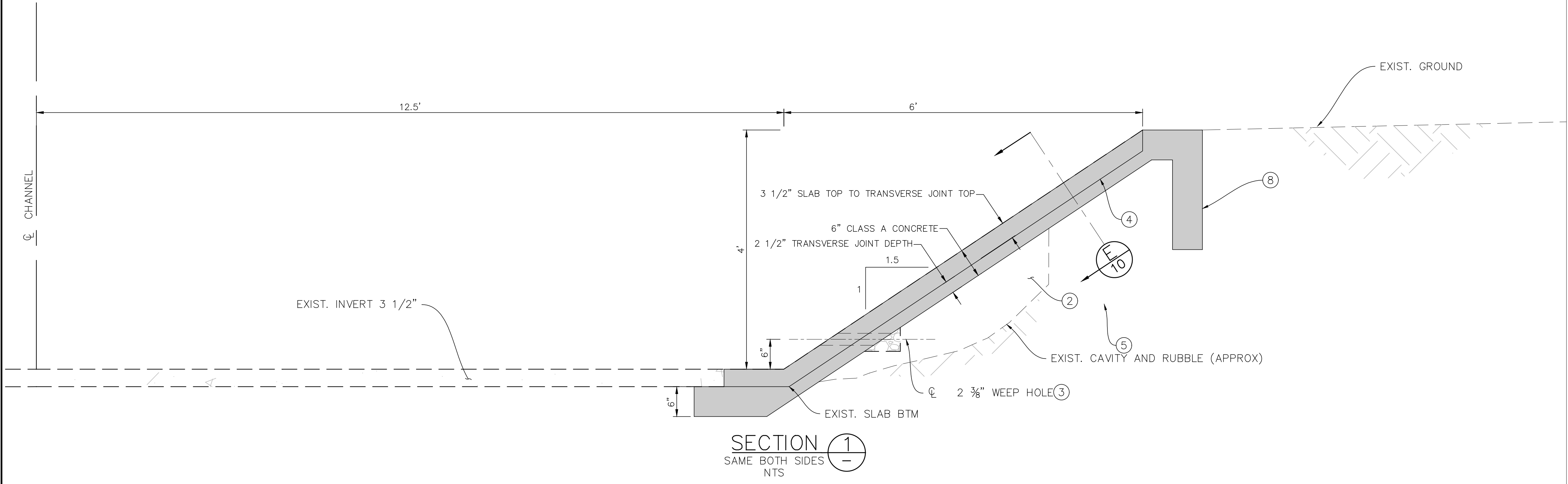
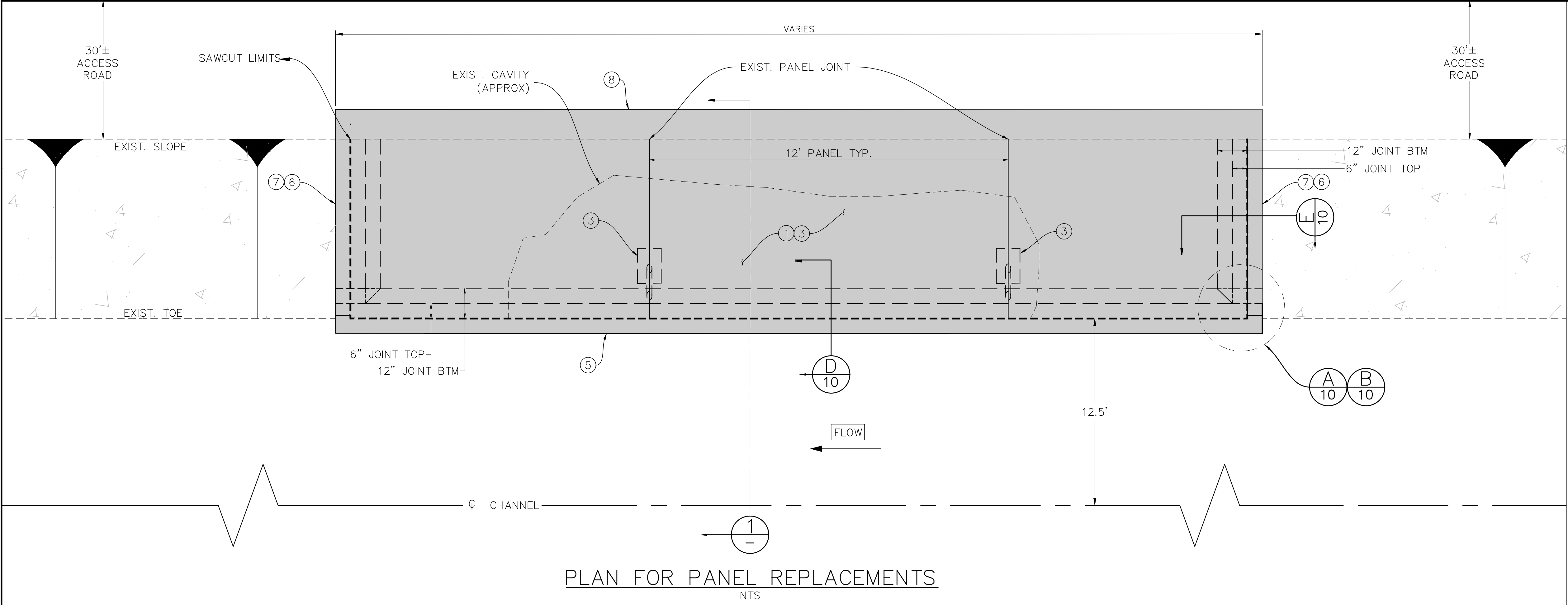


REVISIONS		
REF.	DESCRIPTION	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		
DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:
DRAWN BY: STK	SENIOR CIVIL ENGINEER	CHIEF, OPERATIONS
DATE DRAWN: 7/15/2026	DATE:	DATE:
P8 NUMBER: 271351		

HIGHGROVE CHANNEL SLOPE REPAIRS PATCH REPAIRS	PROJECT NO.
	DRAWING NO.
	SHEET NO. 5 OF 10

CONSTRUCTION DRAWING SET DATED CONSTR DATE



CONSTRUCTION NOTES

1

REMOVE EXISTING DAMAGED CONCRETE PANELS BETWEEN CONSTRUCTION JOINTS. CONFIRM DEMOLITION LIMITS WITH ENGINEER PRIOR TO CUTTING.

2

OVEREXCAVATE SLOPE SUBGRADE UP TO 6" TO COLLAPSE RODENT HOLES ENCOUNTERED AND ACHIEVE AT LEAST 90% COMPACTION. FILL CAVITIES WITH SELECT MATERIAL FROM EXCAVATION OR IMPORT MATERIAL AS APPROVED BY ENGINEER. RE-GRADE TO 6" UNDER CHANNEL SLOPE.

3

CONSTRUCT CONCRETE CHANNEL SLOPE, 12' PANEL JOINTS, AND WEEP HOLES PER RCFC STD CH326.

4

CONSTRUCT TRANSVERSE JOINT CONNECTION UNDER EXISTING TIE-IN PANEL. SEE DETAIL E, SHEET 10.

5

CONSTRUCT LONGITUDINAL JOINT CONNECTION UNDER EXISTING INVERT. SEE DETAIL D, SHEET 10.

6

TRANSVERSE JOINT DIMENSIONS PER DETAIL E, SHEET 10.

7

CONSTRUCT TRANSVERSE JOINT CONNECTION FROM CUTOFF WALL PER DETAILS E AND F DIMENSIONS ON SHEET 10. INCLUDE ADDITIONAL REBAR FROM CUTOFF WALL IN STD DWG CH326.

8

CONSTRUCT 2' CUTOFF WALL SECTION DETAIL PER STD DWG CH326, USE CLASS A CONCRETE.

PANEL REPLACEMENT DIMENSIONS

REPAIR AREA	HEIGHT (FT)	LENGTH (FT)
1	7.25	5
2	7.25	24
3	SEE SHEET 8	SEE SHEET 8
5	7.25	12
6	7.25	12
7	7.25	6
8	7.25	12
9	7.25	12
12	7.25	26

LEGEND

EXISTING CHANNEL BEYOND CUT SECTION

SUBSURFACE LINES

█

PROPOSED CONCRETE LINING

CENTERLINE

SAWCUT

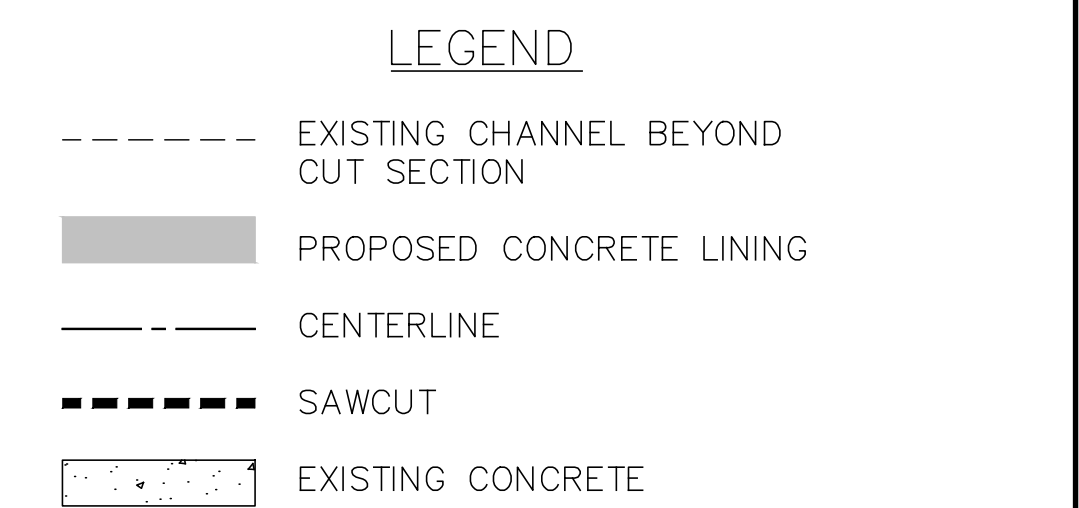
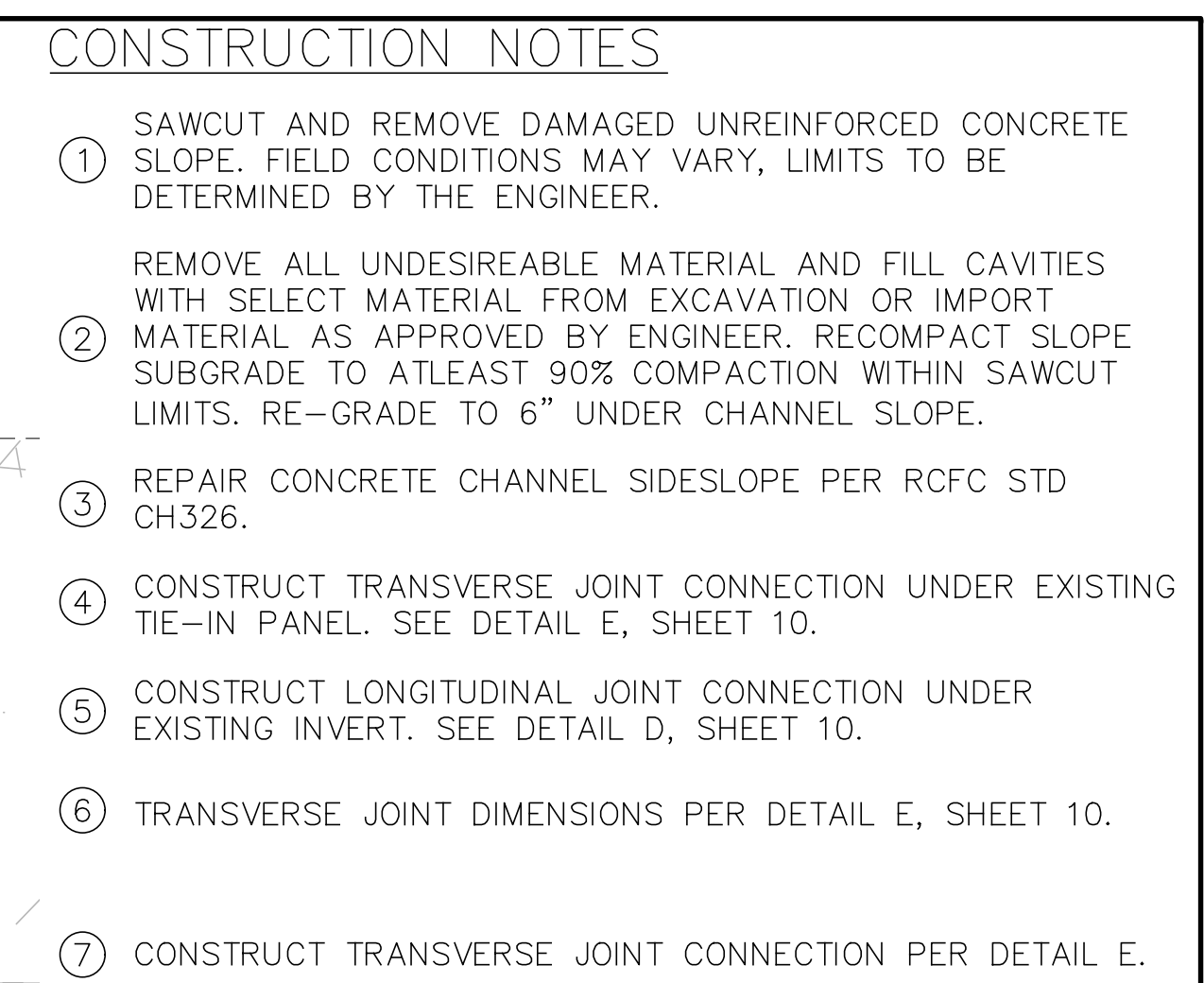
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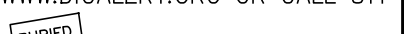
EXISTING CONCRETE

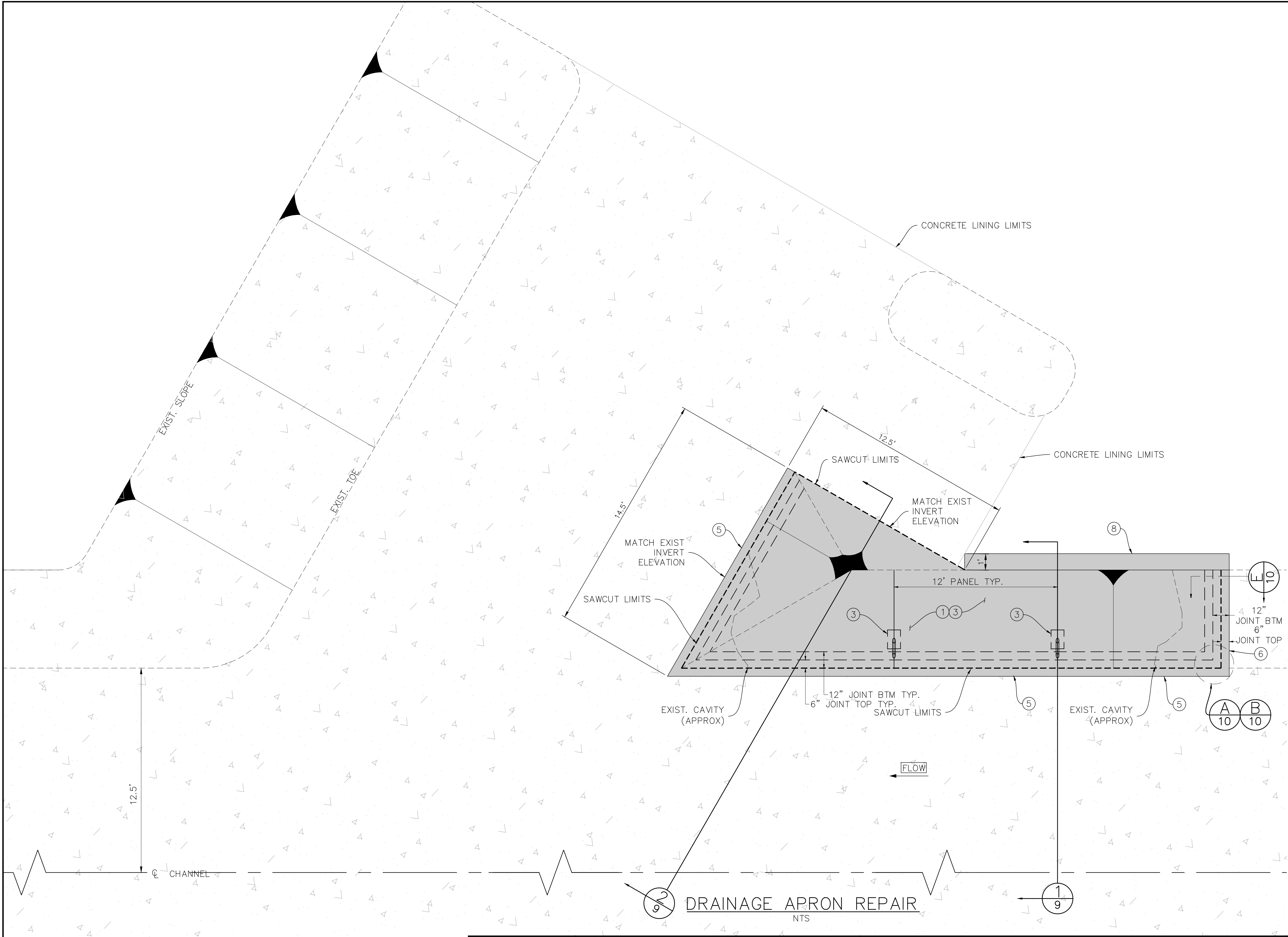
REGISTERED PROFESSIONAL ENGINEER
JEFFREY SRIM
No. 93981
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
HELIO K. TAKANO
No. 76563
CIVIL
STATE OF CALIFORNIA

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA CONTACT DIGALERT AT WWW.DIGALERT.ORG OR CALL 811  AT LEAST TWO WORKING DAYS BEFORE YOU DIG	REVISIONS			RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT			HIGHGROVE CHANNEL SLOPE REPAIRS PANEL REPLACEMENT	PROJECT NO. —
				DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:		DRAWING NO. —
				DRAWN BY: STK	SENIOR CIVIL ENGINEER	CHIEF, OPERATIONS		SHEET NO.
				DATE DRAWN: 7/9/2026	DATE: _____	DATE: _____		6 OF 9
REF.	DESCRIPTION	APPR.	DATE	P8 NUMBER: 271351				



UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA CONTACT DIGALERT AT WWW.DIGALERT.ORG OR CALL 811				REVISIONS				RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT				HIGHGROVE CHANNEL SLOPE REPAIRS				PROJECT NO. —	
 AT LEAST TWO WORKING DAYS BEFORE YOU DIG								DESIGNED BY: STK				RECOMMENDED FOR APPROVAL BY:				DRAWING NO. —	
								DRAWN BY: STK				SENIOR CIVIL ENGINEER				CHIEF, OPERATIONS	
								DATE DRAWN: 7/15/2026				DATE:				SHEET NO.	
								PR NUMBER: 271351								7 OF 10	
REF.				DESCRIPTION				APPR.				DATE					



- CONSTRUCTION NOTES
- 1 REMOVE EXISTING DAMAGED CONCRETE PANELS BETWEEN CONSTRUCTION JOINTS. CONFIRM DEMOLITION LIMITS WITH ENGINEER PRIOR TO CUTTING.
 - 2 OVEREXCAVATE SLOPE SUBGRADE UP TO 6" TO COLLAPSE RODENT HOLES ENCOUNTERED AND ACHIEVE AT LEAST 90% COMPACTION. FILL CAVITIES WITH SELECT MATERIAL FROM EXCAVATION OR IMPORT MATERIAL AS APPROVED BY ENGINEER. RE-GRADE TO 6" UNDER CHANNEL SLOPE.
 - 3 CONSTRUCT CONCRETE CHANNEL SLOPE, 12' PANEL JOINTS, AND WEEP HOLES PER RCFC STD CH326.
 - 4 CONSTRUCT TRANSVERSE JOINT CONNECTION UNDER EXISTING TIE-IN PANEL. SEE DETAIL E, SHEET 10.
 - 5 CONSTRUCT LONGITUDINAL JOINT CONNECTION UNDER EXISTING INVERT. SEE DETAIL D, SHEET 10.
 - 6 TRANSVERSE JOINT DIMENSIONS PER DETAIL E, SHEET 10.
 - 7 CONSTRUCT TRANSVERSE JOINT CONNECTION FROM CUTOFF WALL PER DETAILS E AND F DIMENSIONS ON SHEET 10. INCLUDE ADDITIONAL REBAR FROM CUTOFF WALL IN STD DWG CH326.
 - 8 CONSTRUCT 2' CUTOFF WALL SECTION DETAIL PER STD DWG CH326, USE CLASS A CONCRETE.

- LEGEND
- EXISTING CHANNEL BEYOND CUT SECTION
 - - - - - SUBSURFACE LINES
 - ████████ PROPOSED CONCRETE LINING
 - - - - - CENTERLINE
 - SAWCUT
 - ▨ EXISTING CONCRETE



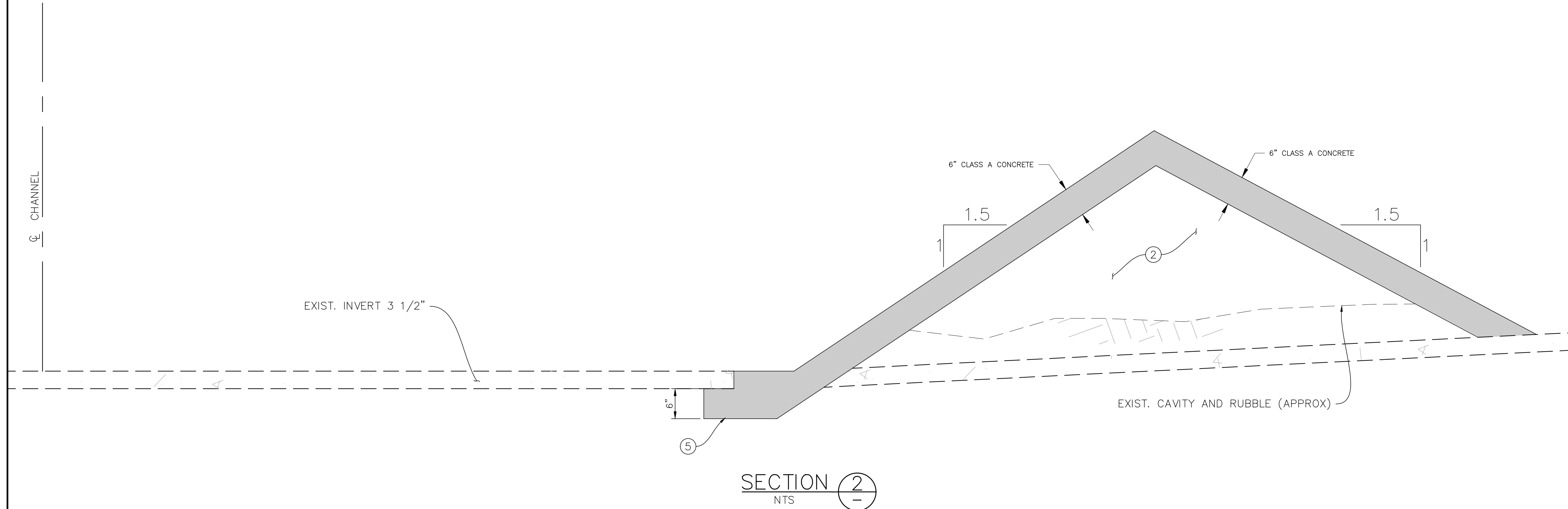
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		
DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:
DRAWN BY: STK	SENIOR CIVIL ENGINEER	CHIEF, OPERATIONS
DATE DRAWN: 7/15/2026	DATE: _____	DATE: _____
P8 NUMBER: 271351		

HIGHGROVE CHANNEL SLOPE REPAIRS REPAIR AREA #3	PROJECT NO. —
	DRAWING NO. —
	SHEET NO. 8 OF 10

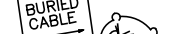
CONSTRUCTION DRAWING SET DATED CONSTR DATE

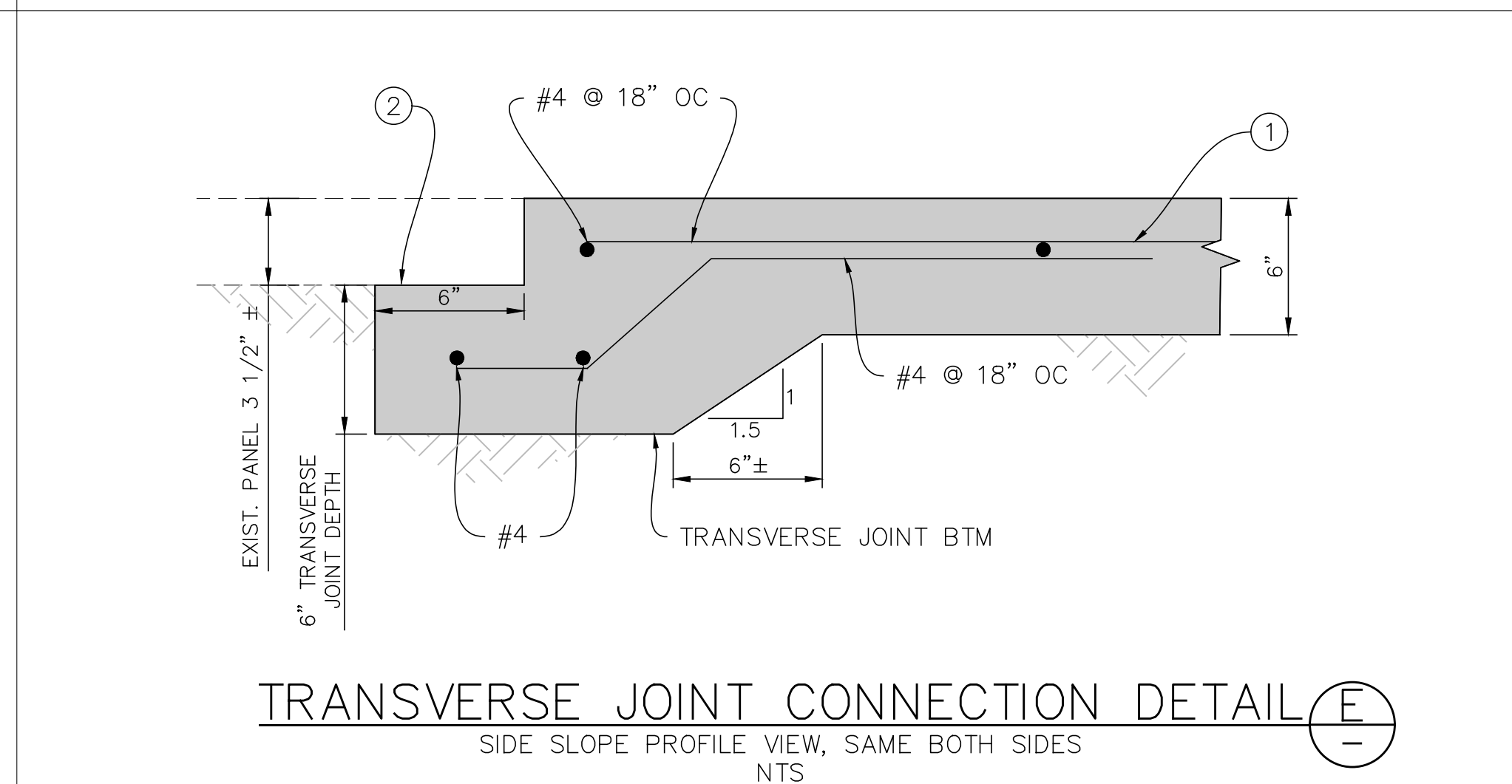
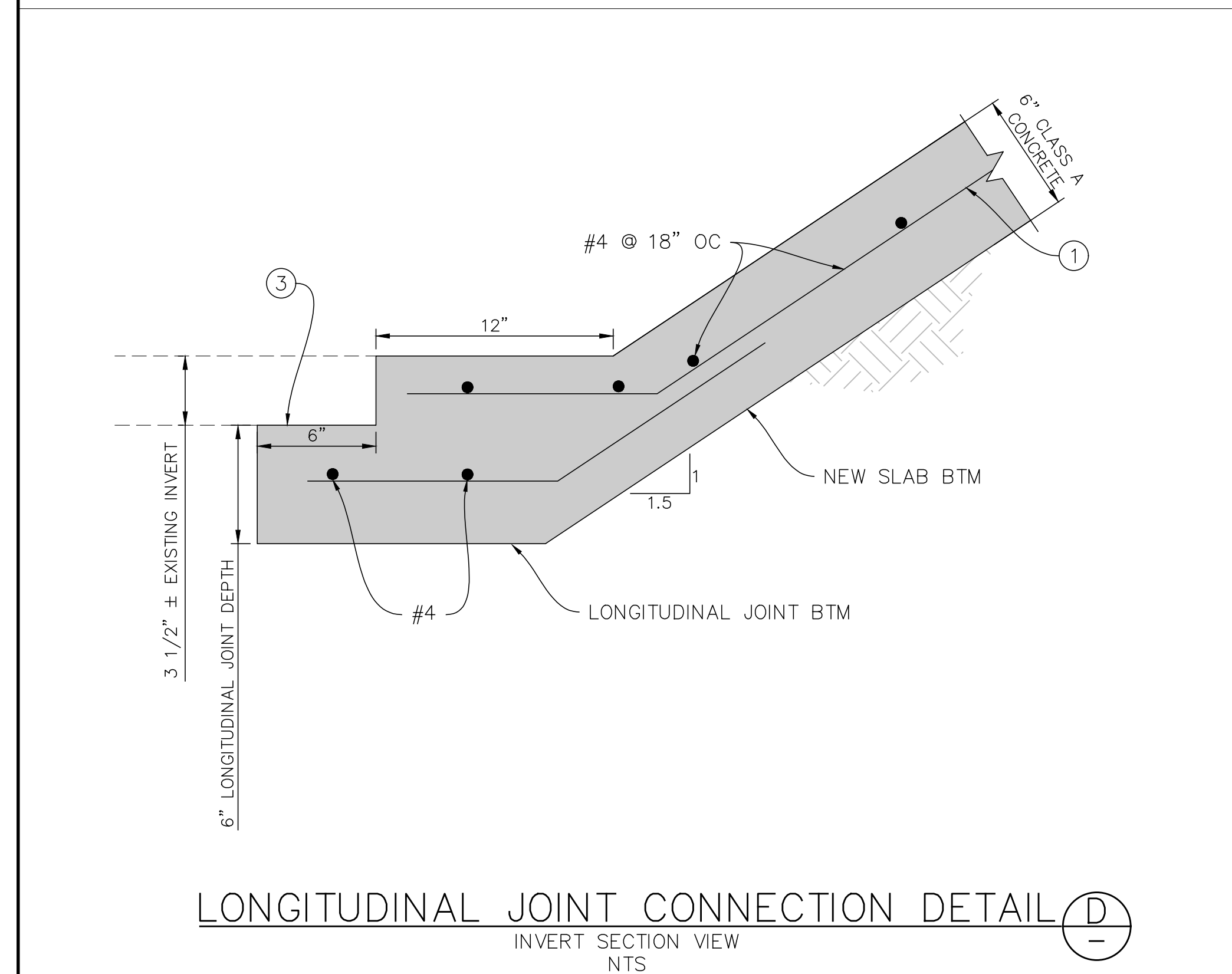
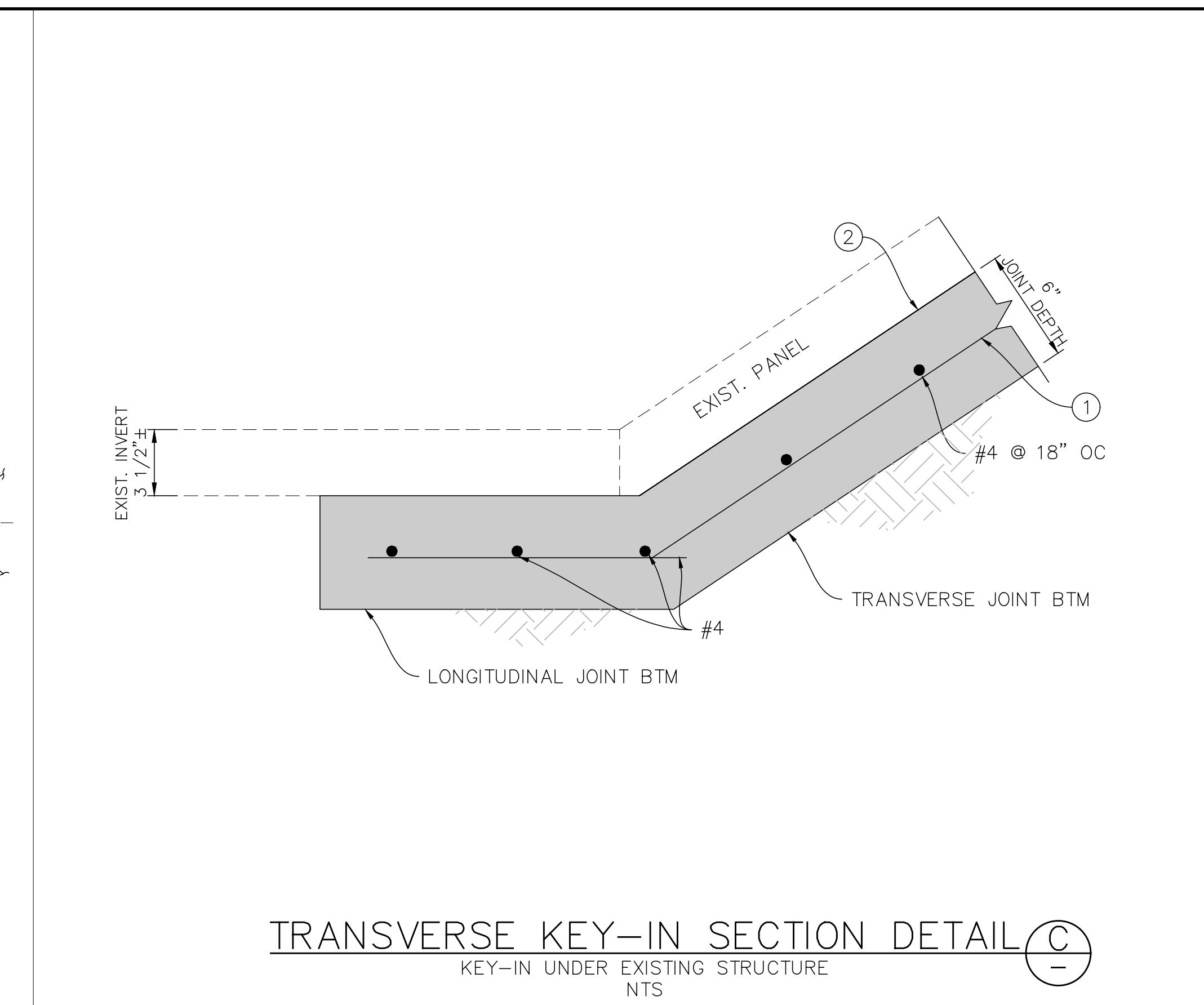
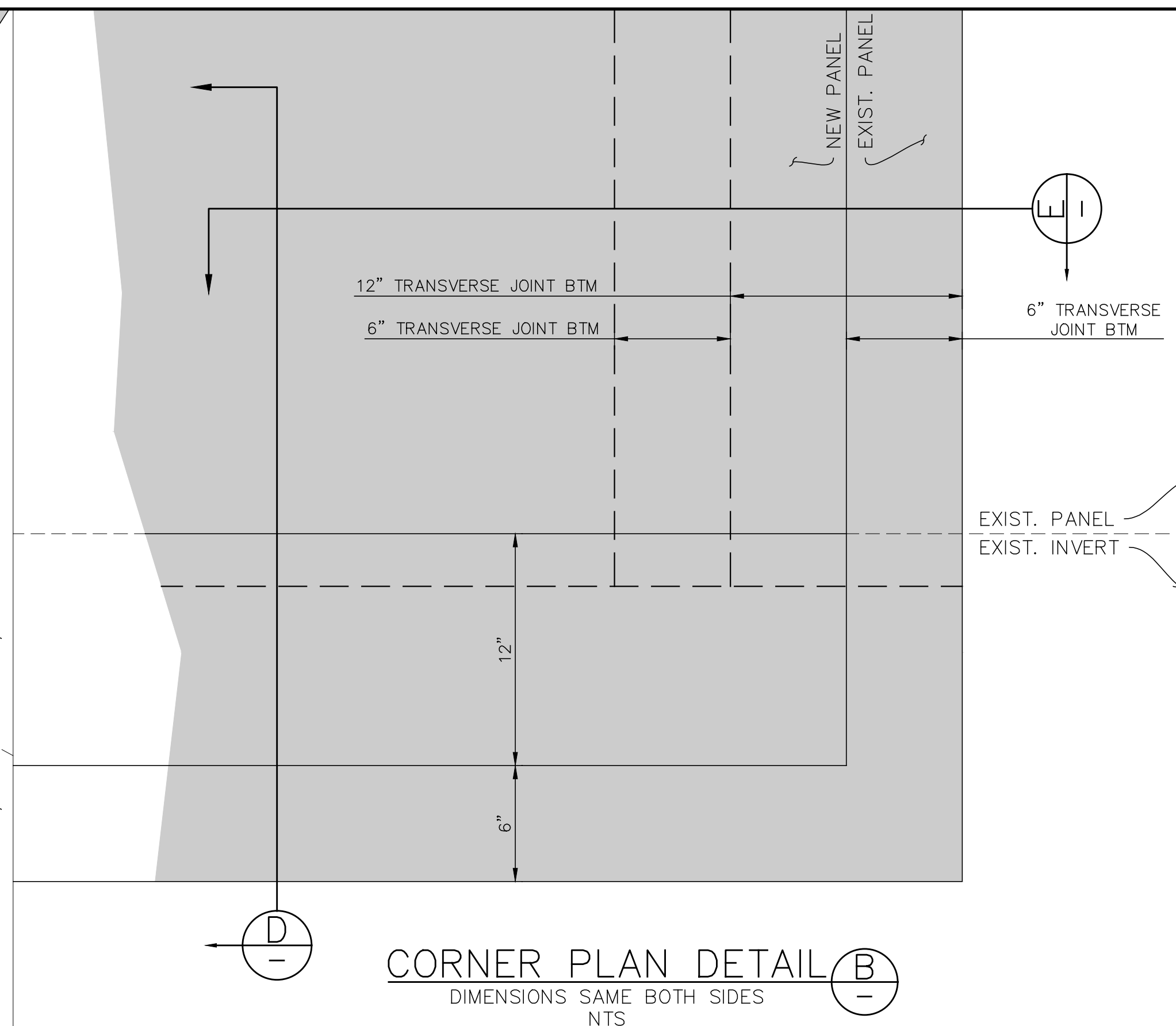
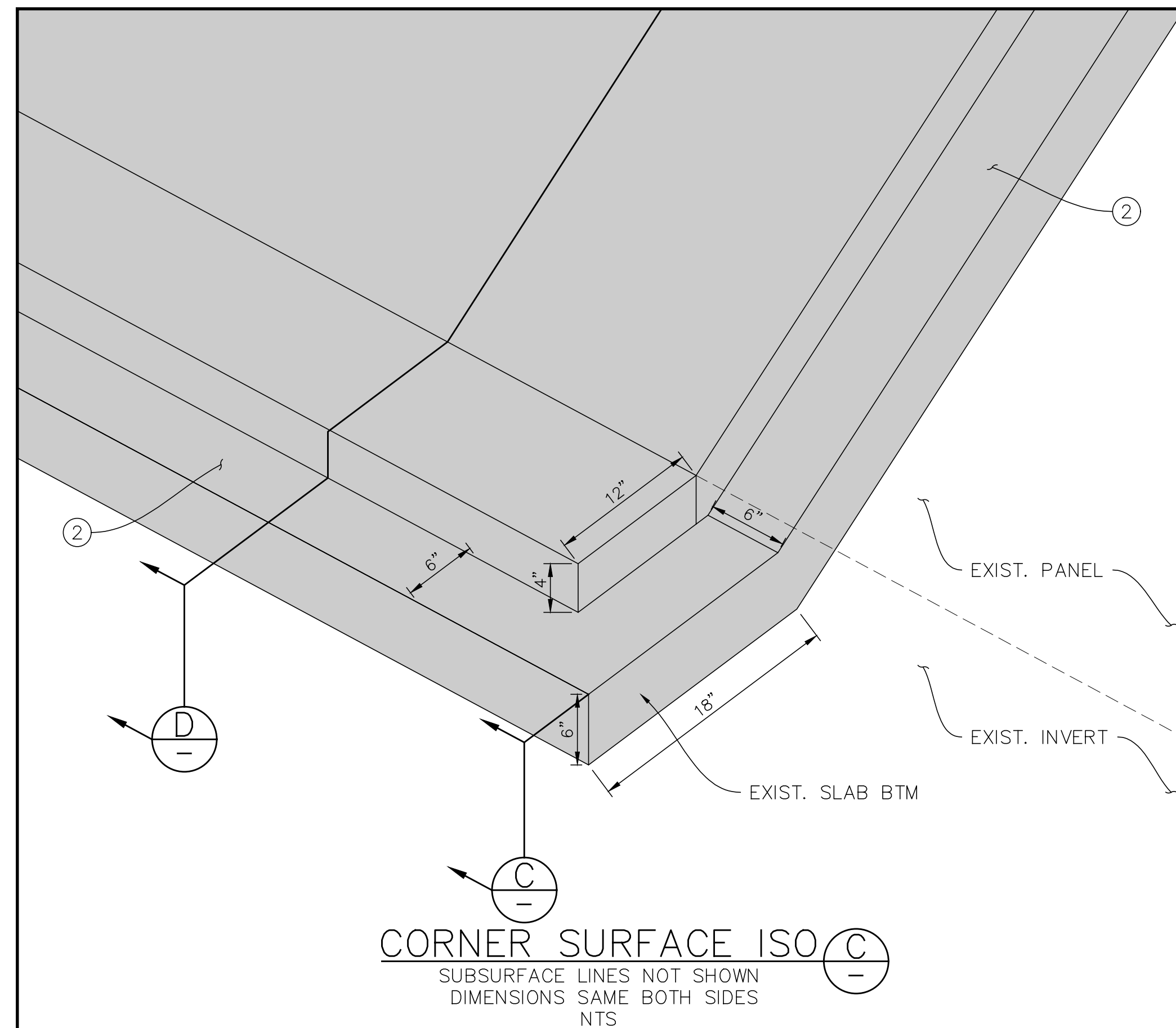
- ① REMOVE EXISTING DAMAGED CONCRETE PANELS BETWEEN CONSTRUCTION JOINTS. CONFIRM DEMOLITION LIMITS WITH ENGINEER PRIOR TO CUTTING.
- ② OVEREXCAVATE SLOPE SUBGRADE UP TO 6" TO COLLAPSE RODENT HOLES ENCOUNTERED AND ACHIEVE AT LEAST 90% COMPACTION. FILL CAVITIES WITH SELECT MATERIAL FROM EXCAVATION OR IMPORT MATERIAL AS APPROVED BY ENGINEER. RE-GRADE TO 6" UNDER CHANNEL SLOPE.
- ③ CONSTRUCT CONCRETE CHANNEL SLOPE, 12' PANEL JOINTS, AND WEEP HOLES PER RCFC STD CH326.
- ④ CONSTRUCT TRANSVERSE JOINT CONNECTION UNDER EXISTING TIE-IN PANEL. SEE DETAIL E, SHEET 10.
- ⑤ CONSTRUCT LONGITUDINAL JOINT CONNECTION UNDER EXISTING INVERT. SEE DETAIL D, SHEET 10.
- ⑥ TRANSVERSE JOINT DIMENSIONS PER DETAIL E, SHEET 10.
- ⑦ CONSTRUCT TRANSVERSE JOINT CONNECTION FROM CUTOFF WALL PER DETAILS E AND F DIMENSIONS ON SHEET 10. INCLUDE ADDITIONAL REBAR FROM CUTOFF WALL IN STD DWG CH326.
- ⑧ CONSTRUCT 2' CUTOFF WALL SECTION DETAIL PER STD DWG CH326, USE CLASS A CONCRETE.



- - - - - EXISTING CHANNEL BEYOND CUT SECTION
 — — — SUBSURFACE LINES
 [Solid Grey Box] PROPOSED CONCRETE LINING
 — - - - - CENTERLINE
 [Thick Dashed Line] SAWCUT
 [Patterned Box] EXISTING CONCRETE

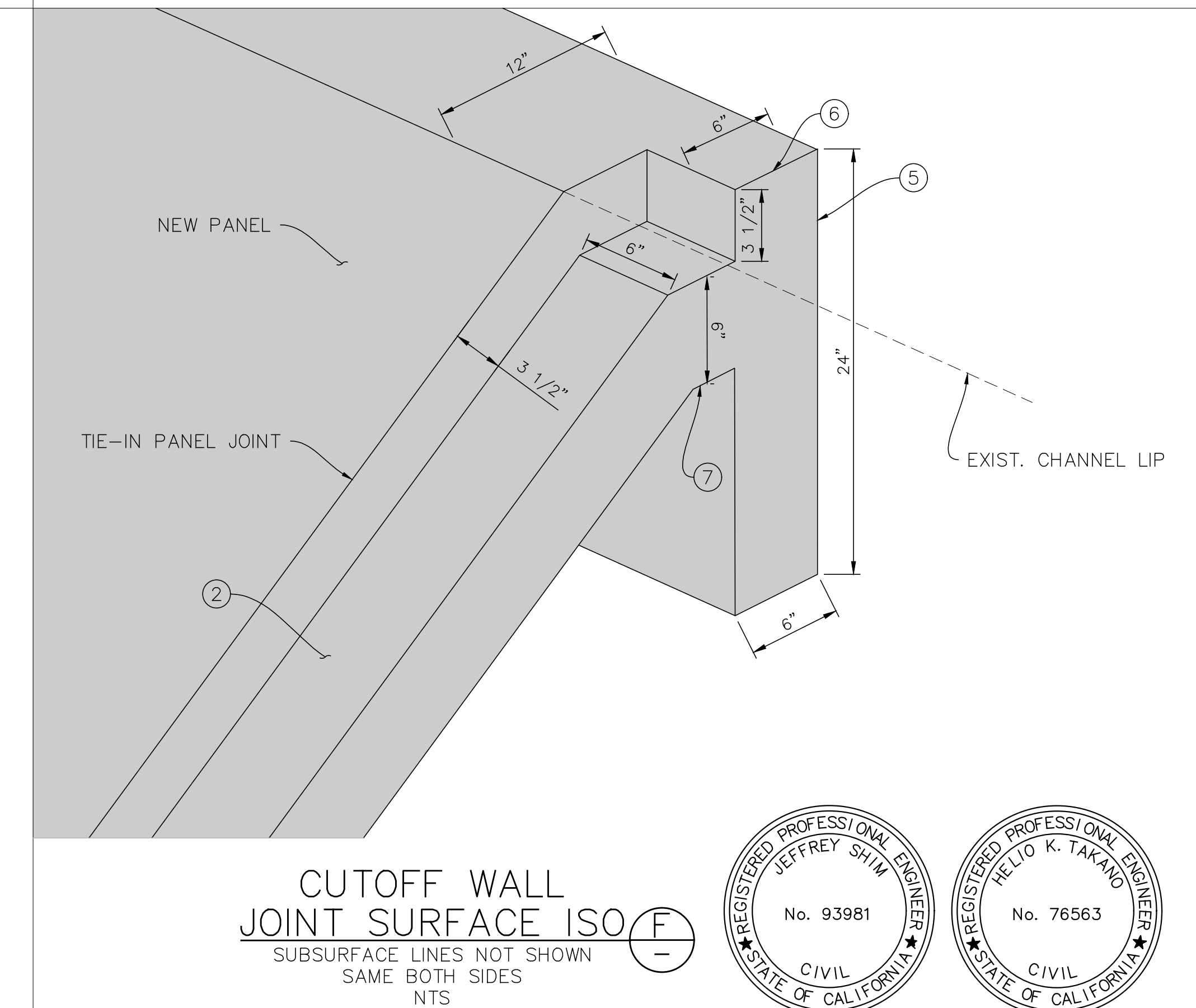


UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA CONTACT DIGALERT AT WWW.DIGALERT.ORG OR CALL 811 AT LEAST TWO WORKING DAYS BEFORE YOU DIG	REVISIONS			RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT			HIGHGROVE CHANNEL SLOPE REPAIRS REPAIR AREA #3		PROJECT NO. —		
				DESIGNED BY: STK		RECOMMENDED FOR APPROVAL BY:			DRAWING NO. —		
				DRAWN BY: STK							
				DATE DRAWN: 7/15/2026		SENIOR CIVIL ENGINEER			SHEET NO.		
				PR. NUMBER: 271351		DATE: _____			9 OF 10		
REF.	DESCRIPTION	APPR.	DATE								



CONSTRUCTION NOTES

- ① MINIMUM STEEL REINFORCEMENT CONCRETE COVER 3" TYP.
- ② CONSTRUCT TRANSVERSE JOINT TO JOIN UNDER EXISTING PANEL PER DETAIL HEREON
- ③ CONSTRUCT LONGITUDINAL JOINT TO JOIN UNDER EXISTING INVERT PER DETAIL HEREON
- ④ CONSTRUCT TRANSVERSE JOINT UNDERNEATH ENTIRE LENGTH OF EXISTING TIE-IN PANEL.
- ⑤ CONSTRUCT 2' CUTOFF WALL PER STD DWG CH326, USE CLASS "A" CONCRETE
- ⑥ SAWCUT AND FILL AN ADDITIONAL 6" OF CUTOFF WALL LENGTH BEHIND EXISTING TIE-IN PANEL BOTH SIDES.
- ⑦ JOIN CUTOFF WALL TO PANEL PER DETAIL E PROFILE DIMENSIONS INCLUDING TRANSVERSE JOINT CONNECTION AND ADDITIONAL REBAR FROM STD DWG 326.



UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA
CONTACT DIGALERT AT
WWW.DIGALERT.ORG OR CALL 811



AT LEAST TWO
WORKING DAYS
BEFORE YOU DIG

REV	REVISIONS		
REF	DESCRIPTION	ADD	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		
DESIGNED BY: STK	RECOMMENDED FOR APPROVAL BY:	APPROVED BY:
DRAWN BY: STK		
DATE DRAWN: 7/15/2026	SENIOR CIVIL ENGINEER	CHIEF, OPERATIONS
BY NUMBER: 271351	DATE:	DATE:

HIGHGROVE CHANNEL SLOPE REPAIRS

DETAILS

PROJECT NO.	—
DRAWING NO.	—
SHEET NO.	10 OF 10

CONSTRUCTION DRAWING SET DATED CONSTR DATE