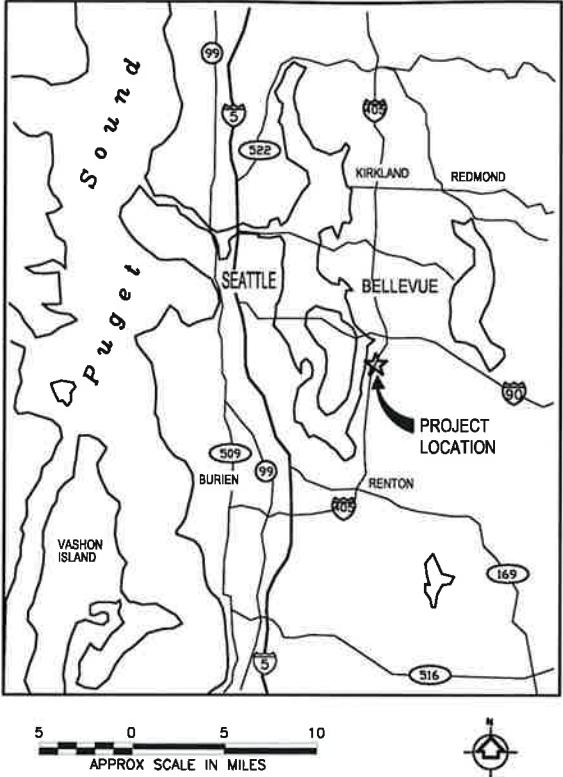
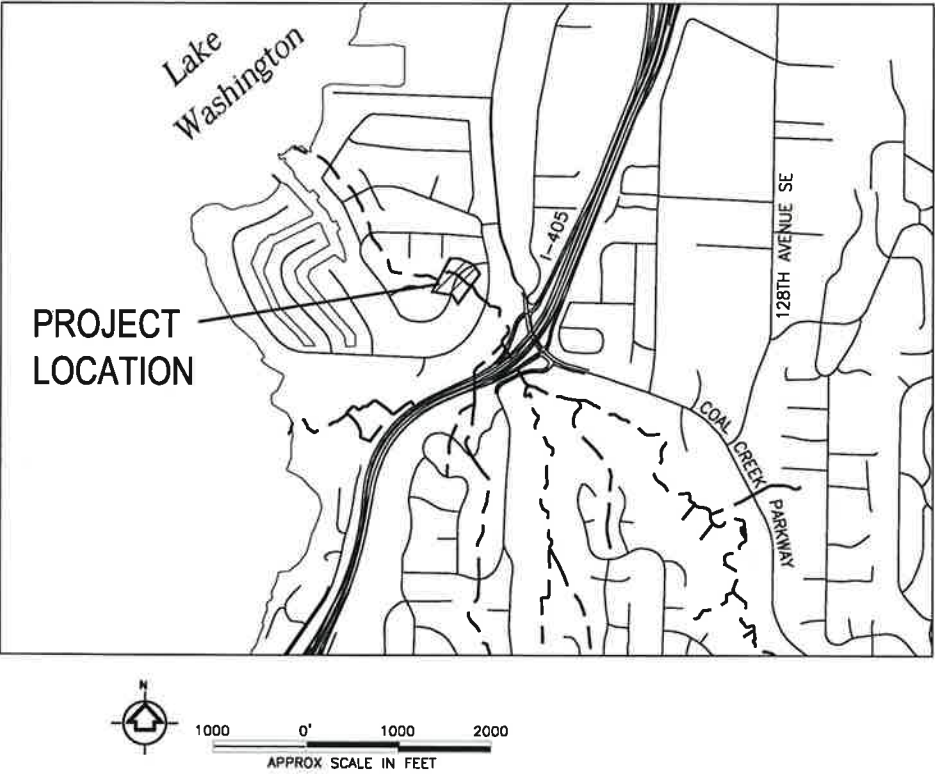


CITY OF BELLEVUE
UTILITIES DEPARTMENT

LOWER COAL CREEK
FLOOD HAZARD REDUCTION PROJECT - GROUP 1
UPPER SKAGIT KEY CULVERT REPLACEMENT
C.I.P. # D-106
BID NO.: 17006



VICINITY MAP



LOCATION MAP

MAYOR
JOHN STOKES
DEPUTY MAYOR
JOHN CHELMINIAK
CITY MANAGER
BRAD MIYAKE
DIRECTOR OF UTILITIES DEPARTMENT
NAV OTAL

CITY COUNCIL
CONRAD LEE
JENNIFER ROBERTSON
LYNNE ROBINSON
KEVIN WALLACE

SHEET INDEX

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14	H5 HABITAT DETAILS 2	28	L2 LANDSCAPE RESTORATION DETAILS

CALL TWO
BUSINESS DAYS
BEFORE YOU DIG
1-800-424-5555

BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT
TITLE SHEET - SHEET INDEX

G1 SHT 1 OF 28

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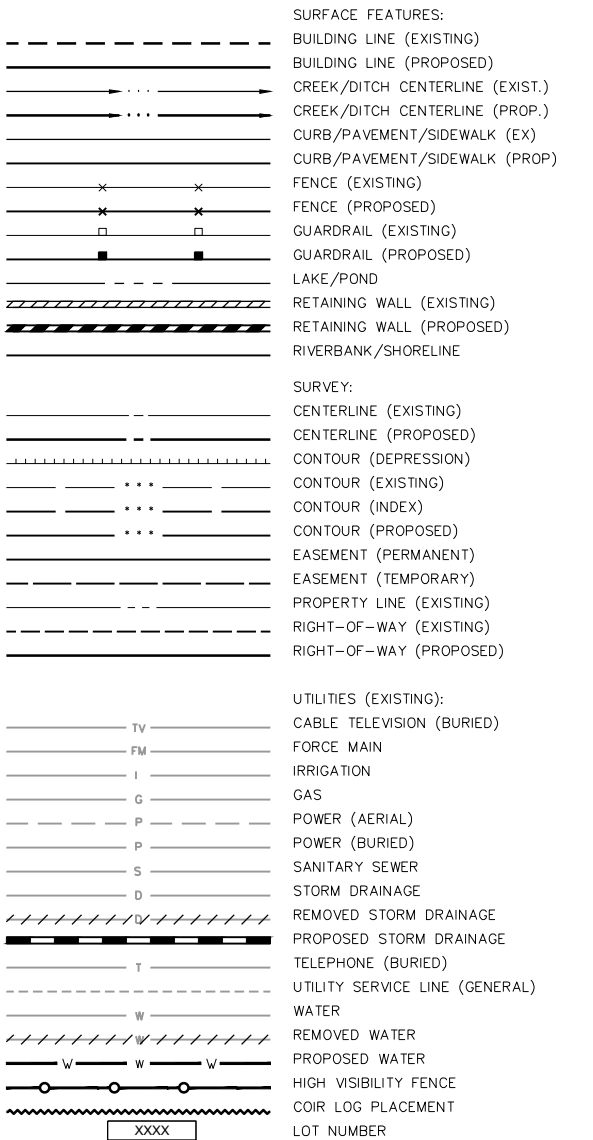
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ABBREVIATIONS

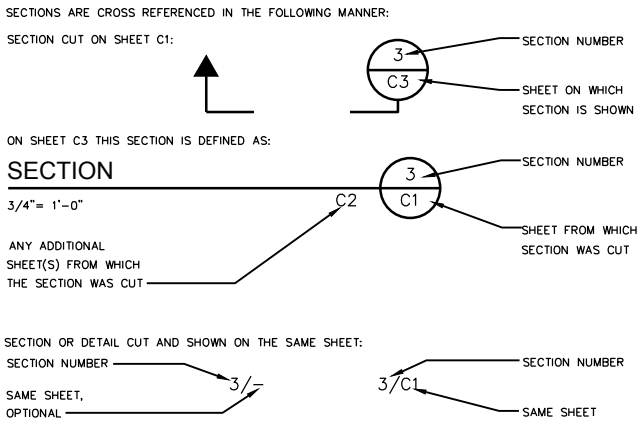
&	AND	PT	POINT OF TANGENCY
Δ	ANGLE	QTY	QUANTITY
°	DEGREE	R	RIGHT
∅	DIAMETER	REINF	REINFORCEMENT
	EPOXY COATED	ROW	RIGHT OF WAY
'	FEET, MINUTES	RT	RIGHT
"	INCHES, SECONDS	S	SANITARY SEWER, STAINLESS STEEL
#	NUMBER	S	SOUTH
%	PERCENT	SD	STORM DRAIN
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	SDCB	STORM DRAIN CATCH BASIN
AC	ASBESTOS CONCRETE	SE	SOUTH EAST
APPROX	APPROXIMATE	SF	SQUARE FEET
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	SPEC	SPECIFICATION
BMP	BEST MANAGEMENT PRACTICE	SS	SANITARY SEWER
CB	CATCH BASIN	SSMH	SANITARY MANHOLE
CFS	CUBIC FEET PER SECOND	STA	STATION
CI	CAST IRON	STD	STANDARD
CL	CENTERLINE, CLASS	SW	SOUTHWEST
COB	CITY OF BELLEVUE	SWLK	SIDEWALK
CONC	CONCRETE	T	TELEPHONE
CONT	CONTAINER	TEMP	TEMPORARY
CPE	CORRUGATED POLYETHYLENE PIPE	TOC	TOP OF CURB
CSBC	CRUSHED SURFACING BASE COURSE	TL	TRAFFIC LOAD
CSL	CROSS SONIC LOGGING	TYP	TYPICAL
CSTC	CRUSHED SURFACING TOP COURSE	UGP	UNDERGROUND POWER
CTR	CENTER	VC	VERTICAL CURVE
D	STORM DRAIN	VERT	VERTICAL
DI	DUCTILE IRON	W	WATER
DIA	DIAMETER	W	WEST
E	EAST	W/	WITH
EL	ELEVATION	WM	WATERMAIN
ESC	EROSION AND SEDIMENT CONTROL	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
ESMT	EASEMENT	WSE	WATER SURFACE ELEVATION
EX, EXIST	EXISTING		
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY		
FIC	FOUND IN CASE		
FL	FLOW LINE		
FLXFL	FLANGE BY FLANGE		
FRP	FIBER REINFORCED POLYMER		
FT	FEET		
FUT	FUTURE		
G	GAS		
GPM	GALLONS PER MINUTE		
HMA	HOT MIX ASPHALT		
HORIZ	HORIZONTAL		
HPA	HYDRAULIC PROJECT APPROVAL		
HS	HIGH STRENGTH		
HSS	HIGH STRENGTH STEEL		
I	INTERSTATE		
ID	IDENTIFIER		
IE	INVERT ELEVATION		
L	LEFT, LENGTH		
LB	POUND		
LF	LINEAR FEET		
LT	LEFT		
LWD	LARGE WOODY DEBRIS		
MAX	MAXIMUM		
MIL	MILLIMETER		
MIN	MINIMUM		
N	NORTH		
NAD	NORTH AMERICAN DATUM		
NAVD	NORTH AMERICAN VERTICAL DATUM		
NCHRP	NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM		
NE	NORTHEAST		
NTS	NOT TO SCALE		
NW	NORTHWEST		
OC	ON CENTER		
OHW	ORDINARY HIGH WATER		
PC	POINT OF CURVATURE		
PCP	PRECAST CONCRETE PANEL		
PERM	PERMANENT		
PI	POINT OF INTERSECTION		
PL	PLATE		
PSE	PUGET SOUND ENERGY		
PSI	POUNDS PER SQUARE INCH		

SYMBOLS

SYMBOL	EXIST.	PROP.	DESCRIPTION
			CAP/PLUG
			COUPLING
			GUARD POST
			REDUCER
			THRUST BLOCK
			WATER METER
			FIRE HYDRANTS:
			2-NOZZLE
			3-NOZZLE
			JOINTS:
			FLANGE/BLIND FL
			MECHANICAL
			PUSH-ON/HUB
			THREAD
			VALVES:
			AIR RELIEF
			BLOW-OFF
			BUTTERFLY
			CHECK
			GATE/GENERAL
			PLUG VALVE
			GAS METER
			GAS VALVE
			PAD MOUNTED TRANSFORMER
			POWER VAULT
			TRANSMISSION TOWER
			UTILITY POLE
			UTILITY POLE ANCHOR
			TELEPHONE RISER
			TELEPHONE VAULT
			MONUMENT (IN CASE)
			MONUMENT (SURFACE)
			SOIL BORING
			SPOT ELEVATION
			SAN. SEWER MANHOLE
			STORM DRAIN CATCH BASIN
			STORM DRAIN MANHOLE
			STREETLIGHT ASSEMBLY W/ UNDERGROUND POWER
			EMBANKMENT
			MAIL BOX
			RIP RAP
			ROCKERY
			STREAMBED MATERIAL
			SHRUB
			WOOD SIGN POST
			METAL SIGN POST
			TREE (Conifer)
			TREE (Deciduous)
			YARD LIGHT
			TREE REMOVAL



SHEET REFERENCE



BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT
ABBREVIATIONS-LEGEND-SYMBOLS

G2

SHT 2 OF 28



TETRA TECH

www.tetrattech.com

1420 Fifth Avenue, Suite 550
Seattle, Washington 98101

Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER

PROJECT MANAGER

GMS

DESIGNED BY

MJS

DRAWN BY

JS

CHECKED BY



City of
Bellevue
UTILITIES

GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE 2016 CITY OF BELLEVUE UTILITIES DEPARTMENT ENGINEERING STANDARDS, CITY OF BELLEVUE TRANSPORTATION DEPARTMENT DESIGN MANUAL, APPLICABLE CITY CODES, AND THE MOST RECENT WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- CALL 1-800-424-5555, OR 8-1-1, 72 HOURS BEFORE CONSTRUCTION FOR UTILITY LOCATES.
- A COPY OF THE APPROVED PLANS MUST BE AT THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

WATER GENERAL NOTES

- NOT USED.
- ALL PIPE SHALL BE DUCTILE IRON CLASS 52 UNLESS OTHERWISE SHOWN.
- ALL PIPE AND FITTINGS NOT TO BE DISINFECTED IN PLACE SHALL BE SWABBED WITH 1% AVAILABLE CHLORINE SOLUTION PRIOR TO INSTALLATION.
- THE NEW WATER MAIN SHALL BE CONNECTED TO THE EXISTING SYSTEM ONLY AFTER NEW MAIN IS PRESSURE TESTED, FLUSHED, DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLE RESULTS ARE OBTAINED AND RECEIVED BY THE CITY INSPECTOR. SEE STANDARD DETAIL W-9.
- AFTER DISINFECTING THE WATERMAIN, DISPOSE OF CHLORINATED WATER BY DISCHARGING TO THE NEAREST OPERATING SANITARY SEWER.
- WATERMAIN SHUT-OFF SHALL BE COORDINATED WITH THE WATER OPERATIONS DIVISION FOR PREFERRED TIMING DURING FLOW CONTROL CONDITIONS. WATERMAIN SHUT-OFFS SHALL NOT BE SCHEDULED TO TAKE PLACE ON FRIDAYS, OR ON THE DAY BEFORE A CITY HOLIDAY, UNLESS OTHERWISE APPROVED BY THE UTILITY.
- NOT USED.
- DEFLECT THE WATERMAIN ABOVE OR BELOW EXISTING UTILITIES AS REQUIRED TO MAINTAIN 3 FT. MINIMUM COVER AND 12 INCH MINIMUM VERTICAL CLEARANCE BETWEEN UTILITIES UNLESS OTHERWISE SPECIFIED.
- WRAP ALL DUCTILE IRON PIPE AND ADJACENT VALVES AND FITTINGS WITH 8-MIL. POLYETHYLENE CONFORMING TO AWWA C105.
- THE WATERMAIN SHALL BE INSTALLED ONLY AFTER THE ROADWAY SUBGRADE IS BACKFILLED, GRADED AND COMPACTED IN CUT AND FILL AREAS.
- NOT USED.
- ALL FITTINGS SHALL BE BLOCKED PER STANDARD DETAILS UNLESS OTHERWISE SPECIFIED.
- NOT USED.
- WHEN WORKING WITH ASBESTOS CEMENT PIPE, THE CONTRACTOR IS REQUIRED TO MAINTAIN WORKERS' EXPOSURE TO ASBESTOS MATERIAL AT OR BELOW THE LIMIT PRESCRIBED IN WAC 296-62-07705.
- NOT USED.
- NOT USED.
- NOT USED.
- NOT USED.
- NOT USED.
- NOT USED.
- NOT USED.
- AVOID CROSSING WATER OR SEWER MAINS AT HIGHLY ACUTE ANGLES. THE SMALLEST ANGLE MEASURE BETWEEN UTILITIES SHOULD BE 45 TO 90 DEGREES.
- WHERE WATERMAIN CROSSES ABOVE OR BELOW SANITARY SEWER, ONE FULL LENGTH OF WATER PIPE SHALL BE CENTERED FOR MAXIMUM JOINT SEPARATION.
- AT POINTS WHERE EXISTING THRUST BLOCKING IS FOUND, MINIMUM CLEARANCE BETWEEN THE CONCRETE BLOCKING AND OTHER BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
- WORKERS MUST FOLLOW CONFINED SPACE REGULATIONS AND PROCEDURES WHEN ENTERING OR DOING WORK IN COB OWNED CONFINED SPACES. COMPLETED PERMIT MUST BE GIVEN TO THE UTILITIES INSPECTOR PRIOR TO ENTRY.
- NOT USED.
- NOT USED.
- NOT USED.

STORM DRAINAGE GENERAL NOTES

- NOT USED.
- STORM PIPE SHALL BE PVC CONFORMING TO ASTM D-3034 SDR 35 (4" - 15") OR ASTM F-679 (18"-27". BEDDING AND BACKFILL SHALL BE AS SHOWN IN THE STANDARD DETAILS D-25 AND D-46.
- NOT USED.
- NOT USED.
- PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT OR OTHER HAZARDOUS MATERIALS DO NOT ENTER THE STORM DRAINAGE SYSTEM IN ACCORDANCE WITH THE SITE'S APPROVED SWPPP. FOR ALL CONSTRUCTION DURING THE RAINY SEASON, DOWNHILL BASINS AND INLETS MUST BE PROTECTED WITH CATCH BASIN INSERTS. SIMPLY PLACING FILTER FABRIC UNDER THE GRATE IS NOT ACCEPTABLE.
- PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF STORM DRAINAGE WORK, PIPES AND STORM DRAIN STRUCTURES SHALL BE CLEANED AND FLUSHED. ANY OBSTRUCTIONS TO FLOW WITHIN THE STORM DRAIN SYSTEM, (SUCH AS RUBBLE, MORTAR AND WEDGED DEBRIS), SHALL BE REMOVED AT THE NEAREST STRUCTURE. WASH WATER OF ANY SORT SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM OR SURFACE WATERS.
- NOT USED
- ALL GRATES IN ROADWAYS SHALL BE DUCTILE IRON, BOLT-LOCKING, VANED GRATES PER THE STANDARD DETAILS. STRUCTURES IN TRAFFIC LANES OUTSIDE OF THE CURBLINE WHICH DO NOT COLLECT RUNOFF SHALL BE FITTED WITH ROUND, BOLT-LOCKING SOLID COVERS. OFF-STREET STRUCTURES WHICH DO NOT COLLECT RUNOFF SHALL BE FITTED WITH BOLT-LOCKING SOLID COVERS.
- NOT USED
- ALL NEW MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48" AND SHALL CONFORM TO THE STANDARD DETAILS. ALL NEW CATCH BASINS SHALL CONFORM TO THE STANDARD DETAILS.
- NOT USED
- ALL TESTING AND CONNECTIONS TO EXISTING MAINS SHALL BE DONE IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT.
- ALL TRENCHES SHALL BE COMPACTED, AND HOT MIX ASPHALT IN PLACE IN PAVED AREAS, PRIOR TO

- TESTING STORM LINES FOR ACCEPTANCE.
- ALL PUBLIC STORM DRAINS SHALL BE AIR TESTED AND HAVE A VIDEO INSPECTION PERFORMED PRIOR TO ACCEPTANCE (SEE #23 BELOW). STORM MAIN CONSTRUCTED WITH FLEXIBLE PIPE SHALL BE DEFLECTION TESTED WITH A MANDREL PRIOR TO ACCEPTANCE.
 - NOT USED
 - ALL MANHOLES/ CATCH BASINS IN UNPAVED AREAS SHALL INCLUDE A CONCRETE SEAL AROUND ADJUSTMENT RINGS PER STANDARD DETAILS.
 - ALL STORM MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE "STAKED" BY A SURVEYOR LICENSED IN WASHINGTON STATE FOR "LINE AND GRADE" AND CUT SHEETS PROVIDED TO THE ENGINEER, PRIOR TO STARTING CONSTRUCTION.
 - NOT USED.
 - STORM DRAINAGE MAINLINES, STUBS AND FITTINGS SHALL BE CONSTRUCTED USING THE SAME PIPE MATERIAL AND MANUFACTURER. CONNECTIONS BETWEEN STUBS AND THE MAINLINE WILL BE MADE WITH A TEE FITTING. TEE FITTING SHALL BE FROM SAME MANUFACTURER AS PIPE. CUT-IN CONNECTIONS ARE ONLY ALLOWED WHEN CONNECTING A NEW STUB TO AN EXISTING MAINLINE.
 - MANHOLES, CATCH BASINS AND VAULTS ARE CONSIDERED TO BE PERMIT-REQUIRED CONFINED SPACES. ENTRY INTO THESE SPACES SHALL BE IN ACCORDANCE WITH CHAPTER 296-809 WAC.
 - PLACEMENT OF SURFACE APPURTENANCES (MH LIDS, VALVE LIDS, ETC) IN TIRE TRACKS OF TRAFFIC LANES SHALL BE AVOIDED WHENEVER POSSIBLE.
 - NOT USED.
 - THE CONTRACTOR SHALL PERFORM A VIDEO INSPECTION AND PROVIDE A DVD OF THE STORM PIPE INTERIOR FOR THE CITY'S REVIEW. THE VIDEO SHALL PROVIDE A MINIMUM OF 14 LINES PER MILLIMETER RESOLUTION AND COVER THE ENTIRE LENGTH OF THE APPLICABLE PIPE. THE CAMERA SHALL BE MOVED THROUGH THE PIPE AT A UNIFORM RATE (< 30 FT/MIN), STOPPING WHEN NECESSARY TO ENSURE PROPER DOCUMENTATION OF THE PIPE CONDITION. THE VIDEO SHALL BE TAKEN AFTER INSTALLATION AND CLEANING TO INSURE THAT NO DEFECTS EXIST. THE PROJECT WILL NOT BE ACCEPTED UNTIL ALL DEFECTS HAVE BEEN REPAIRED.
 - NOT USED.
 - ALL CONCRETE STRUCTURES (VAULTS, CATCH BASINS, MANHOLES, OIL/WATER SEPARATORS, ETC.) SHALL BE VACUUM TESTED.
 - MANHOLES, CATCH BASINS AND INLETS IN EASEMENTS SHALL BE CONSTRUCTED TO PROVIDE A STABLE, LEVEL GRADE FOR A MINIMUM RADIUS OF 2.5 FEET AROUND THE CENTER OF THE ACCESS OPENING TO ACCOMMODATE CONFINED SPACE ENTRY EQUIPMENT.
 - TOPS OF MANHOLES/ CATCH BASINS WITHIN PUBLIC RIGHT-OF-WAY SHALL NOT BE ADJUSTED TO FINAL GRADE UNTIL AFTER PAVING.
 - CONTRACTOR SHALL ADJUST ALL MANHOLE/ CATCH BASIN RIMS TO FLUSH WITH FINAL FINISHED GRADES, UNLESS OTHERWISE SHOWN.
 - CONTRACTOR SHALL INSTALL, AT ALL CONNECTIONS TO EXISTING DOWN STREAM MANHOLES/ CATCH BASINS, SCREENS OR PLUGS TO PREVENT FOREIGN MATERIALS FROM ENTERING EXISTING STORM DRAINAGE SYSTEM. SCREENS OR PLUGS SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE CONSTRUCTION AND SHALL BE REMOVED ALONG WITH COLLECTED DEBRIS AT THE TIME OF FINAL INSPECTION AND IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT.
 - NOT USED.
 - THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF FIVE FEET (5') HORIZONTAL SEPARATION BETWEEN ALL WATER AND STORM DRAINAGE LINES. ANY CONFLICT SHALL BE REPORTED TO THE UTILITY AND THE DEVELOPER'S ENGINEER PRIOR TO CONSTRUCTION.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT NO CONFLICTS EXIST BETWEEN STORM DRAINAGE LINES AND PROPOSED OR EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - NOT USED.
 - MINIMUM COVER OVER STORM DRAINAGE PIPE SHALL BE 2 FEET, UNLESS OTHERWISE SHOWN.
 - NOT USED.
 - AT POINTS WHERE EXISTING THRUST BLOCKING IS FOUND, MINIMUM CLEARANCE BETWEEN CONCRETE BLOCKING AND OTHER BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
 - NOT USED.
 - NOT USED.
 - NOT USED.

TRANSPORTATION DEPARTMENT CONSTRUCTION NOTES

- NOT USED.
- THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE LATEST EDITION OF THE CITY OF BELLEVUE TRANSPORTATION DEPARTMENT DESIGN MANUAL. THIS APPROVAL IS SUBJECT TO FIELD INSPECTION; OVERSIGHT OR VIOLATION OF CITY ORDINANCES IS NOT INCLUDED IN THIS APPROVAL. VARIANCES TO THESE STANDARDS ARE BY APPROVAL OF THE TRANSPORTATION DEPARTMENT REVIEW ENGINEER AND THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR.
- APPROVAL OF THIS ROAD, GRADING, AND/OR DRAINAGE PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY OTHER CONSTRUCTION (E.G., DOMESTIC WATER CONVEYANCE, SEWER CONVEYANCE, GAS, ELECTRICAL, ETC.).
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL FOR A PRE-CONSTRUCTION CONFERENCE AT 425-452-6875 PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY. THIS CONFERENCE MUST BE ATTENDED BY THE CONTRACTOR AND THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR. A RIGHT OF WAY PERMIT MUST BE OBTAINED PRIOR TO SCHEDULING THE PRE-CONSTRUCTION CONFERENCE.
- THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR MAY ISSUE A STOP WORK ORDER IF APPROVED PLANS ARE NOT AVAILABLE AT THE SITE WHEN NEEDED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY RIGHT OF WAY USE PERMITS BEFORE BEGINNING WORK.
- IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THIS APPROVAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER SERVICES OR DEVICES NECESSARY TO PROTECT PROPERTY AND THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC. TRAFFIC CONTROL PLANS MUST BE SUBMITTED UNDER THE RIGHT OF WAY USE PERMIT PRIOR TO WORK COMMENCING IN THE RIGHT OF WAY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF BELLEVUE'S TRAFFIC SIGNAL SECTION INSPECTOR/ LOCATOR AT 425-864-8080 BEFORE RELOCATING ANY TRAFFIC SIGNAL OR STREET LIGHTING POLES, CONDUITS OR EQUIPMENTS. IN ADDITION, THE INSPECTOR MUST BE NOTIFIED IF ANY STREET CUT THAT AFFECTS AN EXISTING SIGNAL LOOP DETECTOR IN THE RIGHT OF WAY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY TELEPHONE, GAS, POWER, AND CABLE TV COMPANIES OF PROPOSED WORK PRIOR TO CONSTRUCTION.
- PRIOR TO THE PLACEMENT OF ASPHALT PAVING, THE CONTRACTOR MUST SUBMIT COMPACTION TEST RESULTS (CONDUCTED BY A LICENSED SOILS ENGINEER) TO THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR. PROOF ROLLING OF THE ROADWAY WILL BE CONDUCTED IN THE PRESENCE OF THE TRANSPORTATION CONSTRUCTION INSPECTOR PRIOR TO CRUSHED ROCK PLACEMENT.
- THE FINAL TOP LIFT FOR THE ROADWAY MAY BE PLACED ONLY AFTER APRIL 1ST AND PRIOR TO

- OCTOBER 1ST, SUBJECT TO TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR APPROVAL. ALL OTHER LIMITATIONS PER WSDOT STANDARD SPECIFICATIONS 5-04.3 SHALL APPLY.
- NOT USED.
 - NOT USED.
 - ALL CITY-OWNED UTILITIES VALVE BOXES, MANHOLE COVERS, CATCH BASINS, AND MONUMENT CASES WHICH ARE IN THE ASPHALT PORTION OF THE ROADWAY SHALL BE ADJUSTED TO THE FINAL ROADWAY GRADE FOR THAT PORTION OF THE PROJECT WITHIN ONE WEEK OF THE PLACEMENT OF FINAL LIFT. THESE ITEMS WILL BE ADJUSTED TO THE FINAL GRADE ONLY AFTER THE FINAL LIFT OF ASPHALT IS PLACED.
 - NOT USED.
 - STREET SIGNS ARE TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR AS DIRECTED PER A SIGNING PLAN APPROVED BY THE TRANSPORTATION DEPARTMENT. CONTACT THE TRAFFIC ENGINEERING TECHNICIAN AT (425) 452-4499 AT LEAST 72 HOURS PRIOR TO INSTALLATION FOR FIELD LAYOUT DIRECTION. ALL SIGNS MUST BE IN GOOD CONDITION PRIOR TO FINAL ACCEPTANCE OF THE ROADWAY. RELOCATION OF STREET SIGNS MUST BE COORDINATED WITH THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR.
 - NOT USED.
 - DRIVEWAY APRONS MUST BE PLACED AND CONSTRUCTED PER THE CITY OF BELLEVUE TRANSPORTATION DEPARTMENT DESIGN MANUAL.
 - NOT USED.
 - THE CONTRACTOR MUST CALL FOR CONCRETE FORM INSPECTION AND/OR STRING INSPECTION PRIOR TO POURING CONCRETE
 - THE CONTRACTOR MUST CALL FOR SIGHT DISTANCE INSPECTION PRIOR TO PROJECT COMPLETION. THIS INSPECTION WILL INCLUDE DRIVEWAYS AND INTERSECTIONS FOR VEHICULAR SIGHT DISTANCE, AND SIDEWALK AND OTHER PEDESTRIAN FACILITIES FOR PEDESTRIAN SIGHT DISTANCE. FINAL SIGHT DISTANCE MUST TAKE INTO CONSIDERATION THE ANTICIPATED HEIGHT OF MATURE LANDSCAPING.
 - THE CONTRACTOR MUST PROVIDE FOR CONSTRUCTION WORKER PARKING, EQUIPMENT STORAGE, AND MATERIAL STORAGE ON SITE. EXCEPTIONS MAY BE GRANTED BY THE TRANSPORTATION DEPARTMENT DIRECTOR UNDER CERTAIN CONDITIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PUBLIC UTILITIES AND COORDINATION WITH FRANCHISE UTILITIES. THIS WORK MUST BE COORDINATED SUCH THAT, FOR EXAMPLE, THE PLACEMENTS OF UTILITY VAULTS DO NOT CREATE A CONFLICT WITH THE INSTALLATION OF DRIVEWAY APPROACHES AND/OR SIDEWALKS AT 2% CROSS SLOPE AND MAXIMUM OF 8% RUNNING SLOPE PER ADA REQUIREMENTS.

EROSION CONTROL GENERAL NOTES

- ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF BELLEVUE (COB) CLEARING & GRADING CODE, CLEARING & GRADING DEVELOPMENT STANDARDS, LAND USE CODE, UNIFORM BUILDING CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THESE REQUIREMENTS. ANY VARIANCE FROM ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF BELLEVUE DEVELOPMENT SERVICES (DSD) PRIOR TO CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB.
- NOT USED.
- NOT USED.
- THE IMPLEMENTATION OF THE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE ESC FACILITIES SHOWN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- NOT USED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FENCED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FENCED CLEARING LIMITS SHALL BE PERMITTED. THE FENCING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- CLEARING SHALL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS. EXPOSED SOILS MUST BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1ST THROUGH APRIL 30TH. FROM MAY 1ST THROUGH SEPTEMBER 30TH, EXPOSED SOILS MUST BE COVERED AT THE END OF EACH CONSTRUCTION WEEK AND ALSO AT THE THREAT OF RAIN.
- AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR MUST MAINTAIN A SWEEPER ON SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH A VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIAL MUST BE APPROVED BY THE CLEARING AND GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPILING.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM 5% SLOPE, PER THE INTERNATIONAL RESIDENTIAL CODE (IRC) R401.3.
- THE CONTRACTOR SHALL PREPARE A TURBIDITY AND pH MONITORING PLAN THAT MEETS COB CLEARING AND GRADING DEVELOPMENT STANDARDS. THE TURBIDITY AND pH MONITORING PLAN SHALL BE SUBMITTED FOR APPROVAL TO COB CLEARING AND GRADING PERMIT REVIEW PRIOR TO THE PRE-CONSTRUCTION MEETING AND INSPECTION.

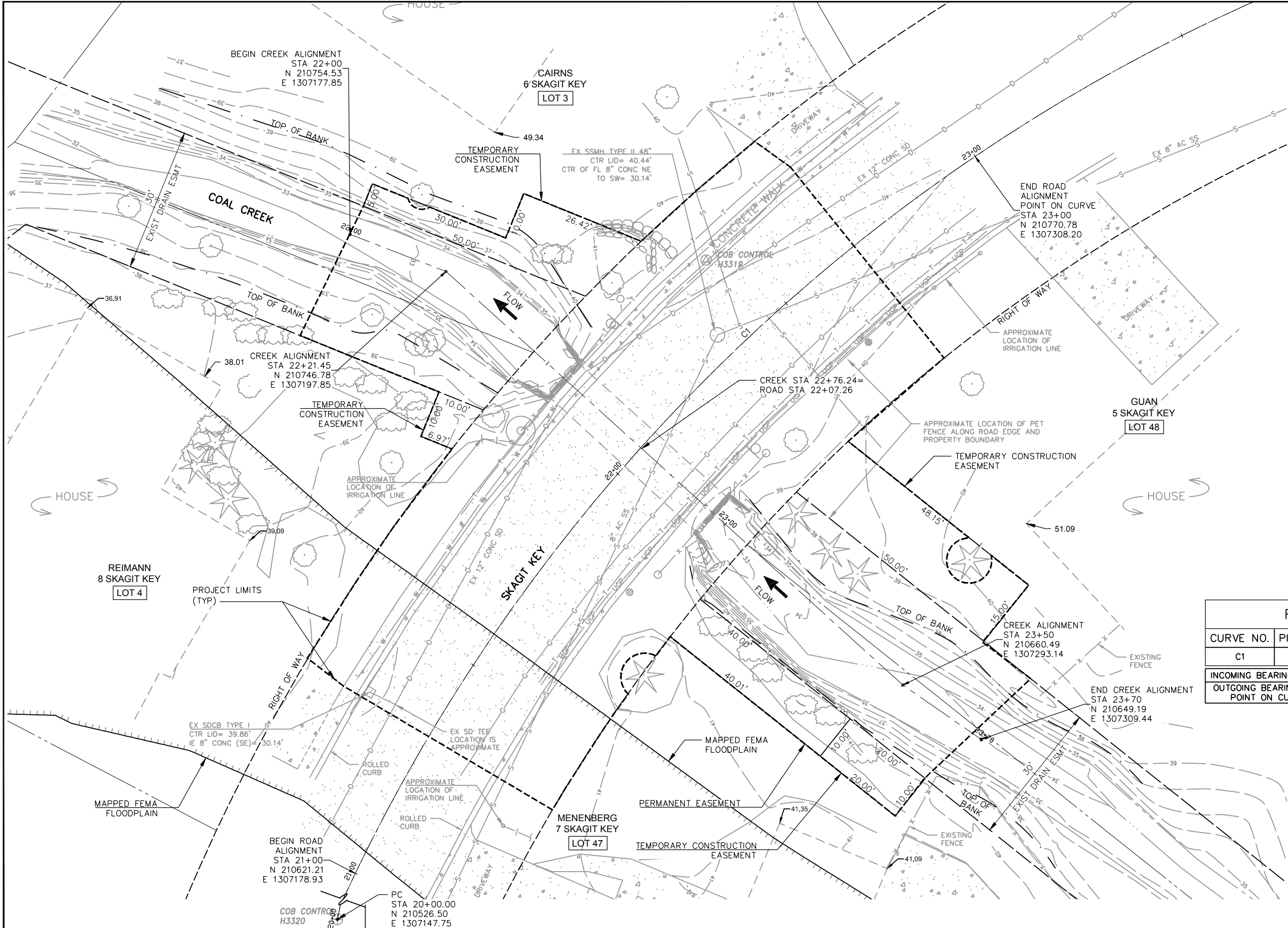
BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT NOTES

G3

SHT 3 OF 28

Path: P:\134271 Lower Coal Creek Ph. 2 Early Action\CAD\SheetFiles\Group\1\ ECL UPPER SKAGIT KEY CREEK EXIST COND & SURVEY CTRL.dwg Plot date: Mar 16, 2017 02:16:18m CAD User: Adam Forster.
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CITY OF BELLEVUE CONTROL POINTS				
ID	DESCRIPTION	NORTHING	EASTING	ELEVATION*
H3320	MONUMENT	210526.50	1307147.76	39.631
H3319	MONUMENT	210749.16	1307252.13	

*HORIZONTAL CONTROL POINT ONLY IF NO ELEVATION LISTED.

HORIZONTAL DATUM:
WASHINGTON STATE PLANE COORDINATES,
NORTH ZONE (BASED UPON NAD 83/11)

VERTICAL DATUM:
NAVD 88

CONTROL METHOD:
HORIZONTAL AND VERTICAL CONTROL
COORDINATES WERE DERIVED USING
TRIGONOMETRIC TRAVERSE METHODS USING
A LEICA TPS-1201 TOTAL STATION TIED
TO CITY OF BELLEVUE CONTROL POINTS.

FIELD SURVEY PERFORMED OCTOBER AND
NOVEMBER 2015 BY TETRA TECH.

ROAD CURVE DATA TABLE					
CURVE NO.	PI STATION	DELTA Δ	RADIUS	TANGENT	LENGTH
C1	22+77.35	72°14'55"	380.00'	277.35	479.17'
INCOMING BEARING AT PC:		N10°40'52"E			
OUTGOING BEARING FROM POINT ON CURVE:		N55°54'53"E			



BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT
EXISTING CONDITIONS AND
SURVEY CONTROL

EC1

SHT 4 OF 28

NO	DATE	BY	APPR	REVISIONS

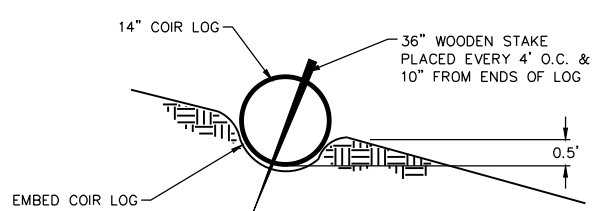
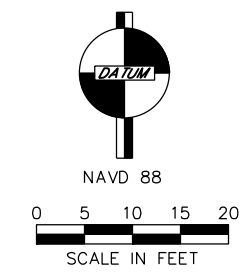
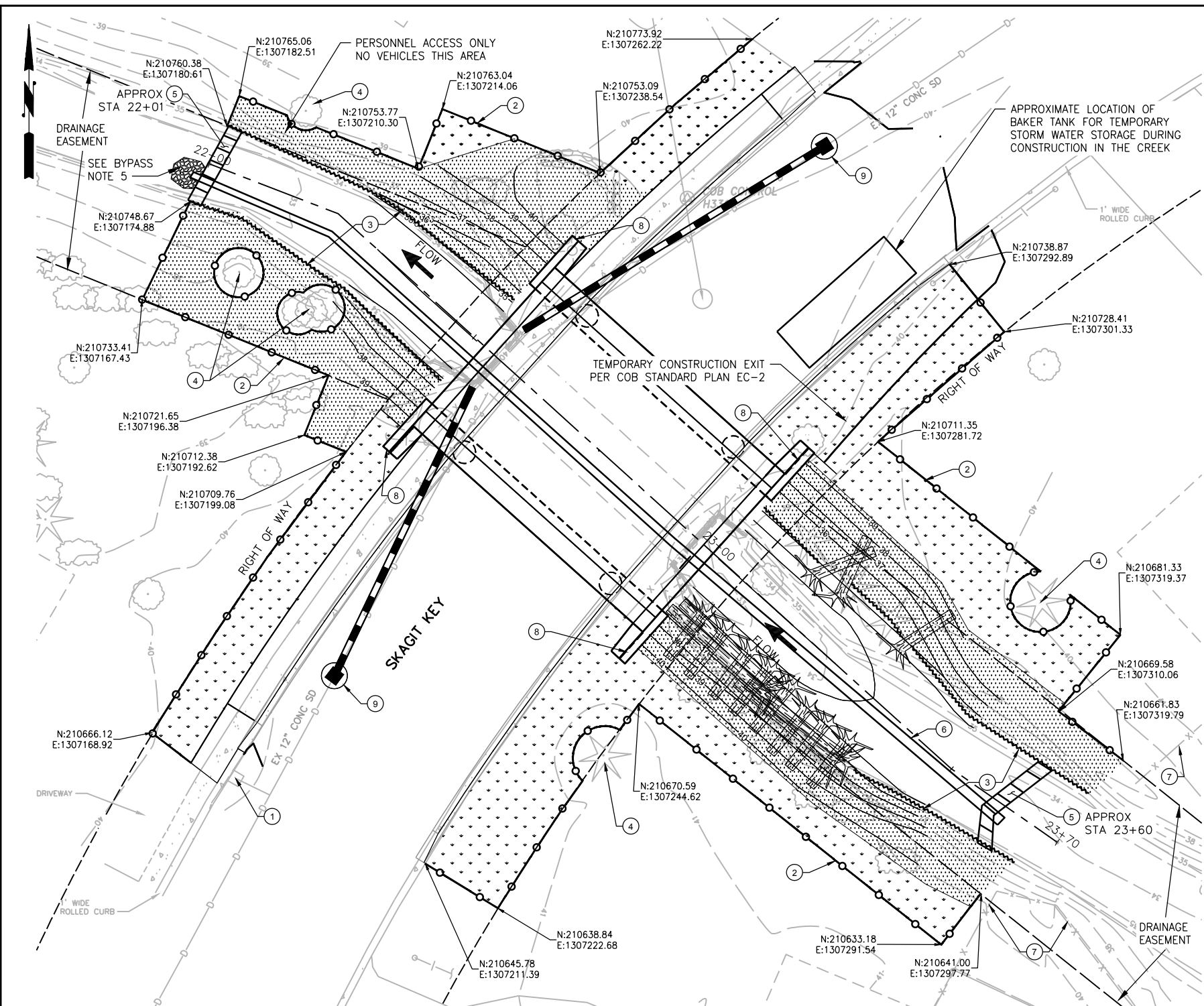


Approved By	
DESIGN MANAGER	DATE
PROJECT MANAGER	DATE
KA DESIGNED BY	DATE
NS DRAWN BY	DATE
QMS CHECKED BY	DATE



City of
Bellevue
UTILITIES

Path: P:\134271 Lower Coal Creek Ph. 2 Early Action\CAD\SheetFiles\Group\5 E UPPER SKAGIT KEY STREAM BYPASS AND ESC PLAN.dwg Plot date: Mar 16, 2017 - 02:16:47pm CAD User: Adam Forcier
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COIR LOG PLACEMENT
SCALE: NTS

CONSTRUCTION NOTES:

- 1 CATCH BASIN INLET PROTECTION INSERT PER COB STANDARD DETAIL EC-06
INSTALL ON ALL CB WITHIN 200FT DOWNSTREAM OF PROJECT
- 2 HIGH VISIBILITY FENCE PER WSDOT STANDARD PLAN I-10.10-01, APPROX 560 LF
- 3 COIR LOG PLACEMENT, SEE DETAIL 1/-, APPROX 200 LF
- 4 TREE PROTECTION PER COB STANDARD DETAIL EC-21
- 5 TEMPORARY GRAVEL BAG BERM
- 6 TEMPORARY STREAM BYPASS PIPELINE. MINIMUM 42" DIA SMOOTH BORE AND 62 CFS CAPACITY, APPROX 160 LF
- 7 PROTECT EXISTING RESIDENTIAL FENCE
- 8 PROTECT WING WALLS AFTER CONSTRUCTION DURING SITE ACCESS
- 9 CONTRACTOR TO SUBMIT TO ENGINEER FOR APPROVAL A PLAN TO BYPASS STREET RUNOFF AROUND OR THROUGH CONSTRUCTION ZONE AND DISCHARGE TO STREAM BYPASS OUTFALL LOCATION. MOVABLE PIPES IN STREAM CHANNEL OR STREET LEVEL PUMPS ARE ACCEPTABLE. RUNOFF OVER BARE SOIL WILL NOT BE PERMITTED. CONTRACTOR IS ADVISED THAT THE PREDICTED 2-YEAR PEAK STORM FLOW IN THE NORTHEAST SD AND SOUTHWEST SD IS ABOUT 0.6 CFS (270 GPM) AND 0.2 CFS (90 GPM), RESPECTIVELY.

PLACE 6-INCH THICK LAYER OF WOOD CHIP MULCH (CONTRACT SPECS 8-01.2(1)) ON BARE GROUND. OVERLAY WITH BIODEGRADABLE EROSION CONTROL BLANKET PER COB STD PLAN EC-15. LANDSCAPE PER SHEET L1.

BIODEGRADABLE EROSION CONTROL BLANKET PER COB STD PLAN EC-15. NO WOOD CHIP MULCH. LANDSCAPE PER SHEET L1.

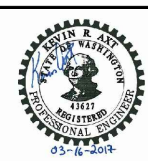
EROSION & SEDIMENTATION CONTROL NOTES:

1. SEE SHEET G2 FOR ABBREVIATIONS AND SYMBOLS.
SEE COB STANDARD EROSION CONTROL NOTES ON SHEET G3.
2. EXPOSED SOIL SHALL BE COVERED IN ACCORDANCE WITH COB EROSION CONTROL GENERAL NOTE 9, SHEET G3. SOIL COVERING SHALL BE SELECTED FROM COB BMP C120-TEMPORARY SEEDING, COB BMP C121-MULCHING, COB STANDARD DETAIL EC-15 EROSION CONTROL BLANKETS AND NETS, OR COB STANDARD DETAIL EC-14 PLASTIC COVERING FOR SLOPES AND STOCKPILES, AS APPROPRIATE.
3. THE CONTRACTOR WILL BE RESPONSIBLE AT ALL TIMES FOR PREVENTING SILT-LADEN RUNOFF FROM DISCHARGING FROM THE PROJECT SITE. NO MORE WORK SHALL BE PERFORMED IN ONE DAY THAN CAN BE COMPLETED WITHOUT THE INSTALLATION OF EROSION CONTROL MEASURES DURING THAT SAME DAY. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
4. ALL EROSION AND SEDIMENTATION CONTROL FACILITIES SHALL BE INSPECTED AND MAINTAINED DAILY. SEDIMENT SHALL BE REMOVED BY THE CONTRACTOR ON A WEEKLY BASIS AS A MINIMUM AND ON A DAILY BASIS DURING PERIODS OF RAINFALL AS IT BECOMES NECESSARY. THE CONTRACTOR SHALL RELOCATE, REBUILD, AND MAKE ADJUSTMENTS TO THESE FACILITIES AS NECESSARY DURING CONSTRUCTION.
5. SOIL EXPOSURE SHALL BE MINIMIZED THROUGH THE USE OF TEMPORARY BMP GROUND COVER AND STABILIZATION PRACTICES. EXPOSED DUST-PRODUCING SURFACES SHALL BE SPRINKLED DAILY UNTIL WET WHILE AVOIDING PRODUCING RUNOFF. PAVED STREETS SHALL BE SWEEPED FOLLOWING CONSTRUCTION ACTIVITIES WHEN DIRECTED BY THE ENGINEER.
6. AT NO TIME SHALL CONCRETE, CONCRETE BY-PRODUCTS, VEHICLE FLUIDS, PAINT, CHEMICALS, OR OTHER POLLUTING MATTER BE PERMITTED TO DISCHARGE FROM THE PROJECT SITE TO THE STREAM OR STORM DRAINAGE SYSTEM. ALL POLLUTANTS OTHER THAN SEDIMENT THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND LEGALLY DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORM OR SURFACE WATERS. POLLUTANTS OF CONCERN INCLUDE, BUT ARE NOT LIMITED TO, FUELS, LUBRICANTS, SOLVENTS, CONCRETE BY-PRODUCTS, AND CONSTRUCTION MATERIALS.
7. REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DONE AFTER THE WORKING AREA IS STABILIZED OR AS DIRECTED BY THE ENGINEER.
8. SEE SHEETS L1 & L2 FOR PERMANENT VEGETATION RESTORATION (NURSERY PLANTINGS). NOTE LOCATIONS TO RECEIVE TOPSOIL.
SEE SHEET EC1 FOR ROAD AND CREEK ALIGNMENTS.

STREAMFLOW BYPASS NOTES:

1. COMPLETE DEFISHING OPERATIONS PER CONTRACT SPEC 8-03.2(1) PRIOR TO DIVERTING CREEK FLOW INTO THE BYPASS.
2. ALL STREAMFLOWS SHALL BE DIVERTED INTO A BYPASS SYSTEM IN ACCORDANCE WITH THE HPA. BYPASS SHALL PROVIDE MINIMUM 62 CFS CAPACITY. THE DIVERSION PLAN SHOWN IS A SCHEMATIC REPRESENTATION ONLY; PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT PLANS FOR A BYPASS SYSTEM FOR REVIEW AND APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL DESIGN AND PERFORMANCE OF DIVERSION AND WILL BE RESPONSIBLE FOR DAMAGES CAUSED BY THE FAILURE OF THE DIVERSION. 62 CFS IS THE PREDICTED 2-YEAR PEAK STORM FLOW. 95% OF THE TIME, THE AVERAGE JULY-SEPTEMBER MONTHLY FLOW IS PREDICTED TO BE LESS THAN 7.5 CFS.
3. THE CONTRACTOR SHALL REMOVE WATER FROM THE WORK ZONE AS REQUIRED. DEWATERING PUMP(S) SHALL PUMP WATER TO CONTRACTOR-PROVIDED TANKS. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL SUBMIT TO ENGINEER FOR APPROVAL A PLAN FOR STAGING TEMPORARY WATER STORAGE TANKS. UNDER NO CIRCUMSTANCES SHALL ANY TURBID WATER BE DISCHARGED INTO THE STREAM SYSTEM. COSTS FOR TREATING AND DISPOSING OF WATER THAT ENTERS THE WORK ZONE SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
4. BYPASS PIPE SHALL BE PLACED WITH A DOWN-GRADIENT SLOPE SUCH THAT THE PIPE INVERT ON THE DOWNSTREAM SEGMENT IS AT OR BELOW THE PIPE INVERT AT AN UPSTREAM SEGMENT. THERE SHALL BE NO 'CRESTS' GREATER THAN 6-INCHES IN THE PIPE PROFILE. THE CONTRACTOR SHALL ATTEMPT TO PLACE THE BYPASS PIPE WITH A UNIFORM SLOPE.
5. THE DIVERSION OUTFALL AREA SHALL BE PROTECTED BY SECURING THE PIPE OUTLET, SAND BAGGING, AND PROVIDING ENERGY DISSIPATION TO THE SATISFACTION OF THE ENGINEER.
6. THE POSITION OF TEMPORARY BYPASS PIPELINE SHALL BE RELOCATED AS REQUIRED TO ALLOW CONSTRUCTION OF IMPROVEMENTS. THE BYPASS PIPE SHALL BE ANCHORED IN POSITION USING TEMPORARY REMOVABLE ANCHORS TO PREVENT DISPLACEMENT, INCLUDING DURING FLOOD FLOWS.
7. THE TEMPORARY BYPASS PIPELINE HAS LIMITED FLOW CAPACITY. CONTRACTOR SHALL COORDINATE WORK IN THE CHANNEL DURING PERIODS OF NO RAINFALL. CONTRACTOR SHALL EVACUATE AND LEAVE THE CONSTRUCTION SITE DURING NON-WORKING HOURS SUCH THAT FLOWS IN EXCESS OF THE BYPASS CAPACITY WILL FLOW THROUGH THE SITE WITHOUT MOBILIZING DISTURBED EARTH.
8. CONTINUOUS BASE FLOW IN THE CREEK IS EXPECTED THROUGHOUT CONSTRUCTION. COAL CREEK IS AN URBAN CREEK. FLOWS IN THE CREEK CAN CHANGE SIGNIFICANTLY AND IN SHORT TIME (MINUTES) FOLLOWING RAINFALL. THE CONTRACTOR SHALL NOT WORK WITHIN THE CREEK DURING WET WEATHER.
9. MATERIALS USED FOR DIVERSION SHALL BE REMOVED FROM THE SITE AT THE COMPLETION OF THE PROJECT.

NO	DATE	BY	APPR	REVISIONS



TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 550
Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER	DATE
PROJECT MANAGER	DATE

SF	DESIGNED BY	DATE
NS	DRAWN BY	DATE
QMS	CHECKED BY	DATE

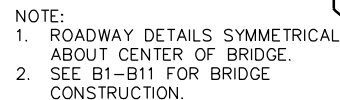
City of Bellevue
UTILITIES

BID SET

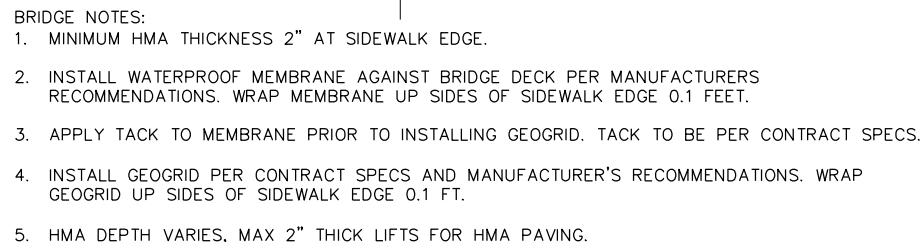
**UPPER SKAGIT KEY CULVERT REPLACEMENT
STREAM BYPASS AND ESC PLAN**

E1	SHT 5 OF 28
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UTILITIES

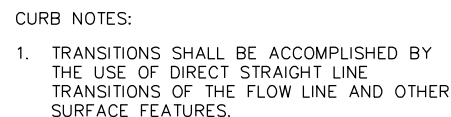


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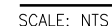


SCALE: 1/4" = 1'-0"

ROAD STA 21+90.8± TO 22+23.7±



SCALE: NTS



SCALE: NTS

ROAD STA 21+38 TO 21+90.8±
ROAD STA 22+23.7± TO 22+68.5±



Approved By

KA	
DESIGNED BY	DATE
NS	
DRAWN BY	DATE
GMS	
CHECKED BY	DATE

**BID SET**

UPPER SKAGIT KEY CULVERT REPLACEMENT
MISCELLANEOUS DETAILS

C4

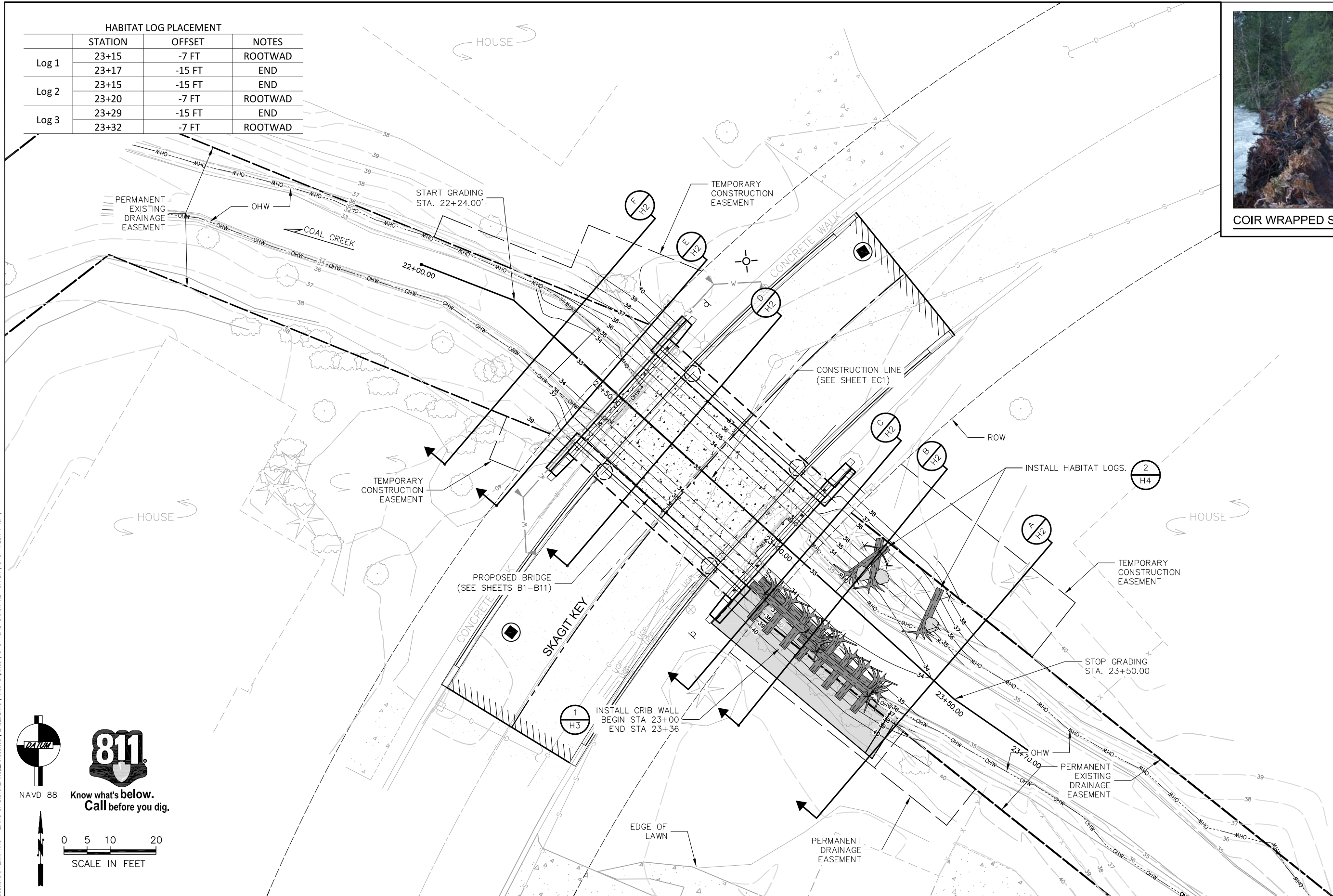
SHT 9 OF 28

HABITAT LOG PLACEMENT			
	STATION	OFFSET	NOTES
Log 1	23+15	-7 FT	ROOTWAD
	23+17	-15 FT	END
Log 2	23+15	-15 FT	END
	23+20	-7 FT	ROOTWAD
Log 3	23+29	-15 FT	END
	23+32	-7 FT	ROOTWAD



COIR WRAPPED SOIL LIFTS

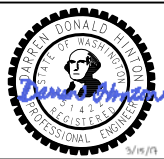
NOTE: REFERENCE SHEET H3 FOR LAYOUT



NAVD 88
Know what's below.
Call before you dig.
811
SCALE IN FEET

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NO	DATE	BY	APPR	REVISIONS



nhc
northwest hydraulic consultants
12787 Gateway Drive South
Seattle, WA 98168
Phone: 206-241-6000
Fax: 206-439-2420

TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 600
Seattle, Washington 98101
Phone: 206-883-9300 Fax: 206-883-9301

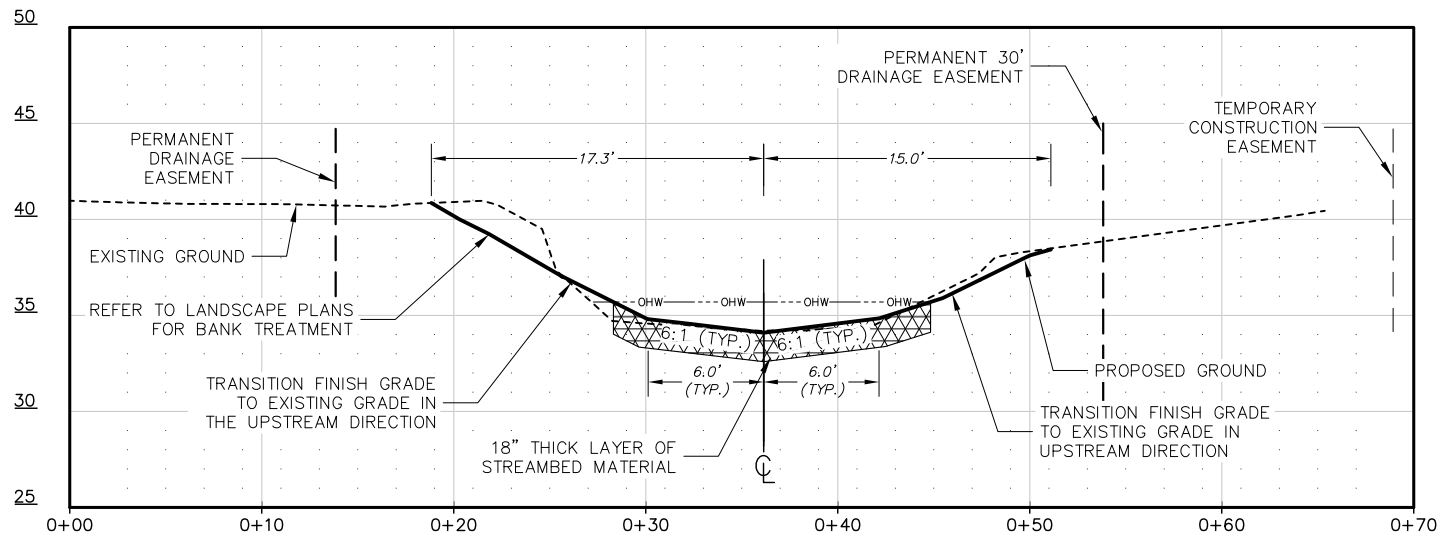
Approved By	
DESIGN MANAGER	DATE
PROJECT MANAGER	DATE
J. BROWN	5/6/2016
M. O'HRT	11/7/2016
E. ROWLAND	5/6/2016
CHECKED BY	DATE



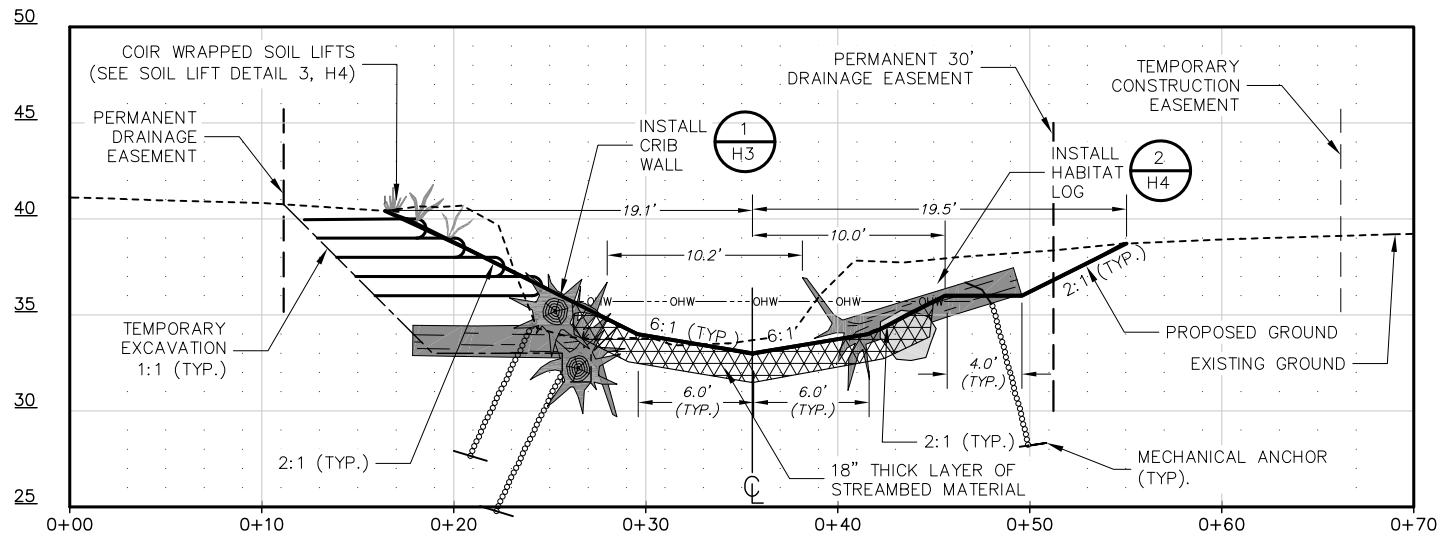
City of Bellevue
UTILITIES

UPPER SKAGIT KEY CULVERT REPLACEMENT HABITAT FEATURES PLAN AND CREEK BED GRADING	
H1	SHT 10 OF 28

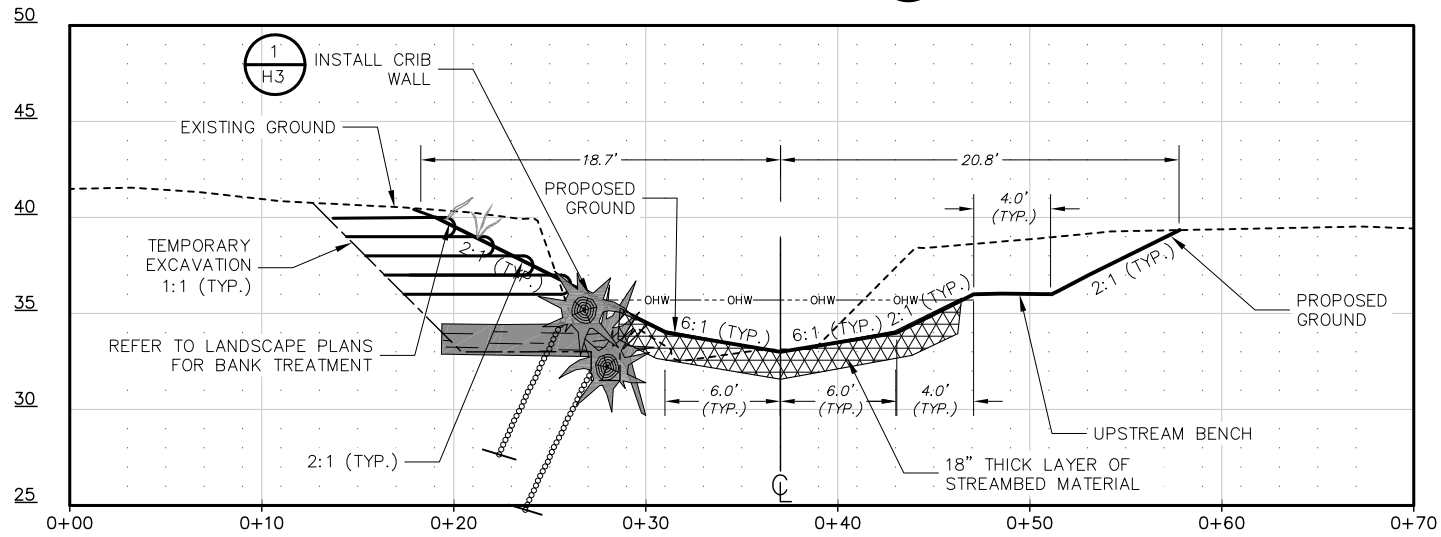
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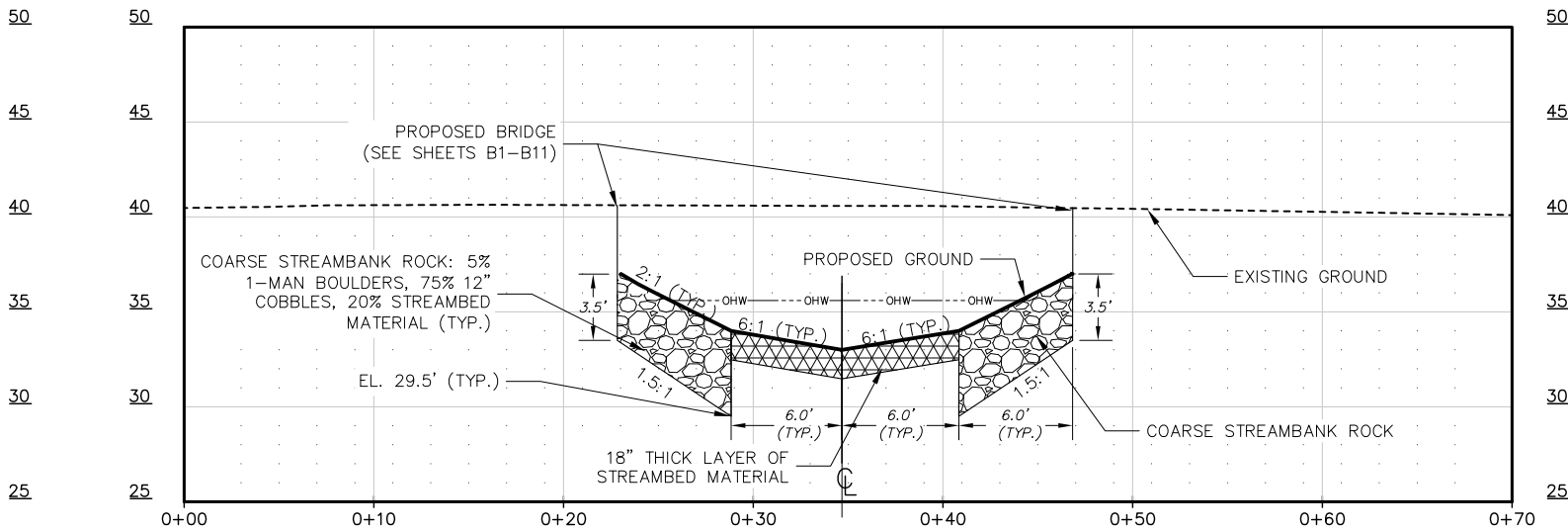
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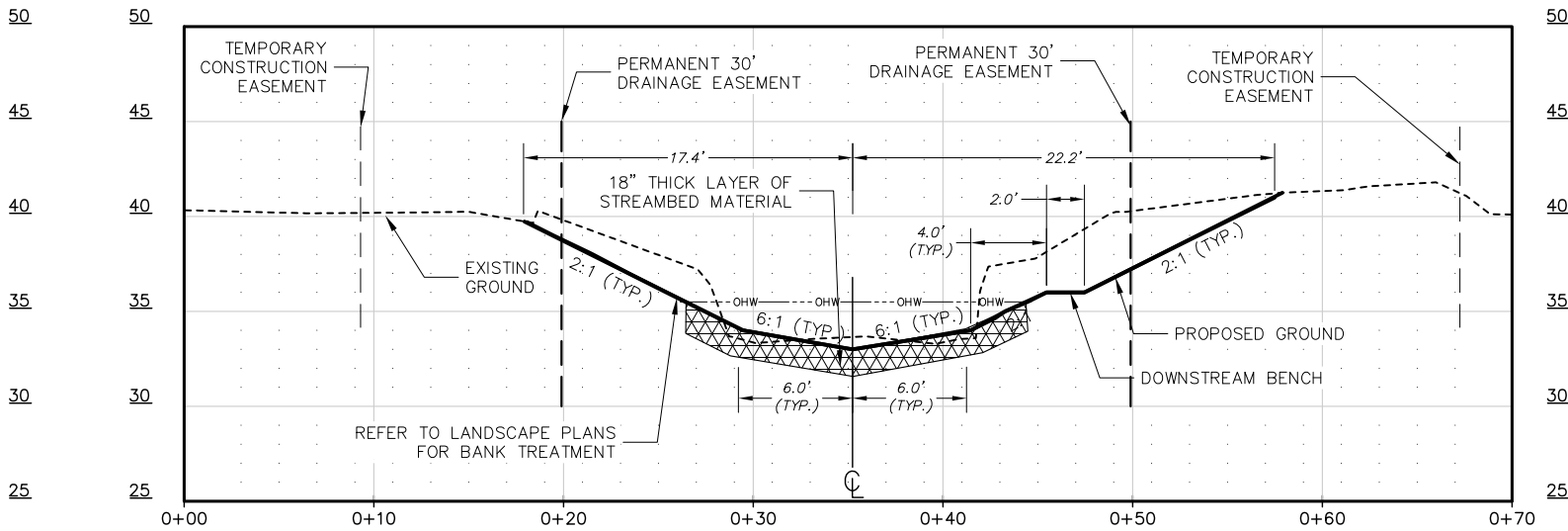
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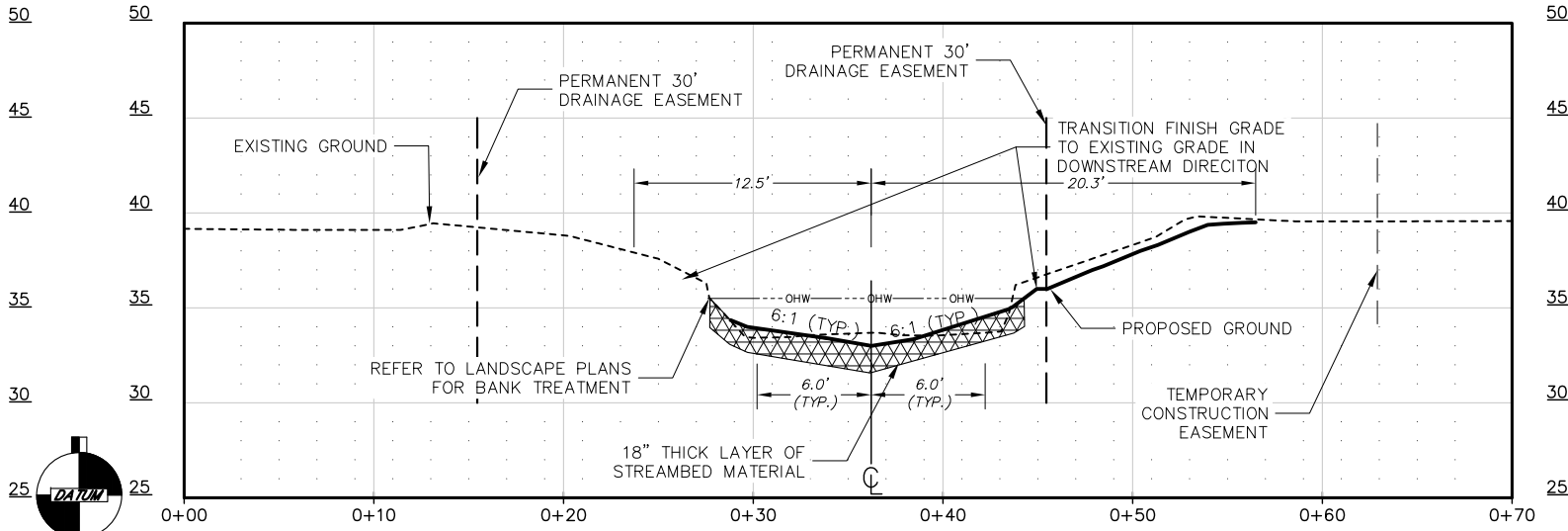
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SECTION STA 22+68
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SECTION STA 22+48
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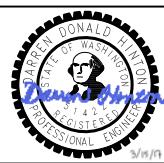


SECTION STA 22+33
1" = 5' (HORIZ.) 1" = 5' (VERT.)



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nhc
northwest hydraulic consultants

12787 Gateway Drive South
Seattle, WA 98168
Phone: 206-241-6000
Fax: 206-439-2420



TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 600
Seattle, Washington 98101
Phone: 206-883-9300 Fax: 206-883-9301

Approved By

DESIGN MANAGER DATE
PROJECT MANAGER DATE

J BROWN 5/6/2016
DESIGNED BY DATE
M OHR 11/7/2016
DRAWN BY DATE
E ROWLAND 5/6/2016
CHECKED BY DATE



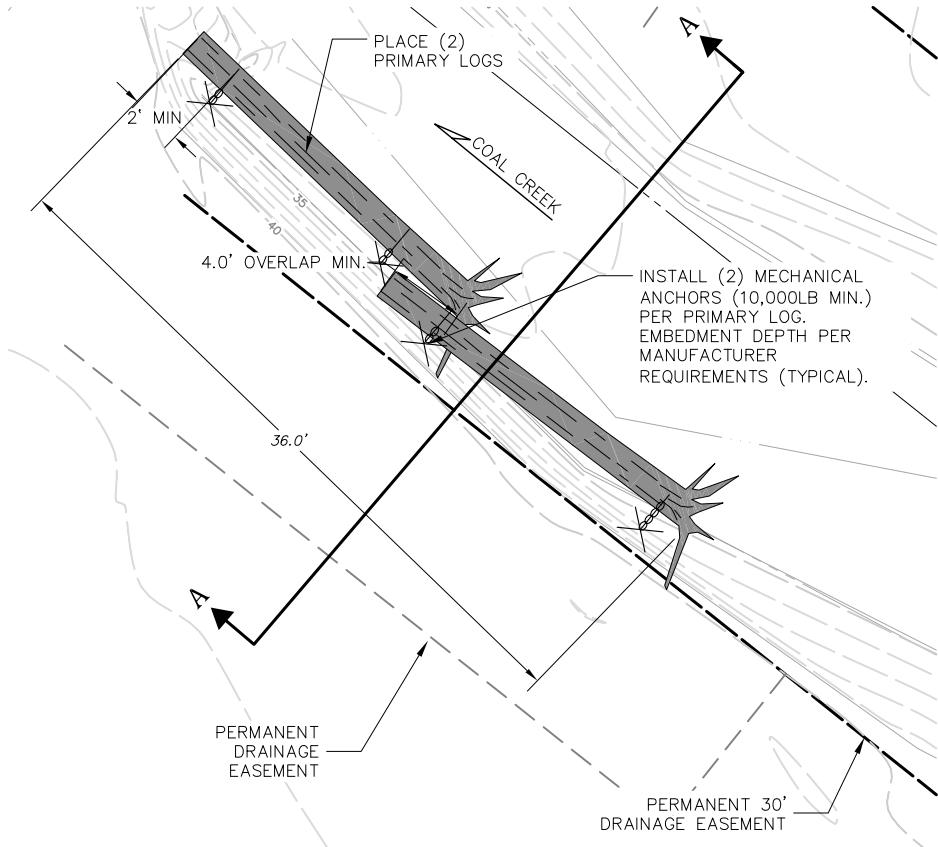
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UPPER SKAGIT KEY CULVERT REPLACEMENT
HABITAT SECTION VIEWS

H2

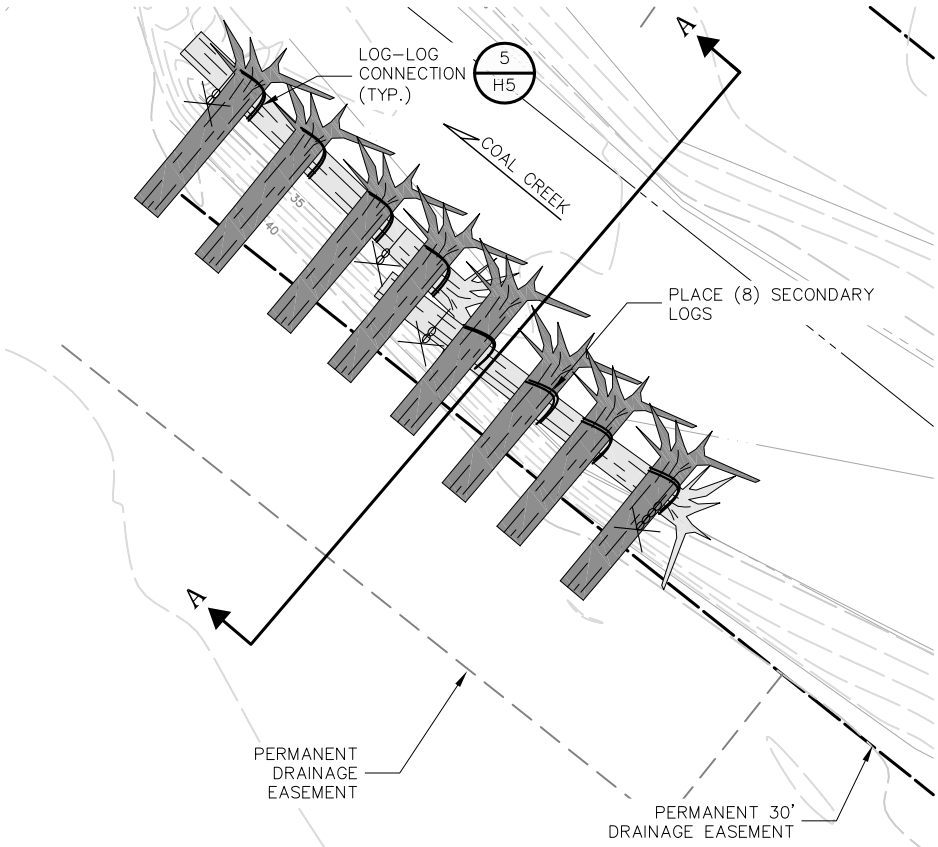
SHT 11 OF 28

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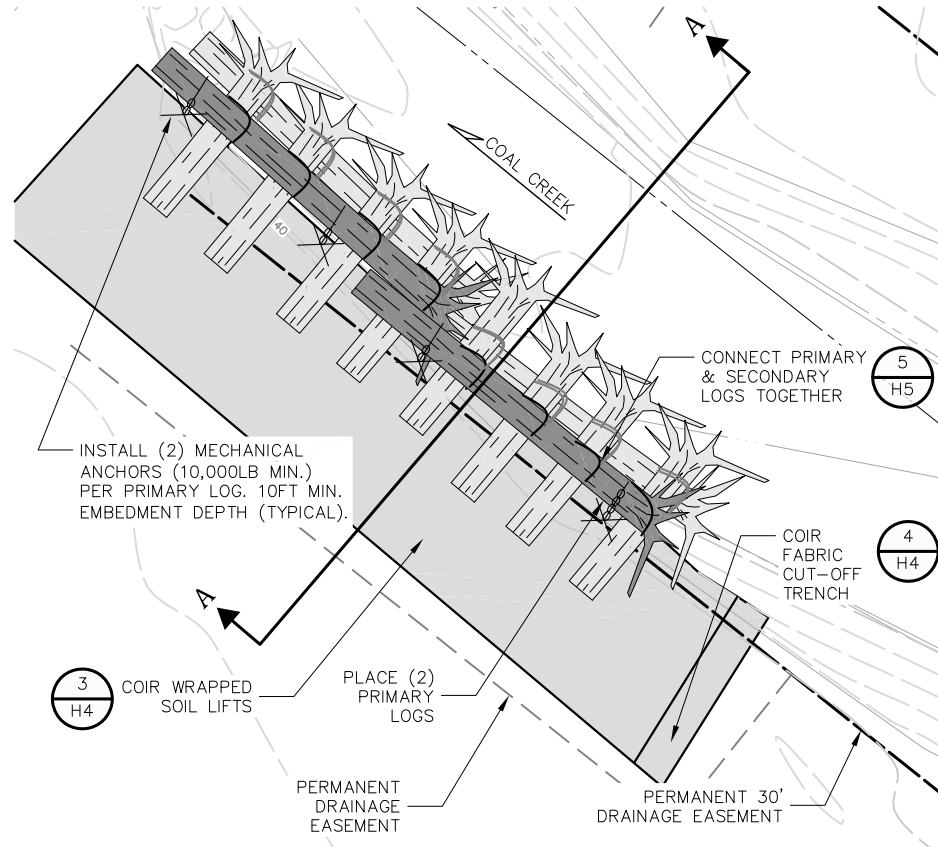
PLAN VIEW
N.T.S.

- STEP 1
- EXCAVATE TRENCH TO EL. 33.0' TO PLACE 2 PRIMARY LOGS AT TOE OF THE FUTURE SLOPE.
 - PLACE & ANCHOR PRIMARY LOGS (20' LONG, 18" Ø WITH ROOTWADS UPSTREAM).



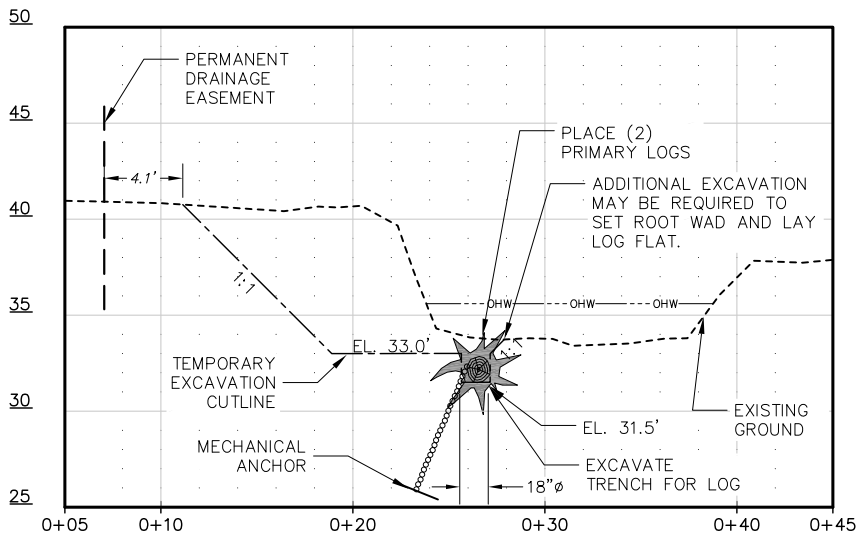
PLAN VIEW
N.T.S.

- STEP 2
- PLACE 8 SECONDARY LOGS (8' LONG, 18" Ø WITH ROOTWAD) ATOP PRIMARY LOGS.
 - SECURE WITH CHAIN IN A FIGURE-8 FASHION AROUND EACH SECONDARY LOG TO PRIMARY LOG. SEE 5/H5.
 - BACKFILL VOIDS WITH STREAMBED MATERIAL.



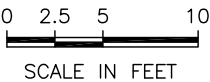
PLAN VIEW
N.T.S.

- STEP 3
- PLACE & ANCHOR 2 PRIMARY LOGS ATOP SECONDARY LOGS.
 - SECURE PRIMARY LOGS TO SECONDARY LOGS IN A FIGURE-8 FASHION WITH CHAIN. SEE 5/H5.



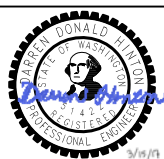
CRIB WALL
N.T.S.

SECTION A-A



NAVD 88

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nhc
northwest hydraulic consultants
12787 Gateway Drive South
Seattle, WA 98168
Phone: 206-241-6000
Fax: 206-439-2420

TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 600
Seattle, Washington 98101
Phone: 206-883-9300 Fax: 206-883-9301

Approved By	
DESIGN MANAGER	DATE
PROJECT MANAGER	DATE
J. BROWN	5/6/2016
M. OHRT	11/7/2016
E. ROWLAND	5/6/2016



City of Bellevue
UTILITIES

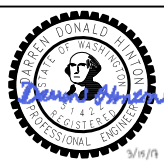
UPPER SKAGIT KEY CULVERT REPLACEMENT CRIB WALL PLACEMENT DETAIL	
H3	SHT 12 OF 28

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NAVD 88

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nhc
northwest hydraulic consultants

12787 Gateway Drive South
Seattle, WA 98168
Phone: 206-241-6000
Fax: 206-439-2420

TETRA TECH
www.tetratech.com
1420 Fifth Avenue, Suite 600
Seattle, Washington 98101
Phone: 206-883-9300 Fax: 206-883-9301

Approved By

DESIGN MANAGER DATE
PROJECT MANAGER DATE

J. BROWN 5/6/2016
DESIGNED BY DATE
M. OHRT 5/6/2016
DRAWN BY DATE
E. ROWLAND 5/6/2016
CHECKED BY DATE



**City of
Bellevue**
UTILITIES

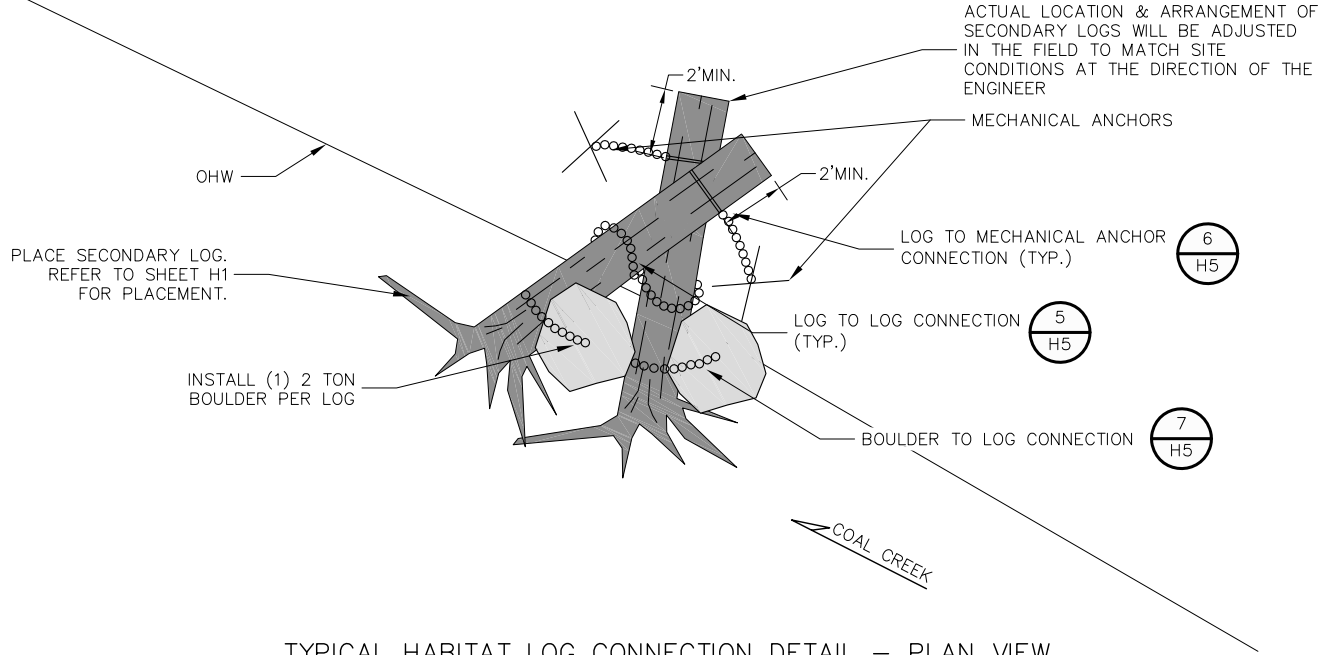
UPPER SKAGIT KEY CULVERT REPLACEMENT
HABITAT DETAILS 1

H4 SHT 13 OF 28

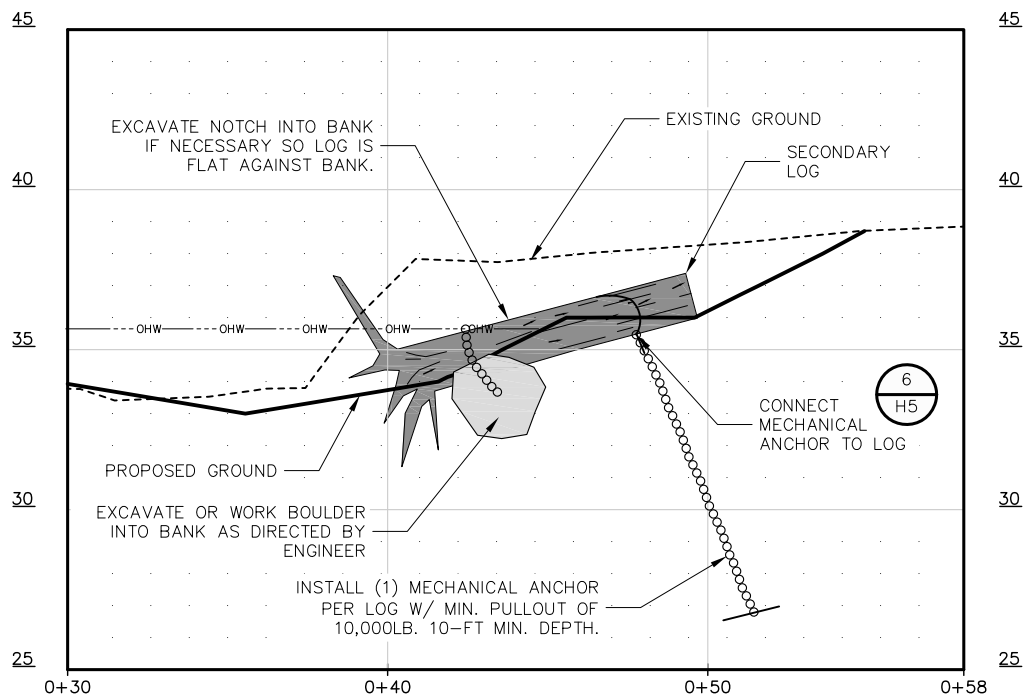


Know what's below.
Call before you dig.

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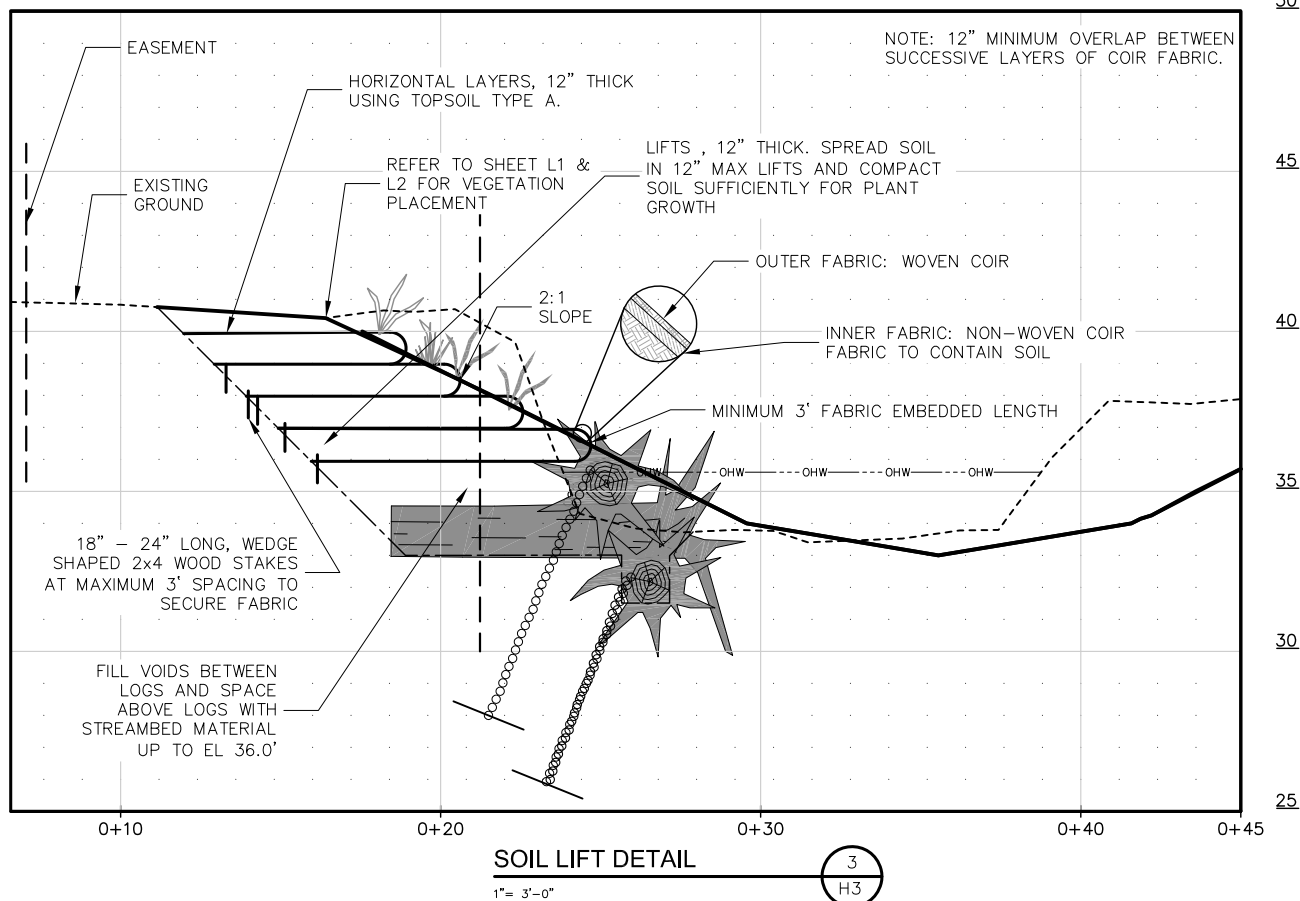
TYPICAL HABITAT LOG CONNECTION DETAIL – PLAN VIEW



SECTION VIEW

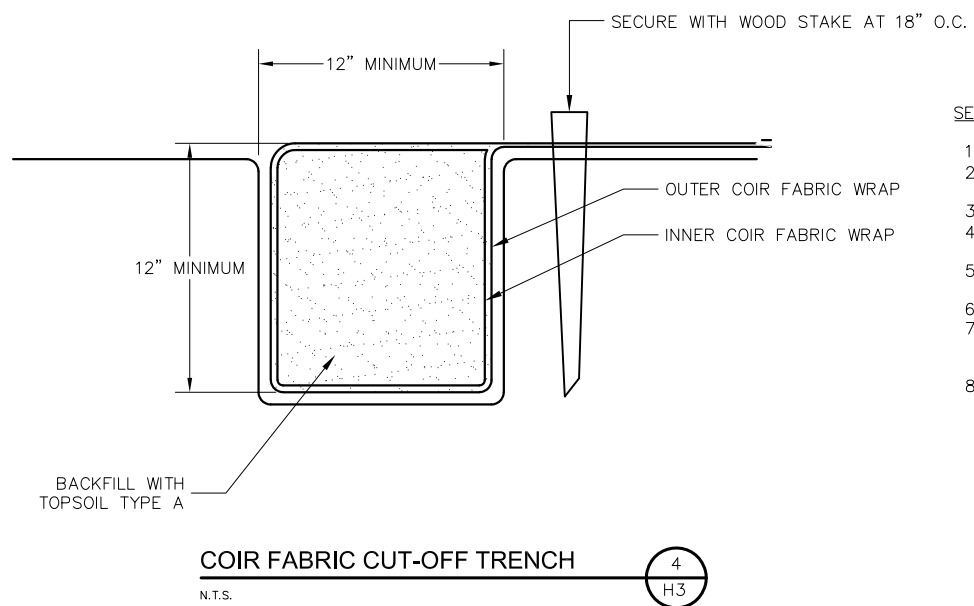
TYPICAL HABITAT LOG CONNECTION DETAIL

1"= 3'-0"



SOIL LIFT DETAIL

1"= 3'-0"



COIR FABRIC CUT-OFF TRENCH

N.T.S.

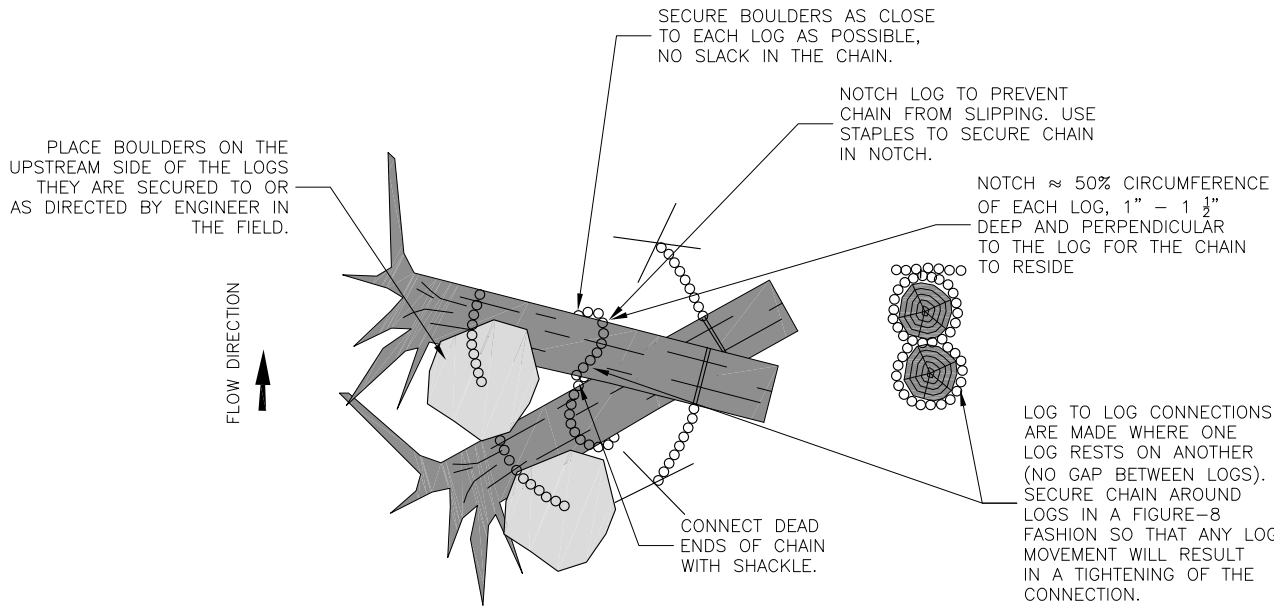
SEQUENCE NOTES

1. LAY OUTER AND INNER COIR FABRIC
2. PLACE TOPSOIL TYPE A (12" MAX) AND COMPACT
3. FOLD COIR FABRIC OVER SOIL
4. EXCAVATE 12" X 12" CUTOFF TRENCH AT UPSTREAM FACE OF SOIL LIFT
5. LAY OUTER AND INNER COIR FABRIC IN TRENCH
6. FILL TRENCH AND COMPACT
7. FOLD EXCESS OUTER AND INNER COIR FABRIC BACK OVER FILLED TRENCH AND STAKE
8. REPEAT FOR NEXT LAYER

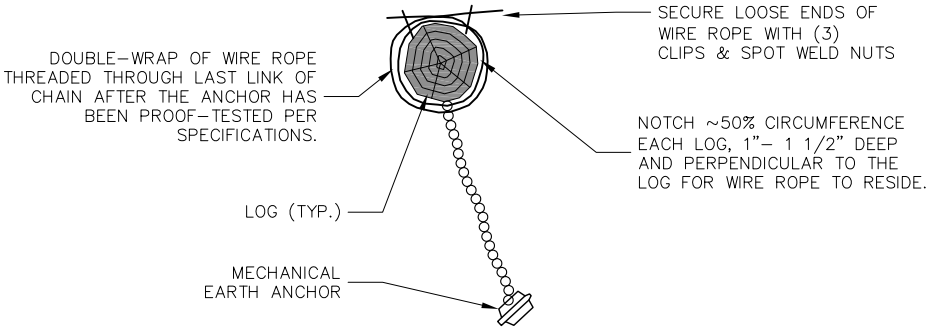
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Net Name: Combined_Locations | Permitting - Limits of Disturbance_Incised | EASMENTS | Tree-origines | C-SP-SITE-SWAST NET UPPER | C-SP-ALCA-PROF |



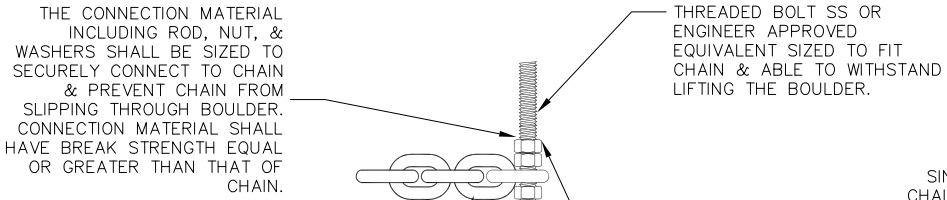
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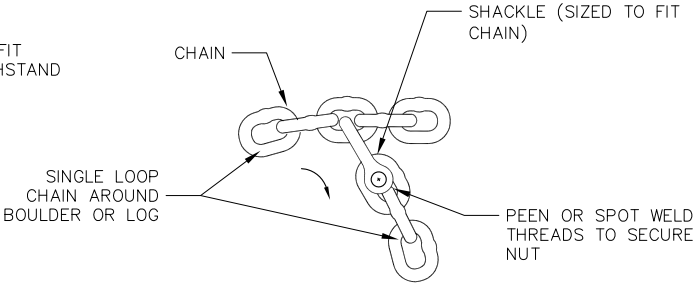
LOG TO LOG CONNECTION DETAILS 5
N.T.S. H3 H4



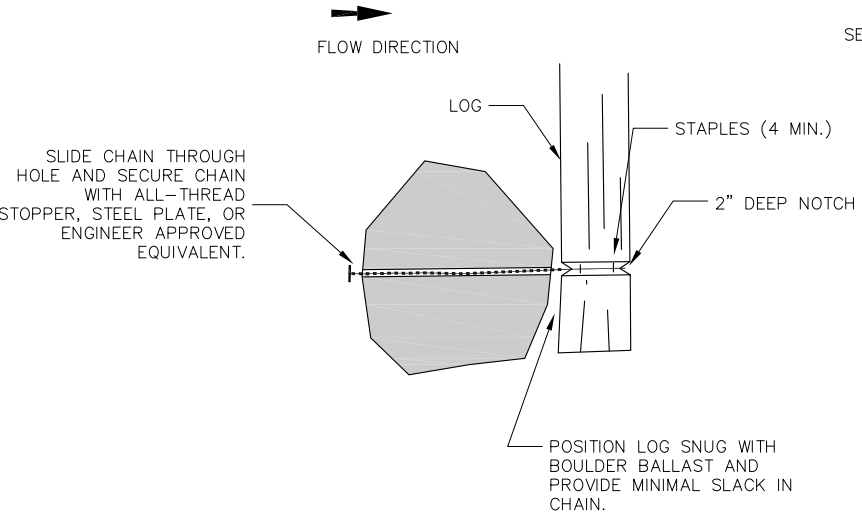
LOG TO MECHANICAL ANCHOR CONNECTION DETAILS 6
N.T.S. H4



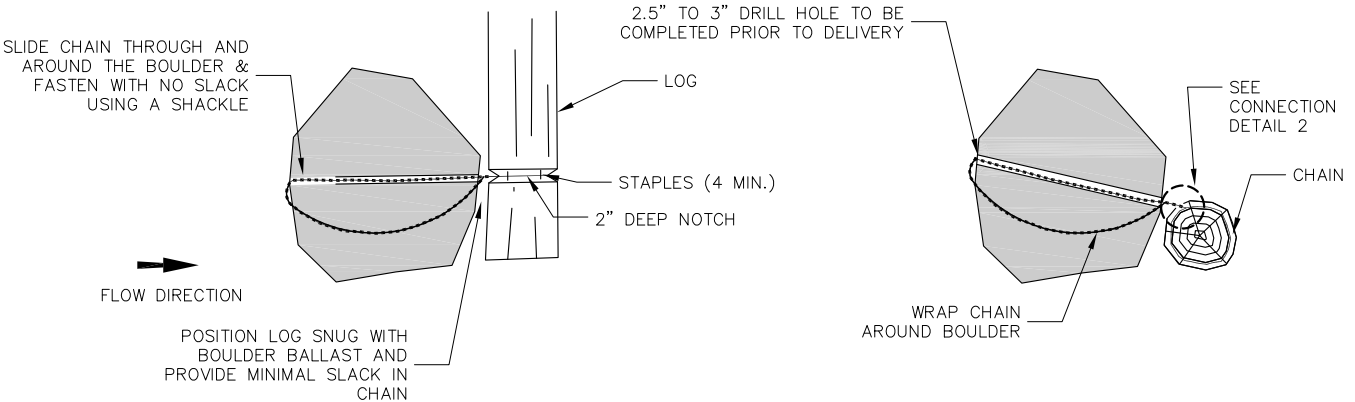
CONNECTION DETAIL 1
N.T.S.



CONNECTION DETAIL 2
N.T.S.



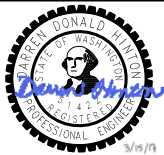
BOULDER TO LOG CONNECTION WITH STOPPER ALTERNATIVE 7
N.T.S. H4



BOULDER TO LOG CONNECTION WITH WRAP ALTERNATIVE 7
N.T.S. H4

BID SET

NO	DATE	BY	APPR	REVISIONS



nhc
northwest hydraulic consultants
12787 Gateway Drive South
Seattle, WA 98168
Phone: 206-241-6000
Fax: 206-439-2420

TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 600
Seattle, Washington 98101
Phone: 206-883-9300 Fax: 206-883-9301

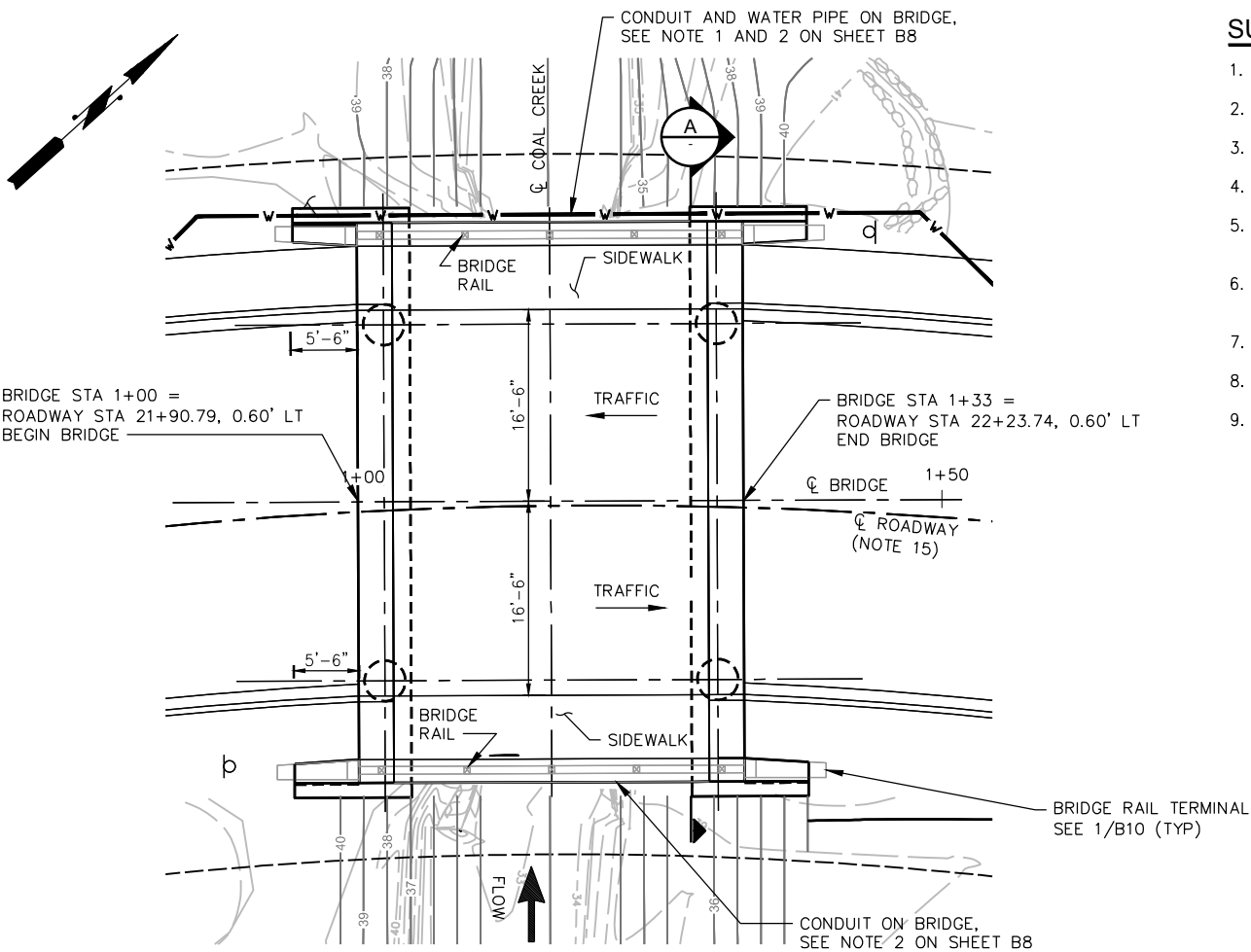
Approved By	
DESIGN MANAGER	DATE
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J. BROWN	5/6/2016
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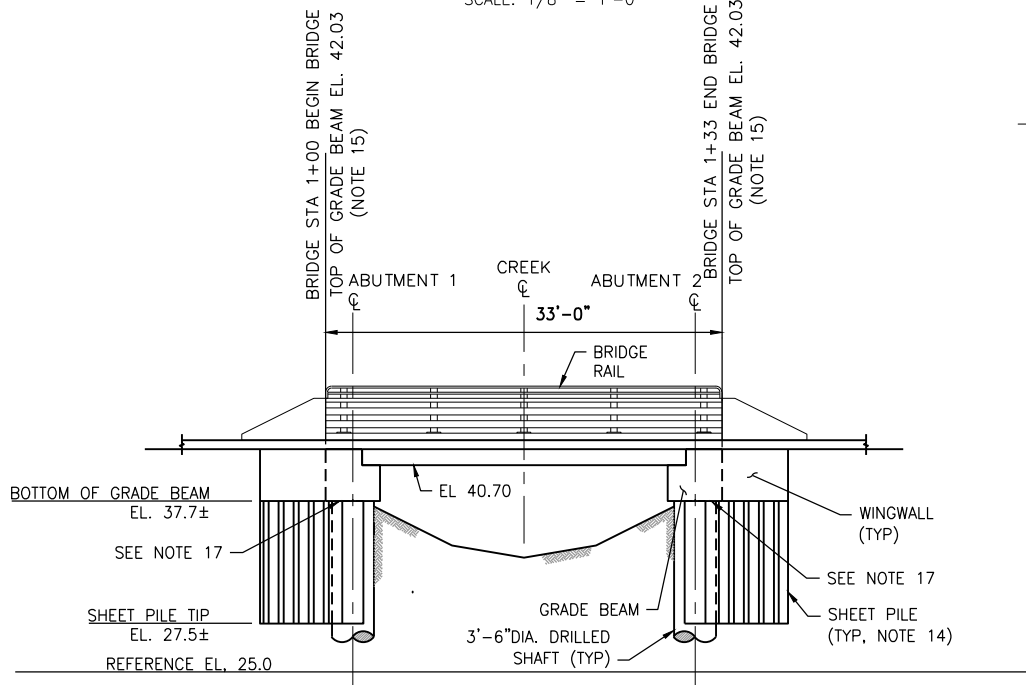
City of Bellevue
UTILITIES

UPPER SKAGIT KEY CULVERT REPLACEMENT
HABITAT DETAILS 2

Path: P:\134271 Lower Coal Creek Ph. 2 Early Action\CAD\SheetFiles\Group\15 BL UPPER SKAGIT KEY CREEK BRIDGE LAYOUT.dwg Plot Date: Mar 16, 2017-02:27:34pm CAD User: Adam Forcier.
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C:\3P-CONTIGUOUS-SKAGIT KEY UPPER C:\3P-UMI Border-602 C:\3P-BRIDGE DETAILS I



PLAN
SCALE: 1/8" = 1'-0"

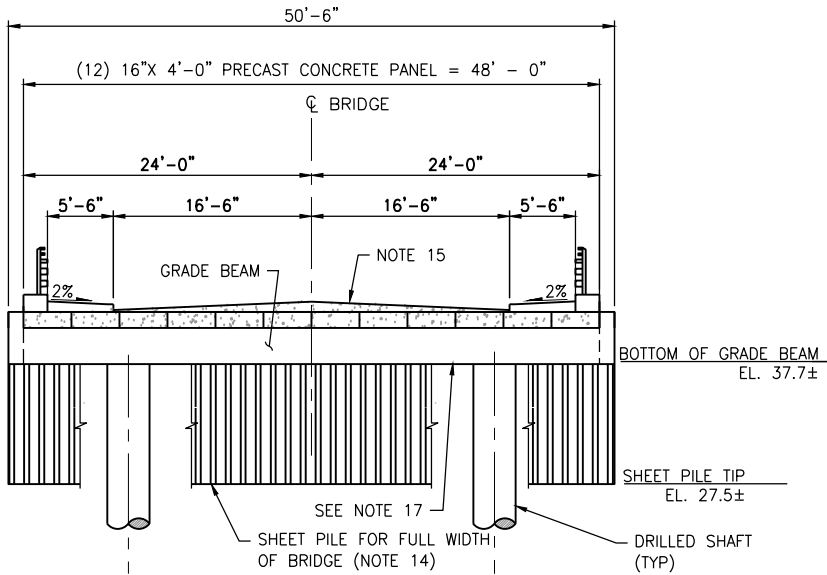


ELEVATION
SCALE: 1/8" = 1'-0"

SEE CIVIL SHEETS FOR EXISTING CULVERT AND EXISTING GROUND LINE.

SUGGESTED BRIDGE CONSTRUCTION SEQUENCE:

1. INSTALL DRILLED SHAFTS.
2. EXCAVATE FOR GRADE BEAM AND WING WALL AND INSTALL SHEET PILE.
3. PLACE 6" OF CSBC FULL WIDTH AND LENGTH OF GRADE BEAM AND WINGWALL.
4. COMPLETE GRADE BEAM FIRST CONCRETE PLACEMENT AND WING WALL.
5. AFTER STREAM CONSTRUCTION, INSTALL PRECAST CONCRETE PANELS AND PLACE NON-SHRINK GROUT.
6. BACKFILL BEHIND GRADE BEAM AND PLACE GRADE BEAM SECOND CONCRETE PLACEMENT.
7. PLACE BRIDGE RAIL PEDESTAL, SIDEWALK AND CURB CONCRETE.
8. INSTALL BRIDGE RAIL AND PLACE BRIDGE RAIL TERMINAL. INSTALL UTILITIES.
9. SEE SHEETS C3 AND C4 FOR ASPHALT PAVING DETAILS.



BRIDGE SECTION
(LOOKING AT ABUTMENT)
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP FOR STRUCTURAL ELEMENTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, DATED 2016 AND AMENDMENTS.
2. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SEVENTH EDITION - 2014 AND INTERIMS, MODIFIED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL.
3. SEISMIC DESIGN HAS BEEN DONE USING THE FOLLOWING SEISMIC PARAMETERS:

SEISMIC DESIGN PARAMETERS	
(Fa)(Ss)=SDs	(0.93)(0.98)=0.911
(Fv)(S1)=SD1	(2.70)(0.33)=0.89
Site Class	E
Site Adjusted PGA, As	0.39

4. BRIDGE RAIL AND ANCHORAGE PROVIDED HAS BEEN CRASH TESTED TO MEET NCHRP 350 TL-4 REQUIREMENTS. CONCRETE REINFORCEMENT IS DETAILED FOR TL-1 PER PROJECT REQUIREMENTS.
5. CONCRETE IN THE PRECAST CONCRETE PANEL SHALL BE CONCRETE CLASS 4,000D. SHAFTS SHALL BE CONCRETE CLASS 5,000P. ALL OTHER CAST-IN-PLACE CONCRETE SHALL BE CLASS 4,000.
6. GRADE BEAM CONCRETE SHALL BE 3,000 PSI PRIOR TO PLACING PRECAST CONCRETE PANELS.
7. UNLESS OTHERWISE SHOWN ON THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BAR SHALL BE AS FOLLOWS:

TOP OF ROADWAY SLAB	2 INCHES
BOTTOM OF ROADWAY SLAB	1-1/2 INCHES
CONCRETE CAST AGAINST EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER	
PRIMARY REINFORCEMENT	2 INCHES
SECONDARY REINFORCEMENT (TIES OR STIRRUPS)	1-1/2 INCHES
8. UNLESS OTHERWISE SHOWN ON THE PLANS, ALL EXTERIOR CORNERS AND EDGES SHALL HAVE 3/4" CHAMFER.
9. THE UTILITY CENTERLINES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THESE PLANS WITH RELEVANT UTILITY INFORMATION SHOWN ON SHEETS C2 AND C3.
10. A PIGMENT SEALER SHALL BE APPLIED TO THE EXTERIOR SURFACE OF THE GRADE BEAM, WING WALL, EXTERIOR PRECAST CONCRETE PANELS AND THE BRIDGE RAIL PEDESTAL CONCRETE. THE COLOR SHALL BE MT. ST. HELENS GRAY.
11. xxx INDICATES BAR MARK NUMBER.
12. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A706 GRADE 60.
13. E INDICATES EPOXY COATED BAR.
14. SHEET PILE SHALL BE SHORE GUARD VINYL SG-950 OR APPROVED EQUAL. COLOR SHALL BE GREY OR CLAY. PROVIDE SHEET PILE CONNECTION AT CORNERS. SHEETS ARE 10' LONG TO PREVENT SCOUR BENEATH CAP BEAM. SHEETS ARE NOT DESIGNED TO SUPPORT UNBALANCED LOAD. THE SHEETS SHALL BE PRESSED IN. INSTALLATION METHODS THAT MAY CAUSE VIBRATION SHALL NOT BE USED. SEE THE FOUNDATION PLAN ON SHEET B2 FOR LIMITS OF SHEET PILE LOCATED BELOW GRADE BEAM AND WING WALLS.
15. FOR ROADWAY PROFILE AND TYPICAL CROSS SECTION SEE SHEETS C3 AND C4.
16. BRIDGE IS SYMMETRICAL ABOUT BRIDGE CENTERLINE. SEE SHEET C2 FOR ROADWAY CURVE DATA.
17. EXCAVATE 6" BELOW GRADE BEAM AND WINGWALL BOTTOM ELEVATION. AFTER SHEET PILE INSTALLATION, PLACE 6" CSBC FULL WIDTH AND LENGTH OF GRADE BEAM AND WINGWALL.

PRECAST CONCRETE PANEL GIRDERS LOADING: HL-93

BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT BRIDGE LAYOUT AND GENERAL NOTES

B1

SHT 15 OF 28



NAVD 88



TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 550
Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

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PROJECT MANAGER _____ DATE _____

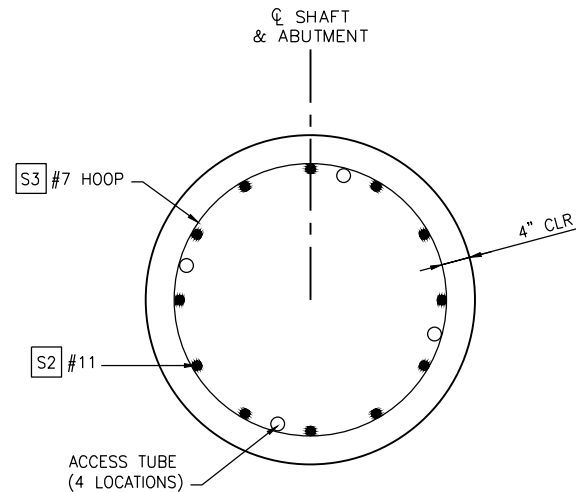
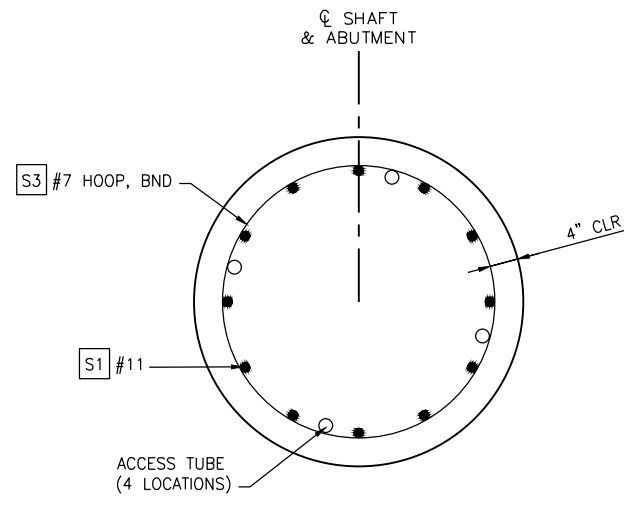
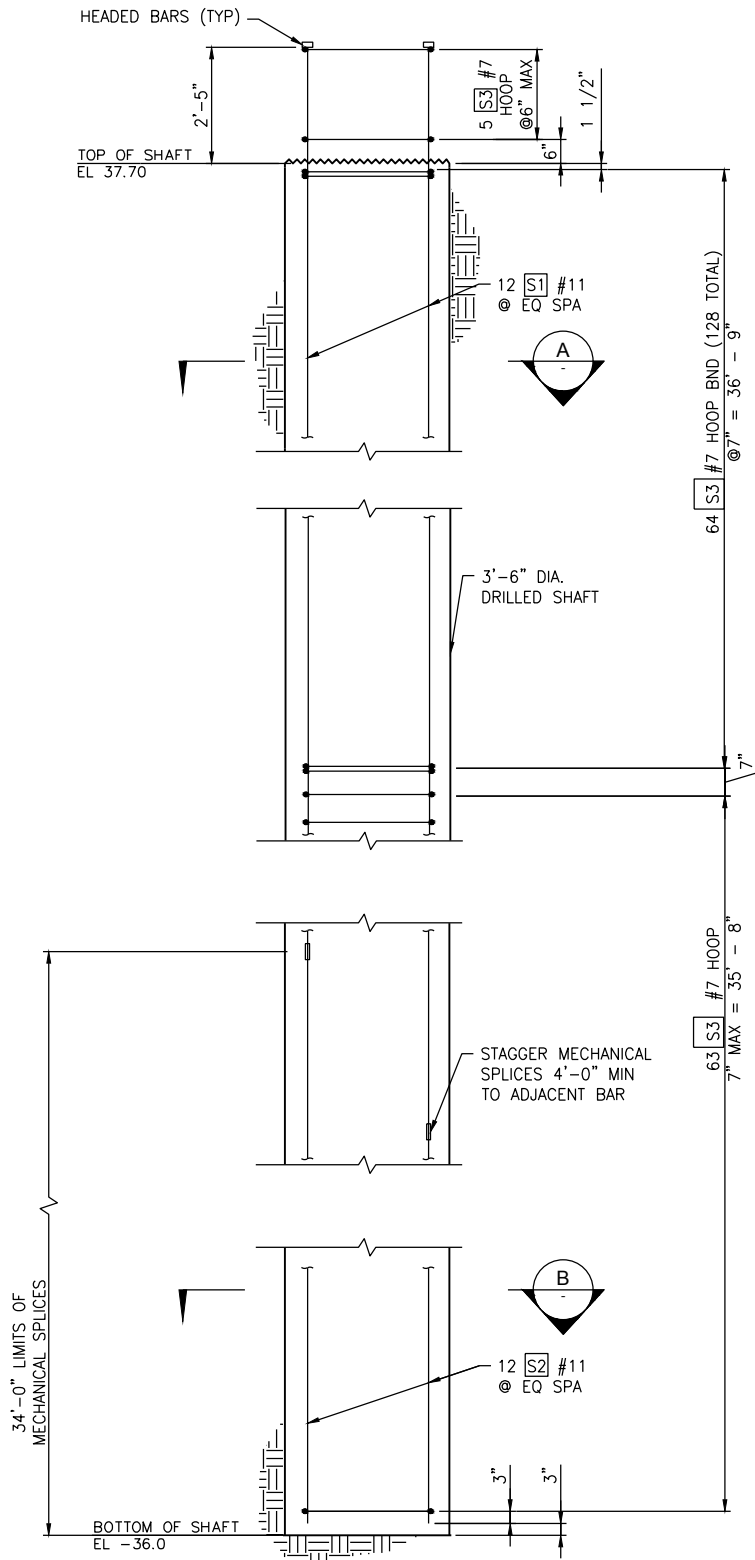
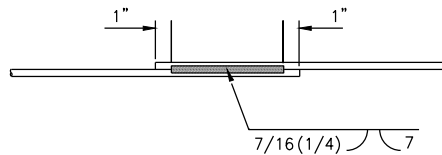
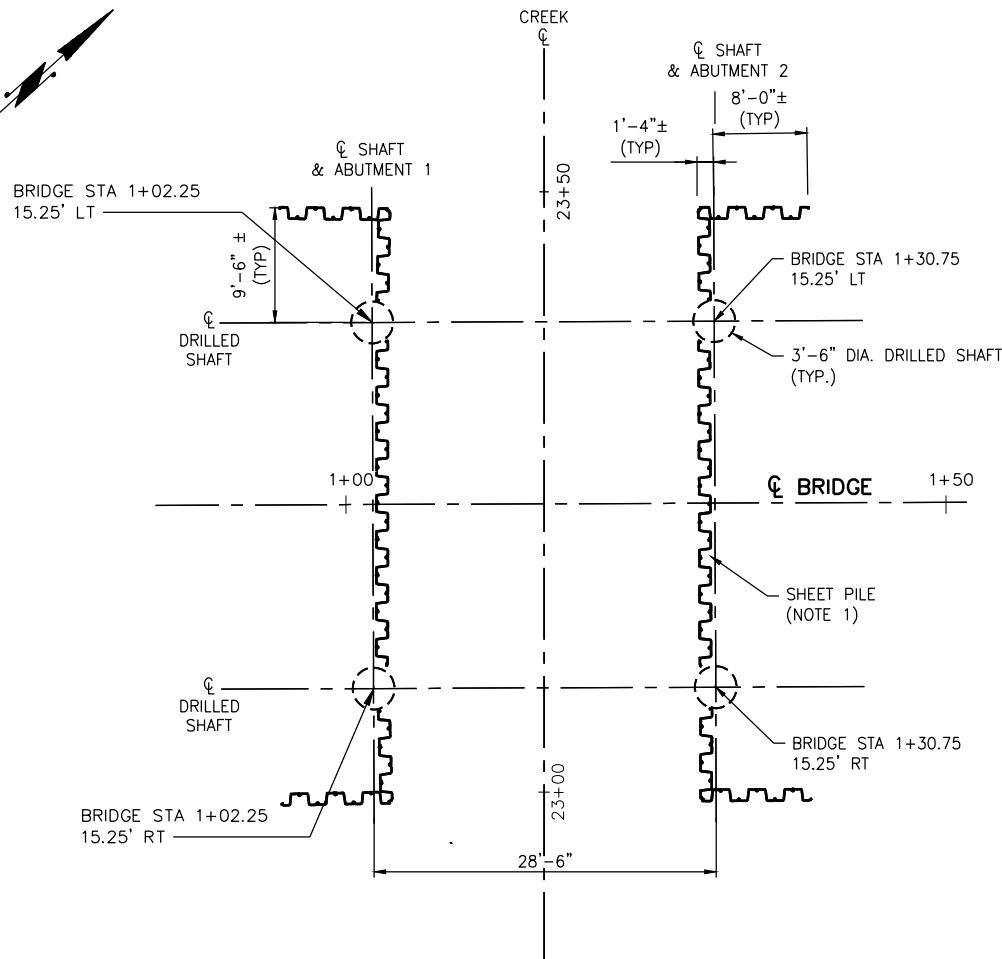
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DS CHECKED BY _____ DATE _____



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UPPER SKAGIT KEY CULVERT REPLACEMENT
BRIDGE LAYOUT AND GENERAL NOTES

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Plot filename: [C:\3P-SITE-UPPER SKAGIT\16 B2 UPPER SKAGIT KEY FOUNDATION PLAN & DETAILS.dwg] [C:\3P-BRIDGE DETAILS]



DRILLED SHAFT NOTES:

1. THE BOTTOM OF THE GRADE BEAM IS AT EL. 37.7. THE CONTRACTOR SHALL INSTALL THE SHEET PILE SO THAT THE TOP OF THE SHEET PILE DOES NOT EXTEND INTO THE FINISHED GRADE BEAM CONCRETE. A ONE INCH GAP IS ALLOWED BETWEEN THE BOTTOM OF THE GRADE BEAM AND TOP OF THE SHEET PILE.
2. ADDITIONAL SUPPORT OF THE SHAFT SIDEWALLS (SUCH AS CASING OR SLURRY) MAY BE NEEDED TO MITIGATE POTENTIAL CAVING OR SLOUGHING SOILS, ESPECIALLY IN THE UPPER 25 FEET OF THE SOIL PROFILE WHERE SOIL CONDITIONS ARE EXPECTED TO BE VERY LOOSE/SOFT. SEE THE SOIL BORING INFORMATION IN THE GEOTECHNICAL DATA REPORT. IF CONTRACTOR ELECTS TO USE A CASING, VIBRATORY METHODS SHALL NOT BE USED TO INSTALL OR REMOVE THE CASING.

NO	DATE	BY	APPR	REVISIONS



Approved By	
DESIGN MANAGER	DATE
PROJECT MANAGER	DATE

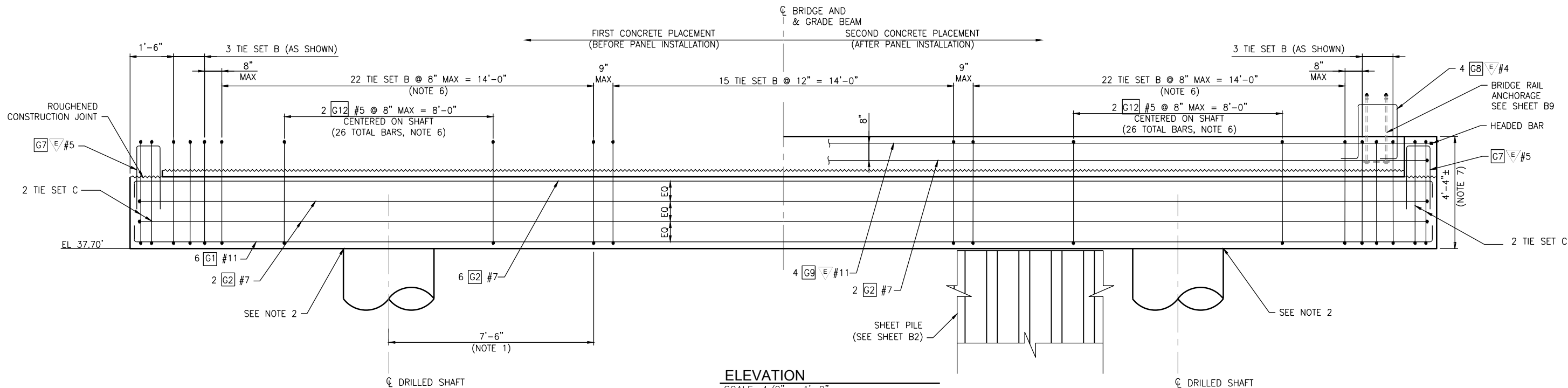
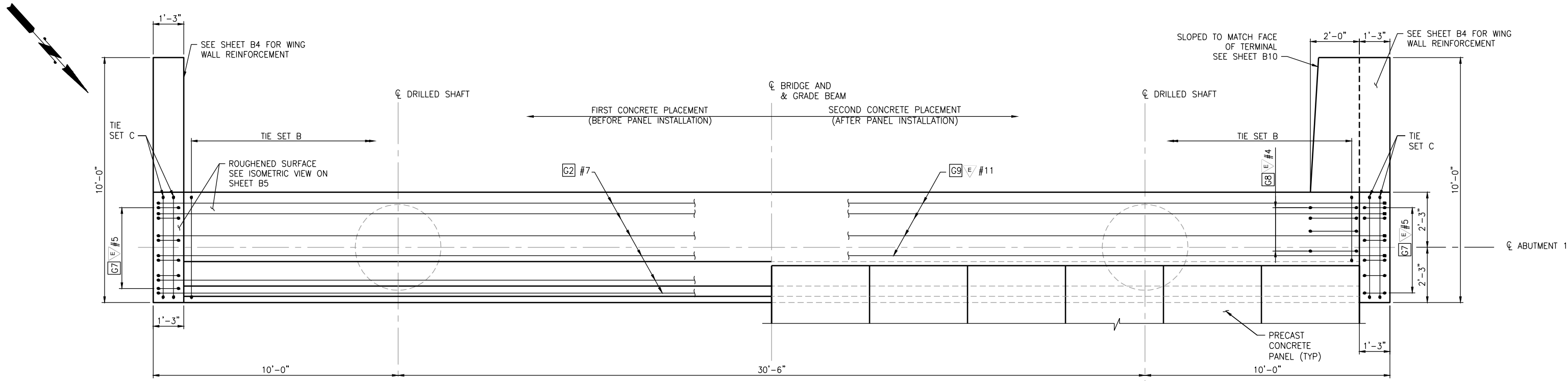
DS	DESIGNED BY	DATE
NS	DRAWN BY	DATE
AA	CHECKED BY	DATE



City of
Bellevue
UTILITIES

BID SET	
UPPER SKAGIT KEY CULVERT REPLACEMENT FOUNDATION PLAN AND DETAILS	
B2	SHT 16 OF 28

Path: P:\134271 Lower Coal Creek Ph. 2 Early Action\CAD\SheetFiles\Group\17 B3-ABUTMENT PLAN & ELEVATION.dwg Plot date: Mar 16, 2017-02:20:45pm CAD User: Adam Forcier.
Net filename: 134271-006 [C-39-BRIDGE DETAILS]



NOTES:

1. REINFORCEMENT IS SYMMETRICAL ABOUT CENTERLINE OF BRIDGE.
2. GRADE BEAM TO DRILLED SHAFT AND GRADE BEAM TO WING WALL CONNECTION DETAILS ARE NOT SHOWN. SEE SHEET B4.
3. EACH TIE SET B CONSIST OF 1 G3 #5, 1 G4 #5, 2 G5 #5, & 1 G6 #5.
4. EACH TIE SET C CONSIST OF 1 G4 #5, 3 G5 #5, 1 G10 #5, & 1 G11 #5.
4. SEE SHEET B5 FOR SECOND CONCRETE PLACEMENT.
5. BRIDGE RAIL PEDESTAL AND SIDEWALK NOT SHOWN. SEE SHEET B8.
6. ADJUST REINFORCEMENT SPACING TO CLEAR SHAFT REINFORCING.
7. HEIGHT OF GRADE BEAM IS DEPENDENT ON DEFLECTION OF NEOPRENE RUBBER STRIP DUE TO WEIGHT OF PCP

NO	DATE	BY	APPR	REVISIONS



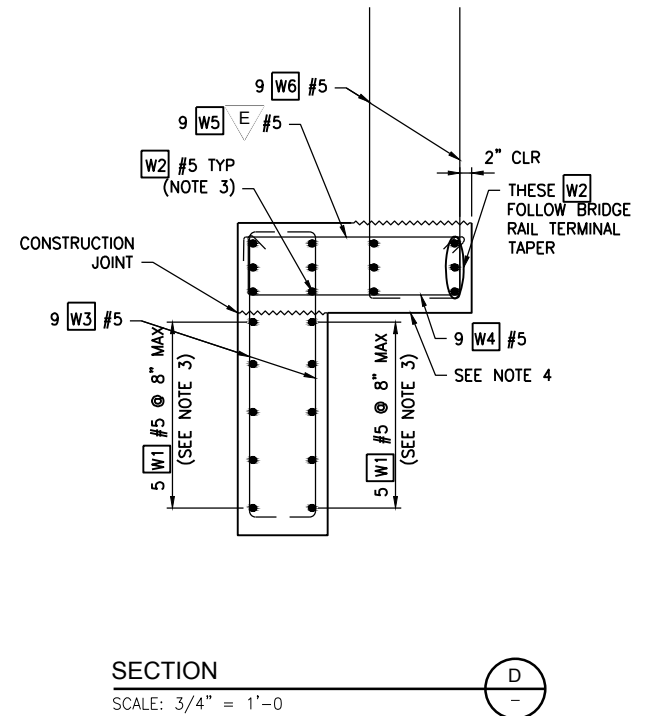
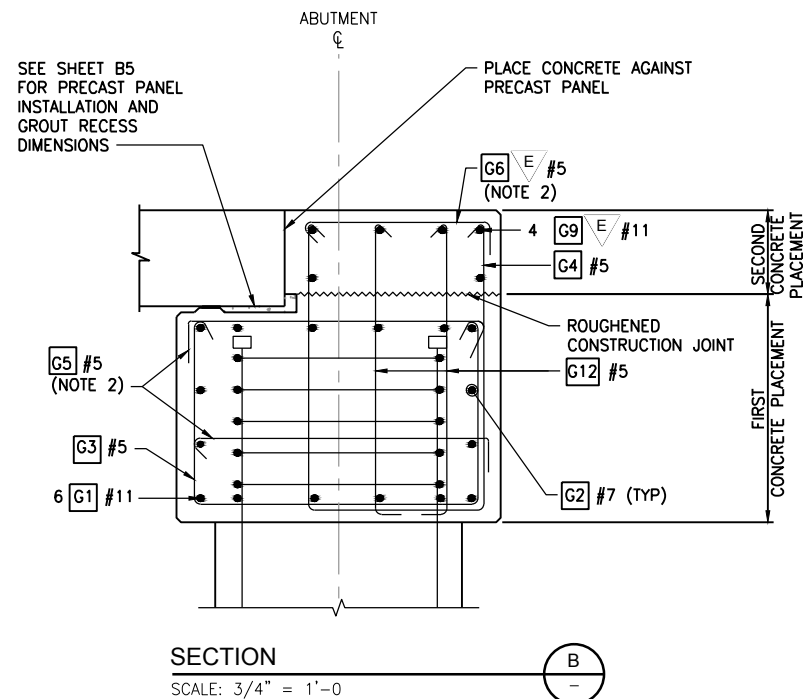
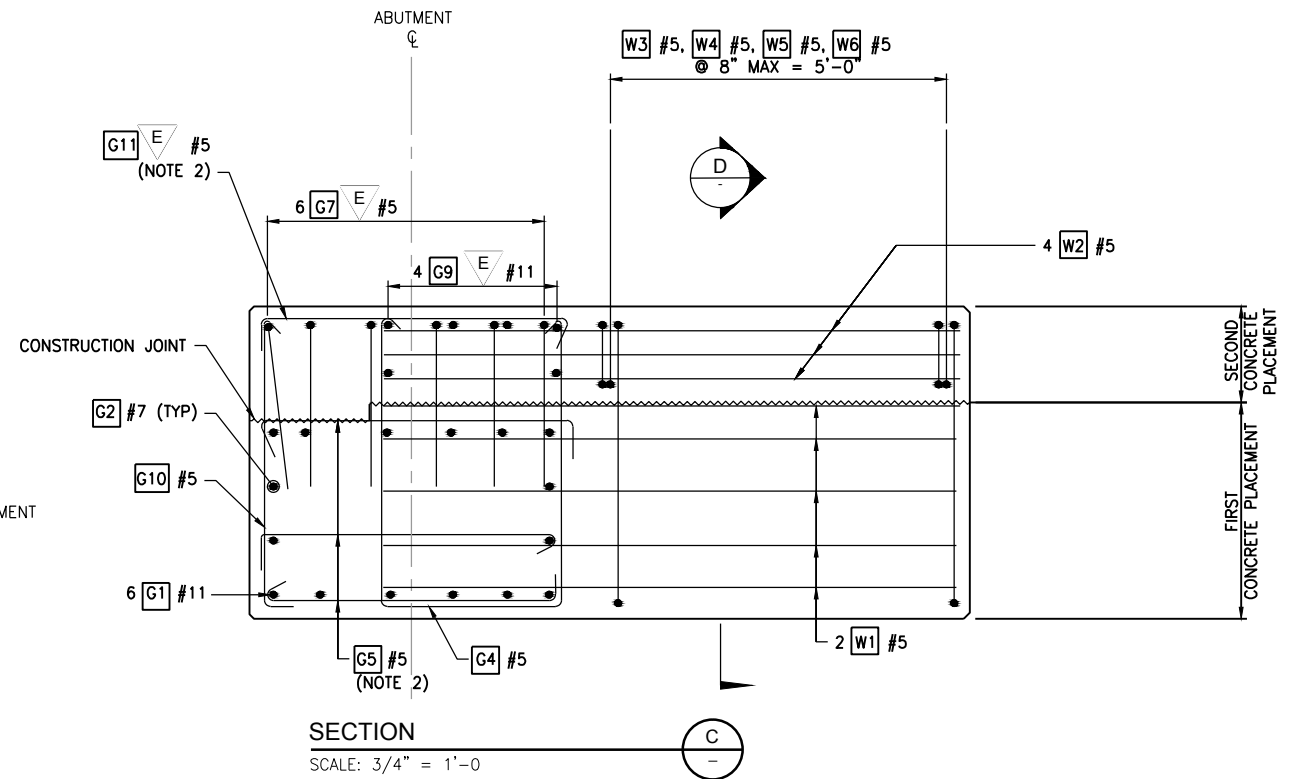
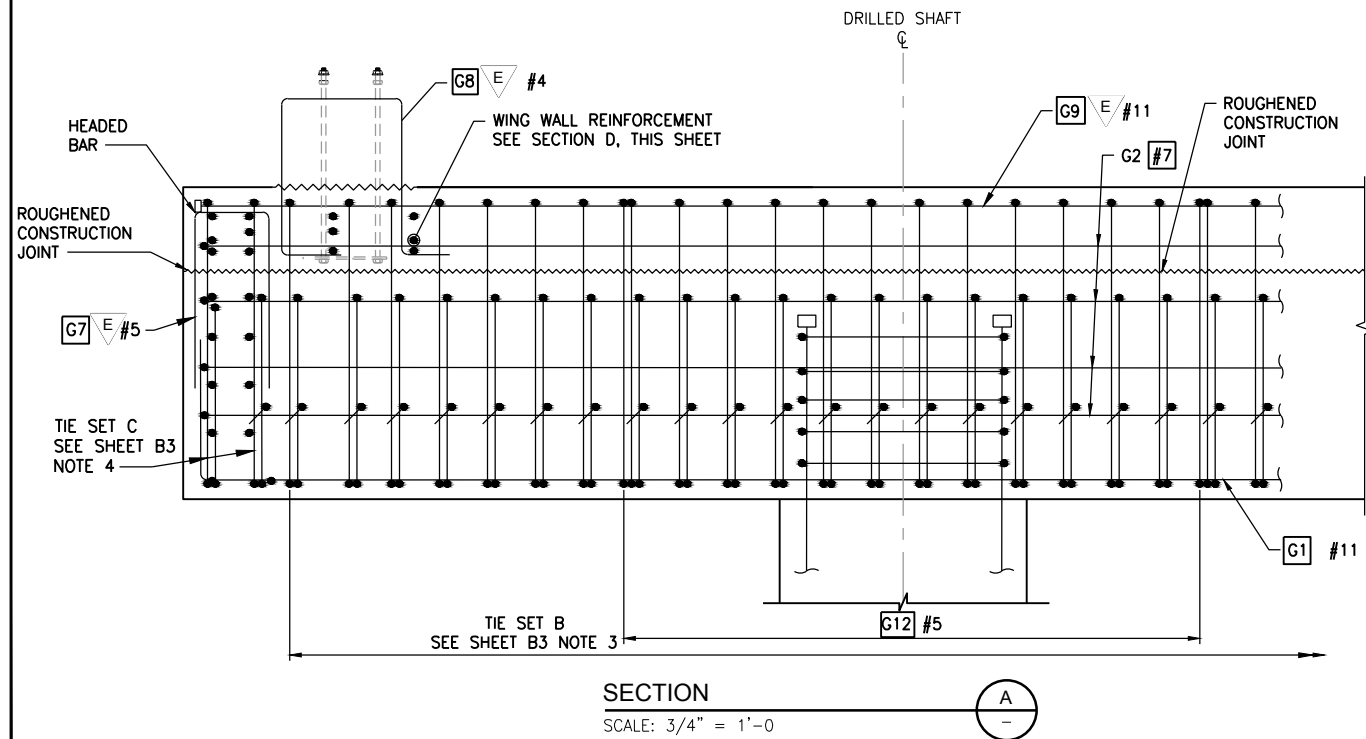
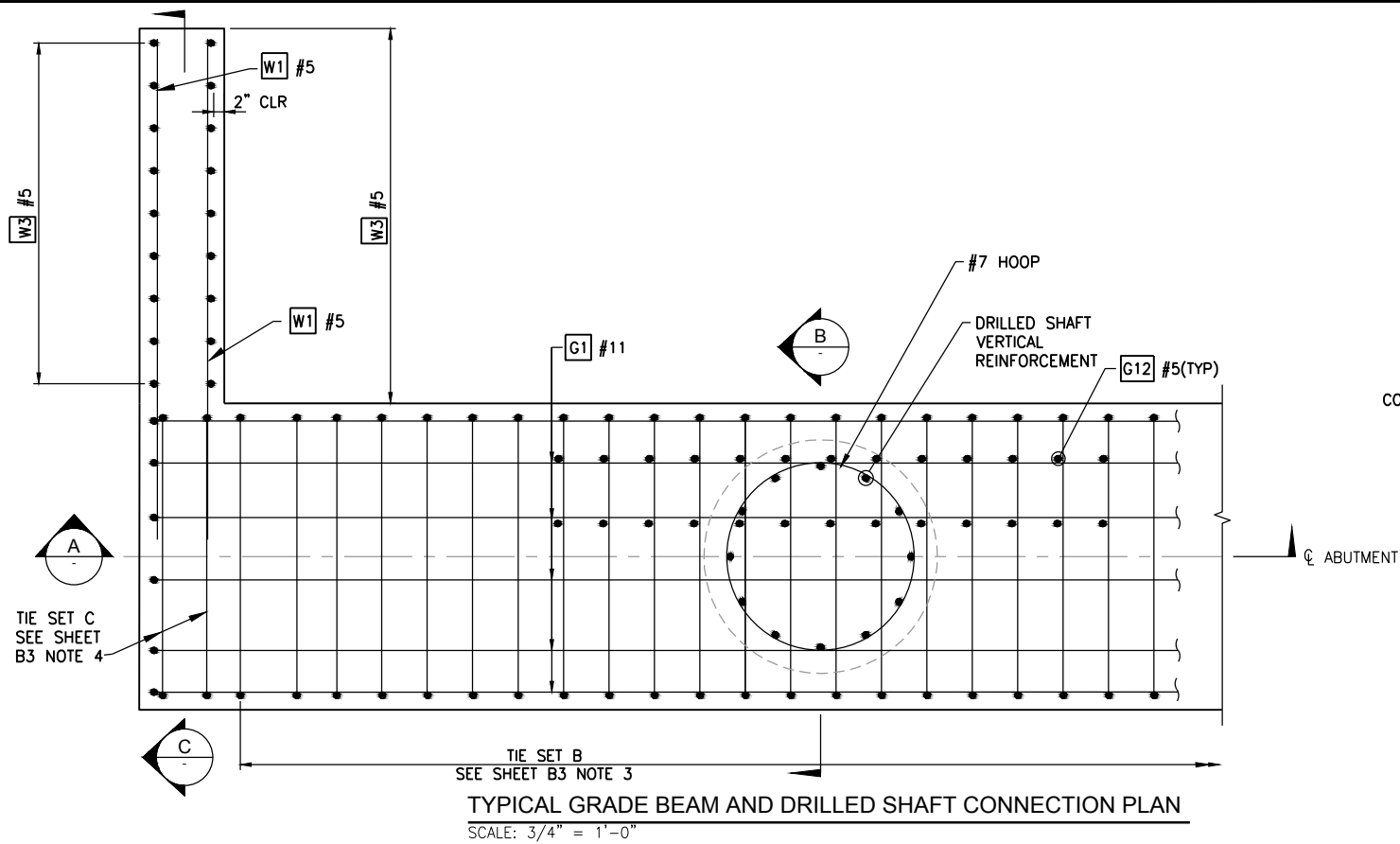
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UTILITIES

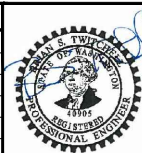
BID SET	
UPPER SKAGIT KEY CULVERT REPLACEMENT ABUTMENT PLAN AND ELEVATION	
B3	SHT 17 OF 28

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Net filename: B4-ABUTMENT AND WINGWALL DETAILS



- NOTES:**
- FIRST AND SECOND CONCRETE PLACEMENT SHOWN. SEE B8 FOR SIDEWALK AND BRIDGE RAIL PEDESTAL REINFORCEMENT.
 - ALTERNATE HOOKS OF HORIZONTAL TIES ALONG LENGTH OF GRADE BEAM.
 - ADJUST TO MISS GRADE BEAM REINFORCEMENT.
 - PLACE CONCRETE ON COMPACTED BACKFILL.

NO	DATE	BY	APPR	REVISIONS



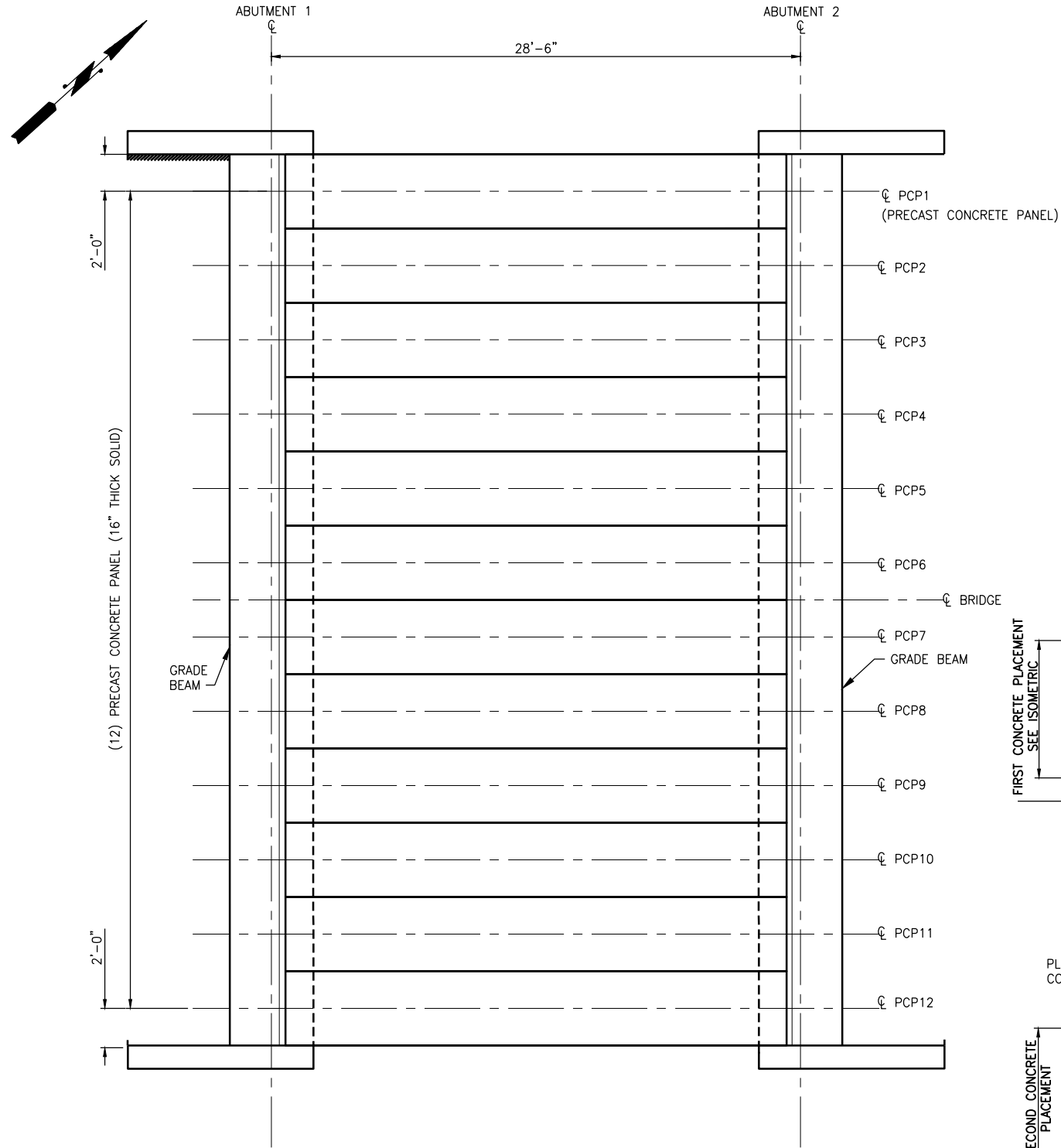
Approved By	
DESIGN MANAGER	DATE
PROJECT MANAGER	DATE



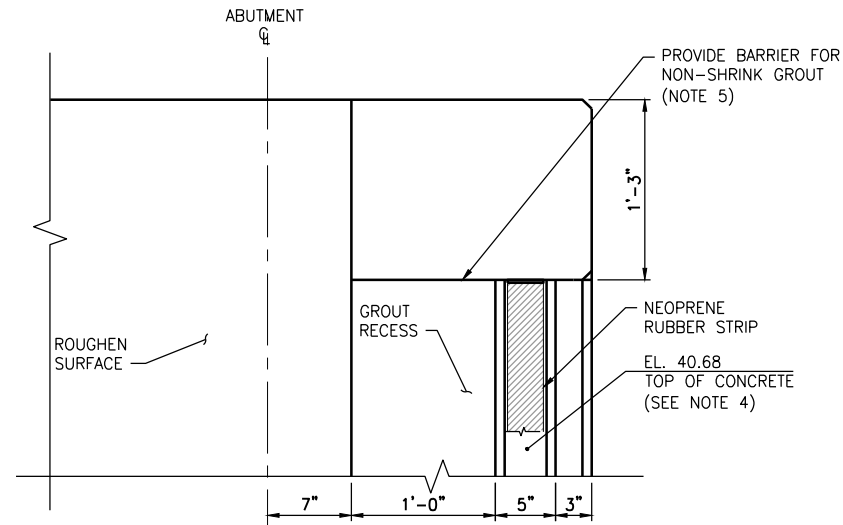
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UTILITIES

BID SET	
UPPER SKAGIT KEY CULVERT REPLACEMENT ABUTMENT AND WINGWALL DETAILS	
B4	SHT 18 OF 28

Path: P:\134271 Lower Coal Creek Ph. 2 Early Action\CAD\SheetFiles\Group1\19 BS- PRECAST CONCRETE PANEL & FRAMING PLAN.dwg Plot date: Mar 16, 2017-02:21:3pm CAD User: AdamForcier.
Ref filename: [C:\SP-SITE-UPPER SKAGIT] [C:\SP-BRIDGE DETAILS]

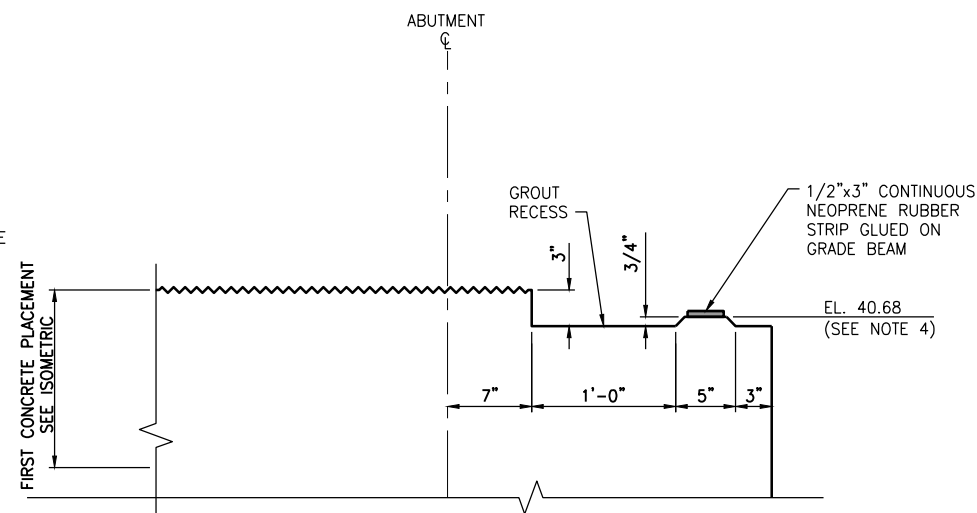


FRAMING PLAN
SCALE: 1/4" = 1'-0"



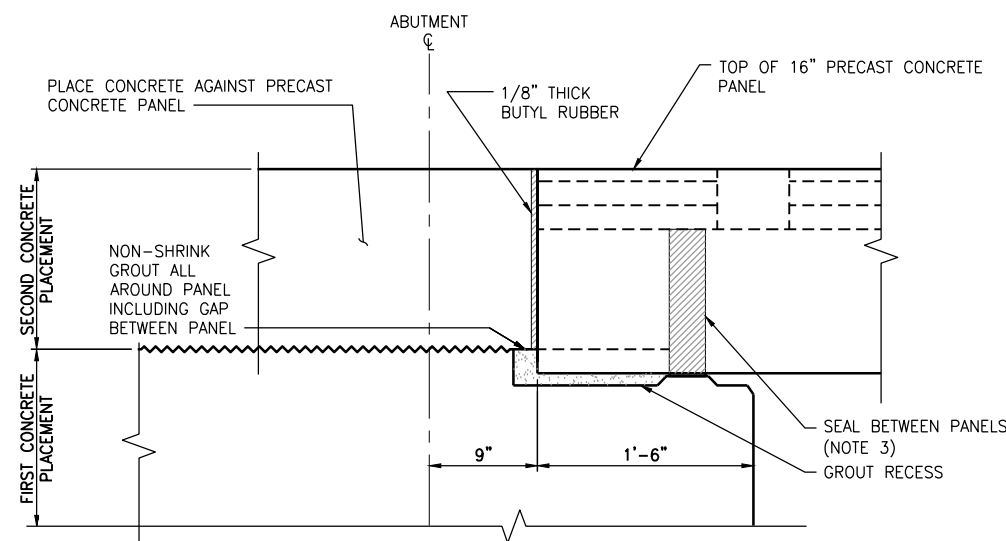
PLAN AT GRADE BEAM END FIRST CONCRETE PLACEMENT

SCALE: 1 1/2" = 1'-0"



PREPARATION OF PCP INSTALLATION GRADE BEAM SECTION

SCALE: 1 1/2" = 1'-0"

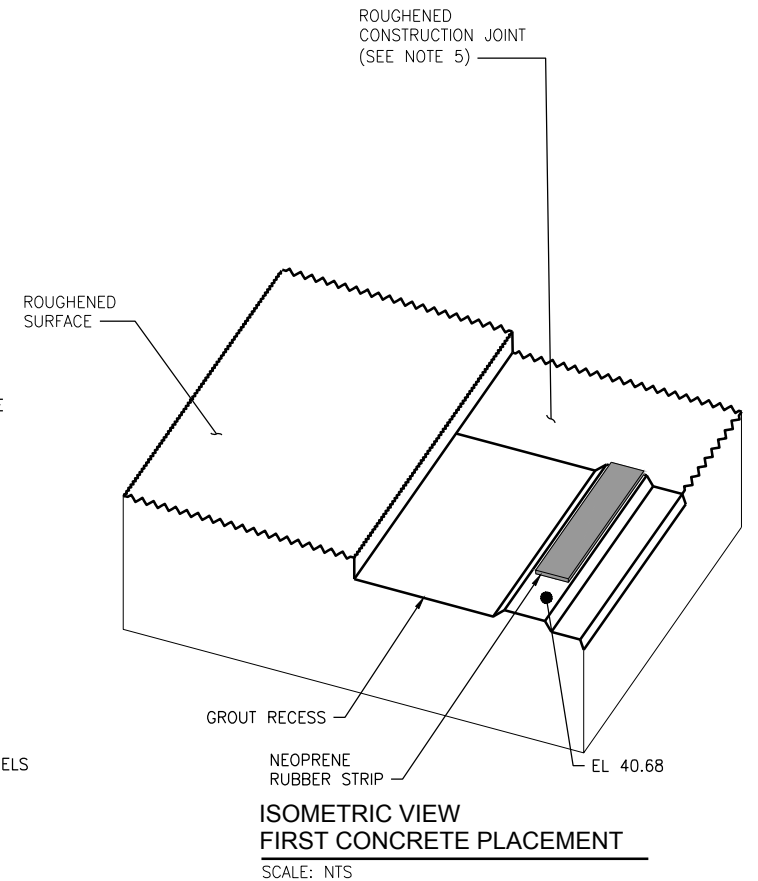


SECOND CONCRETE PLACEMENT AFTER PCP INSTALLATION GRADE BEAM SECTION

SCALE: 1 1/2" = 1'-0"

NOTES:

1. GRADE BEAM REINFORCING BARS ARE NOT SHOWN FOR CLARITY.
2. GRADE BEAM PLAN AND SECTION SHOWN ARE TYPICAL GRADE BEAM DETAILS FOR THE BLOCKOUT AT THE PRECAST CONCRETE PANEL SUPPORT AND SEAL DETAIL FOR THE PREPARATION AND INSTALLATION OF THE PRECAST CONCRETE PANEL AT THE FIRST CONCRETE PLACEMENT OF THE GRADE BEAM.
3. THE CONTRACTOR SHALL PROVIDE A SEAL BETWEEN PANELS BEFORE GROUTING UNDER THE PANELS AND PLACING THE SECOND CONCRETE PLACEMENT OF THE GRADE BEAM.
4. TOP OF CONCRETE ELEVATION 40.68 AT THE CONTINUOUS RUBBER STRIP SHALL BE KEPT SMOOTH AND LEVELED FOR THE ENTIRE 48'-0" LENGTH OF SLAB PANEL SUPPORT. THE MAXIMUM GAP UNDER AN UNLEVELED 10'-0" STRAIGHT EDGE SHALL BE LESS THAN 1/8". PATCH AND GRIND THE TOP OF CONCRETE AS REQUIRED TO PROVIDE THE SMOOTH LEVELED SURFACE.
5. THE CONTRACTOR SHALL PROVIDE A BARRIER FOR PLACING NON-SHRINK GROUT IN THE GROUT RECESS AND SHALL PROVIDE 1/8 INCH THICK BUTYL RUBBER BONDED TO PRECAST CONCRETE PANEL OVER THE FULL CONTACT AREA OF THE GRADE BEAM AND PRECAST CONCRETE PANEL PRIOR TO PLACING THE REMAINING GRADE BEAM CONCRETE.



ISOMETRIC VIEW
FIRST CONCRETE PLACEMENT

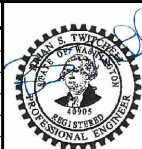
SCALE: NTS

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UPPER SKAGIT KEY CULVERT REPLACEMENT
FRAMING PLAN AND PC PANEL INSTALLATION

B5

SHT 19 OF 28



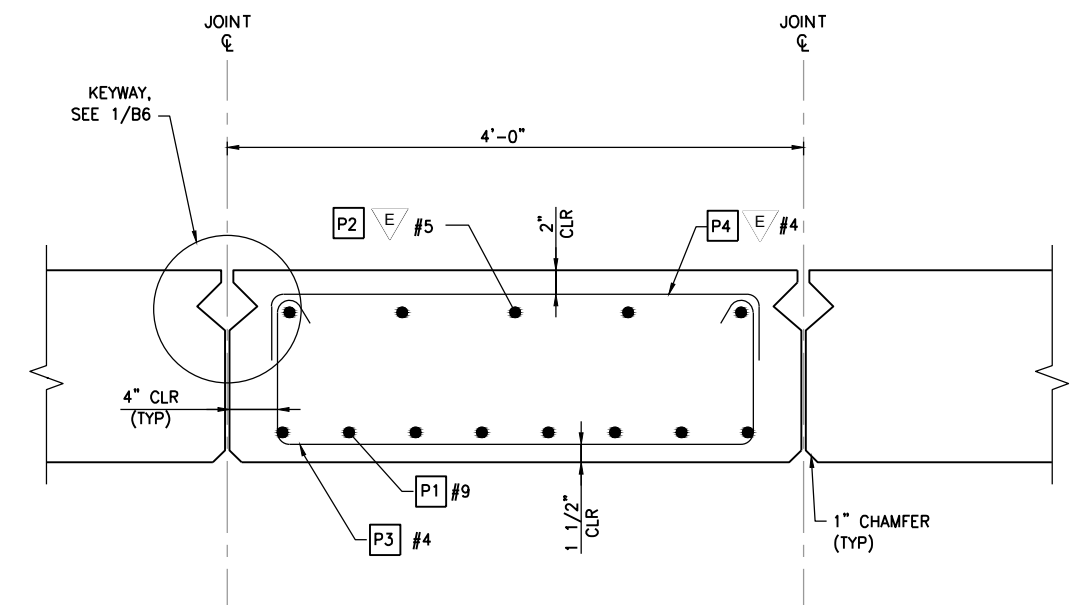
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PROJECT MANAGER _____ DATE _____

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AA
CHECKED BY _____ DATE _____

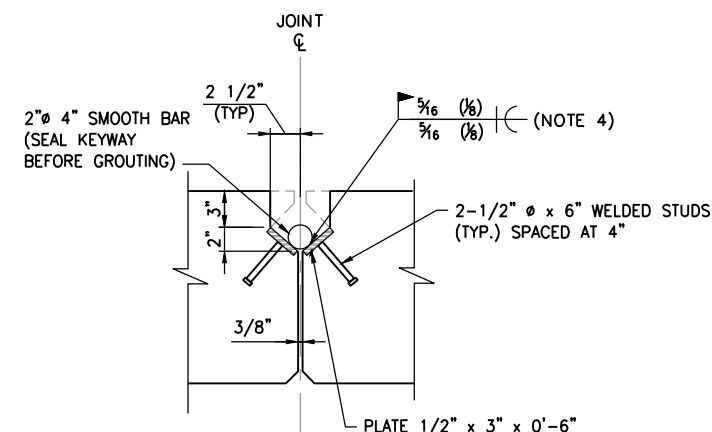


City of
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UTILITIES



TYPICAL SECTION

SCALE: 1-1/2" = 1'-0"

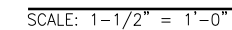


WELD TIE CONNECTION DETAIL,

NO SCALE

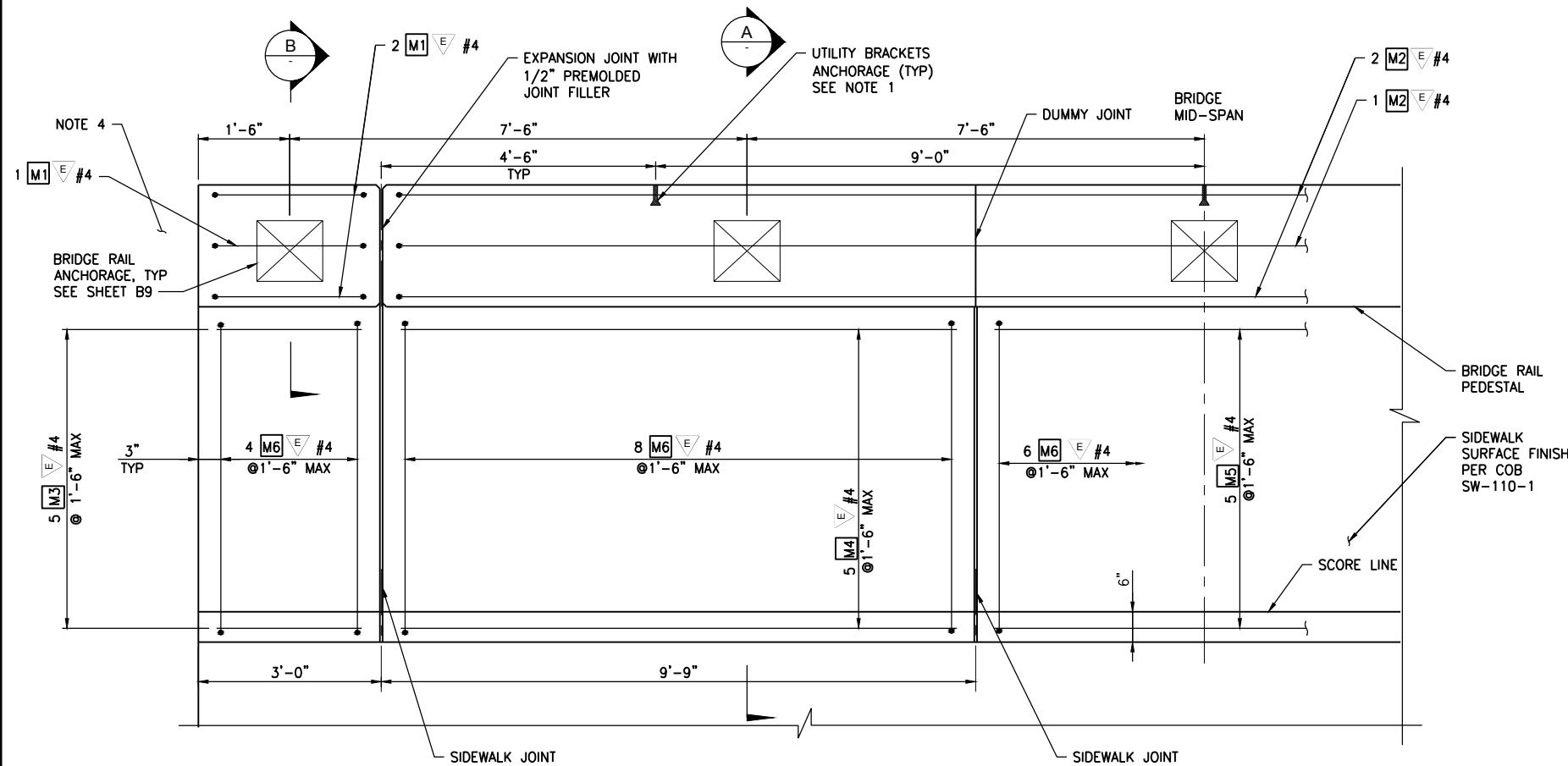
1. KEYWAY AND WELD TIE ARE NOT PROVIDED AT THE EXTERIOR SIDE OF THE EXTERIOR PANELS PCP1 & PCP12. SEE SHEET B7.
2. INSTALL LIFTING EMBEDMENTS IN ACCORDANCE WITH STANDARD SPECIFICATION 6-02.3(25)L. AFTER ERECTION, CUT OFF LIFTING EMBEDMENTS 1 INCH BELOW TOP OF PANEL AND FILL WITH APPROVED GROUP.
3. GROUT PRECAST CONCRETE PANEL CONNECTION AND KEYWAY PER WSDOT STANDARD SPECIFICATION 6-02.3(25)0. GROUT SHALL BE TYPE 2.
4. WELD TIES SHALL BE PAINTED WITH A FIELD PRIMER COAT OF AN ORGANIC ZINC PAINT AFTER FIELD WELDING PER WSDOT STANDARD SPECIFICATION 6-07.3(9)

BID SET	
UPPER SKAGIT KEY CULVERT REPLACEMENT PRECAST CONCRETE PANEL DETAILS 1	
B6	SHT 20 OF 28



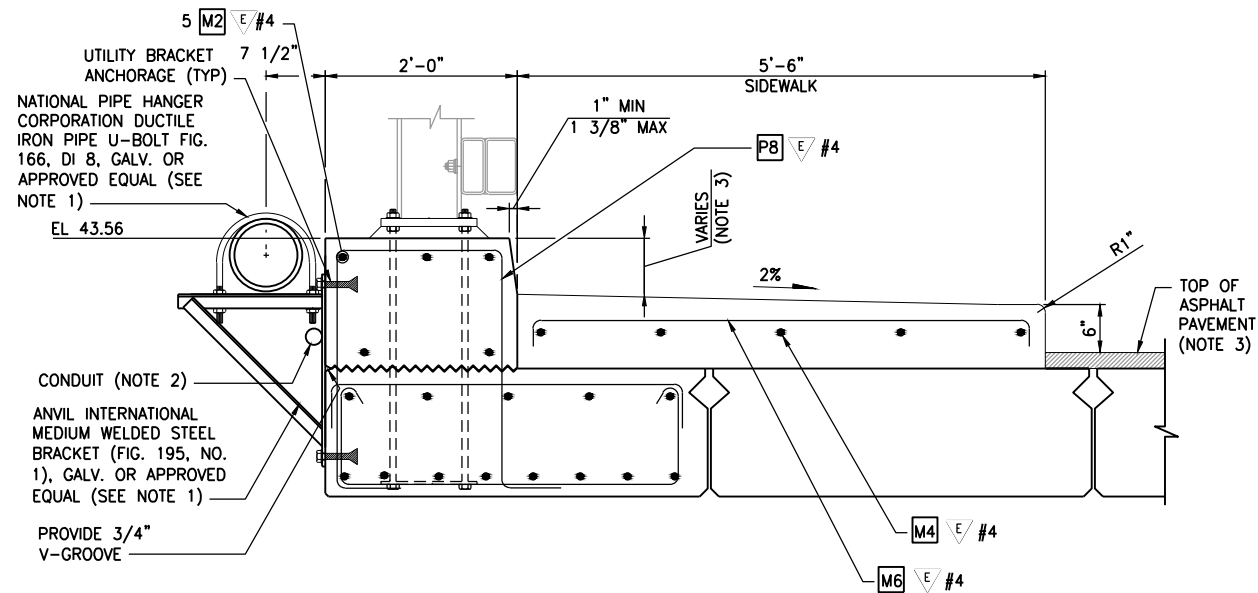
SHT 21 OF 28

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Ref Filename: I:\bids-608 [C-3]-BRIDGE DETAILS



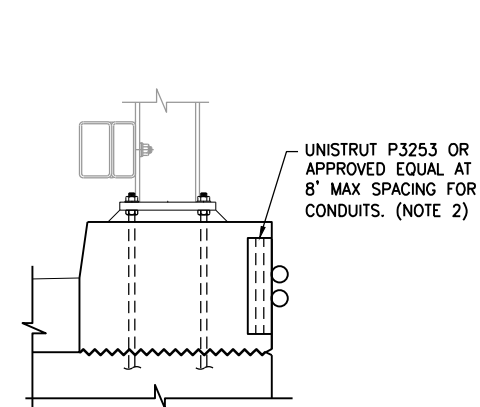
BRIDGE RAIL PEDESTAL AND SIDEWALK PLAN

SCALE: 3/4" = 1'-0"
SIDEWALK AND BRIDGE RAILING PEDESTAL REINFORCEMENT IS SYMMETRICAL ABOUT THE ROAD CENTERLINE AND BRIDGE MID-SPAN
UTILITIES P8 #4 & G8 #4 NOT SHOWN



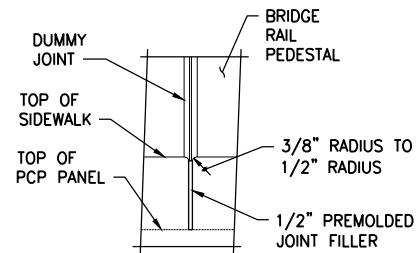
SECTION

SCALE: 1" = 1'-0"



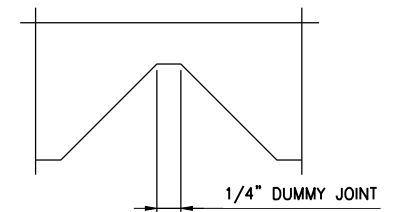
SECTION AT CONDUIT ANCHORAGE

SCALE: 1" = 1'-0"
UNISTRUT ON UPSTREAM AND DOWNSTREAM SIDE OF BRIDGE ADJUST UNISTRUT SPACING TO MISS P8 #4 AND UTILITY BRACKET ANCHORAGE



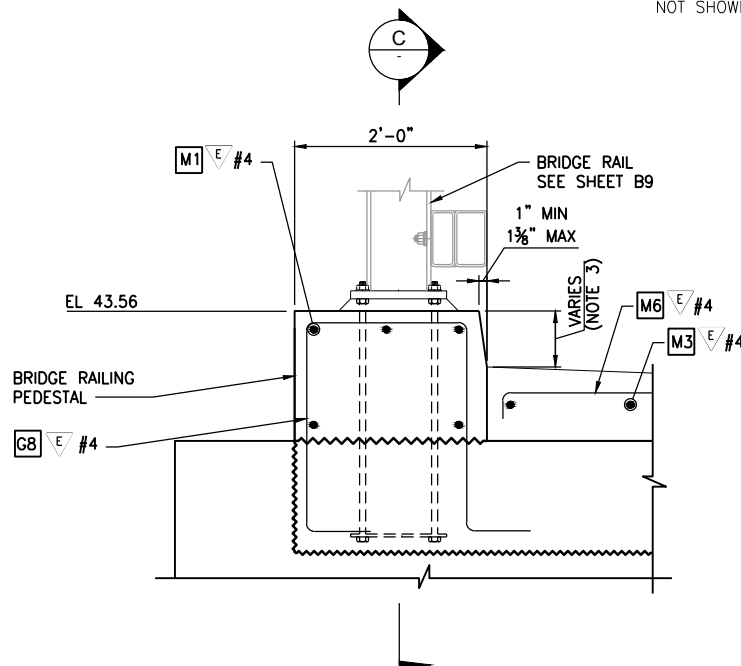
SIDEWALK JOINT DETAIL

SCALE: NTS
SIDEWALK REINFORCING STEEL NOT SHOWN FOR CLARITY



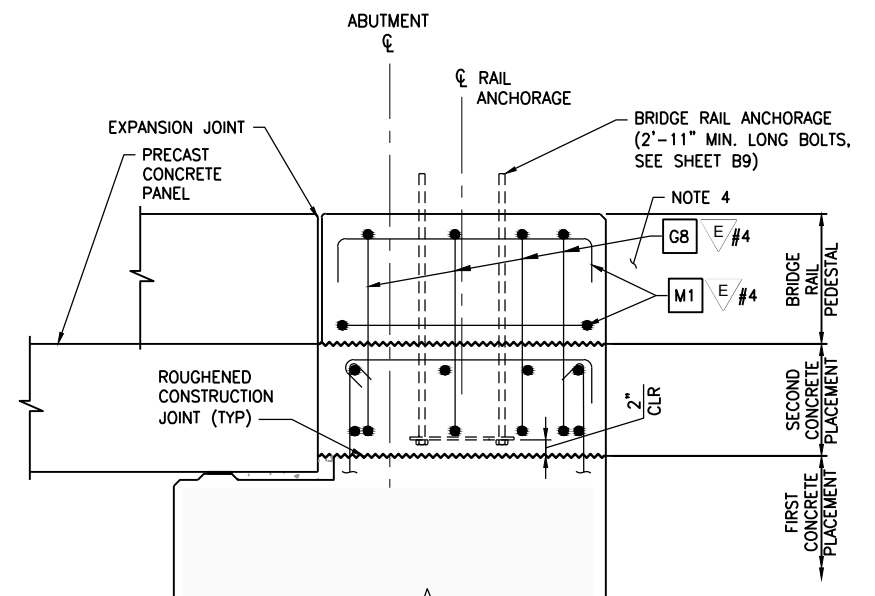
DUMMY JOINT DETAIL

SCALE: NTS



SECTION AT GRADE BEAM

SCALE: 1" = 1'-0"
REINFORCEMENT PLACED IN FIRST CONCRETE PLACEMENT AND UTILITIES NOT SHOWN



BRIDGE RAILING SECTION

SCALE: 1" = 1'-0"

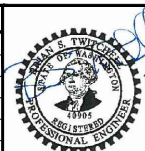


BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT
SIDEWALK PLAN AND SECTION DETAILS

B8

SHT 22 OF 28



Approved By

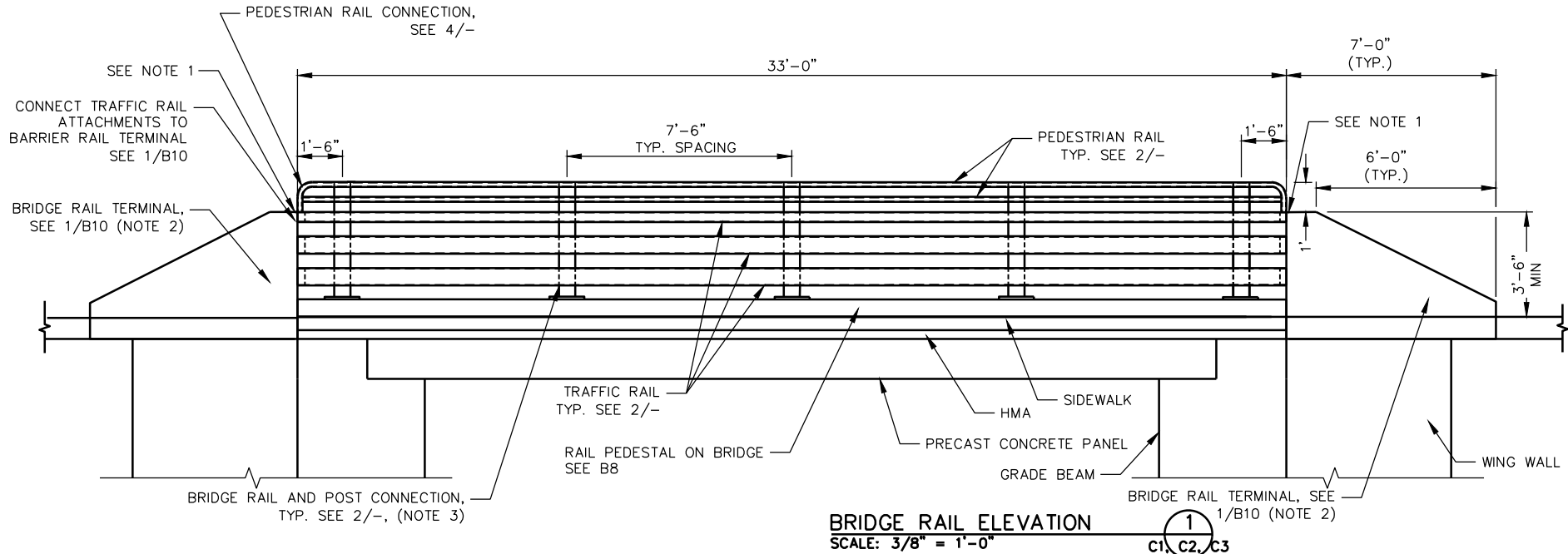
DESIGN MANAGER DATE
PROJECT MANAGER DATE

DS DESIGNED BY DATE
NS DRAWN BY DATE
AA CHECKED BY DATE



City of
Bellevue
UTILITIES

BID SET
UPPER SKAGIT KEY CULVERT REPLACEMENT
SIDEWALK PLAN AND SECTION DETAILS
B8
SHT 22 OF 28

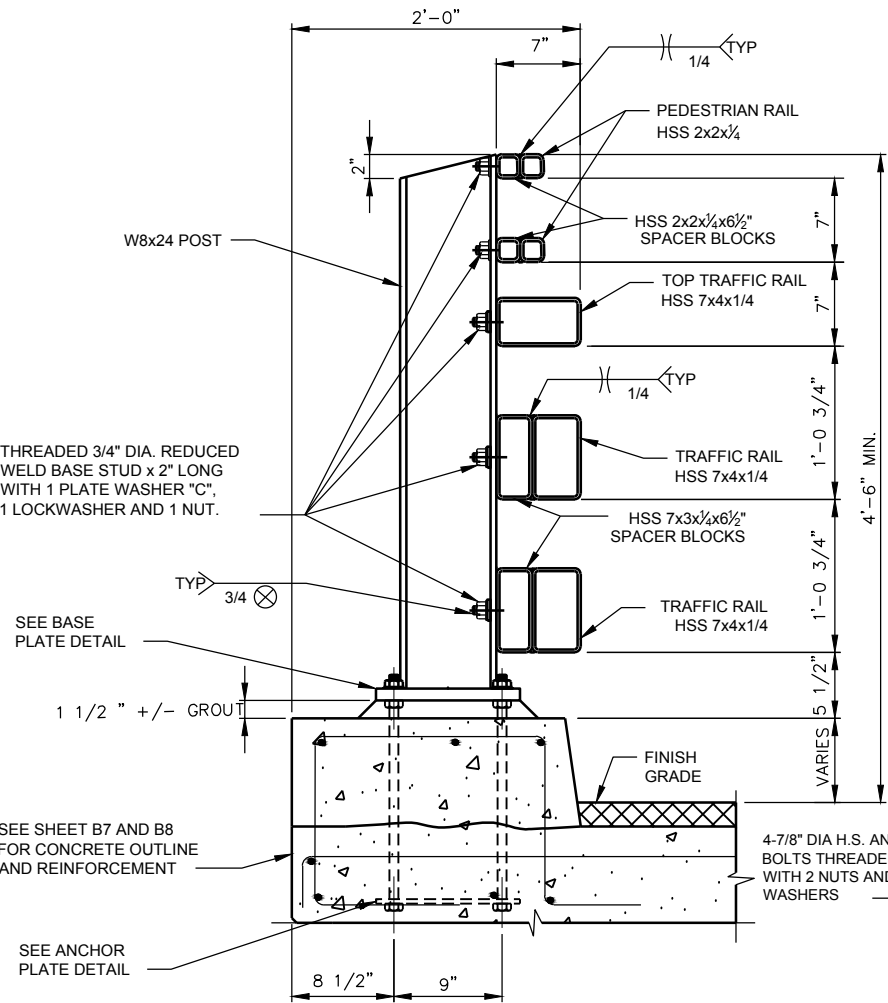


BRIDGE RAIL ELEVATION
SCALE: 3/8" = 1'-0"

1
C1, C2, C3

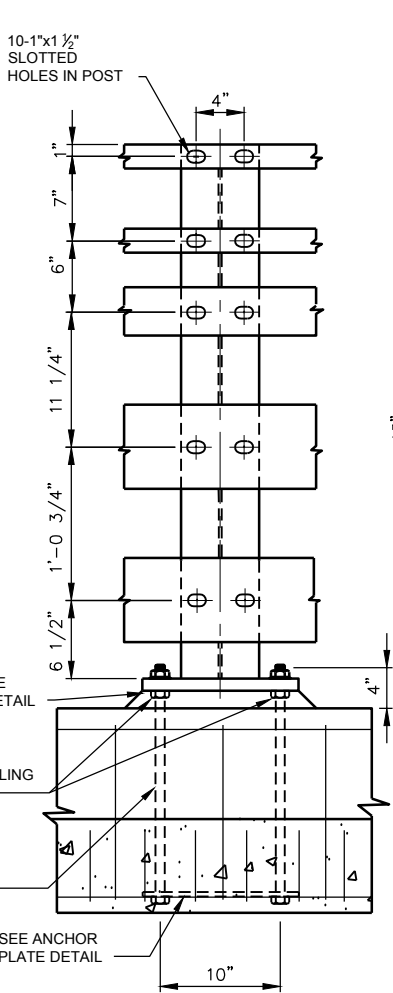
GENERAL NOTES

1. ALIGN TOP OF CAST IN PLACE CONCRETE BRIDGE RAIL TERMINAL WITH TOP OF UPPER MOST TRAFFIC RAIL.
2. CONSTRUCT CONCRETE BRIDGE RAIL TERMINAL WITH VERTICAL FACE TO ROADSIDE OF BRIDGE.
3. ALL RAILING POSTS SHALL BE INSTALLED VERTICALLY. WHERE POSTS ARE ON AN INCLINED SURFACE, THE ANGLE OF THE POST SHALL BE ADJUSTED SO THAT THE POST SHALL BE VERTICAL. INSTALL POSTS NORMAL TO GRADE IN LONGITUDINAL DIRECTION.
4. PROVIDE STRUCTURAL TUBING ACCORDING TO AASHTO A500 GRADE B.
5. PROVIDE STEEL POSTS AND PLATES CONFORMING TO AASHTO M270 GRADE 50 AND AASHTO M183 (ASTM 436) GRADE 36 RESPECTIVELY.
6. PROVIDE HIGH STRENGTH ANCHOR BOLTS (GRADE 105) ACCORDING TO AASHTO M314 GRADE 105; ASTM F 1554, GRADE 105; OR ASTM A449 TYPE 1.
7. FINISH ALL METAL WITH ONE COAT OF SHOP-APPLIED PRIMER AND FOUR COATS OF INDUSTRIAL GRADE ENAMEL. FINISH PAINT COLOR SHALL BE WSDOT CASCADE GREEN. PAINT SHALL BE APPLIED IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION SECTION 6-07.



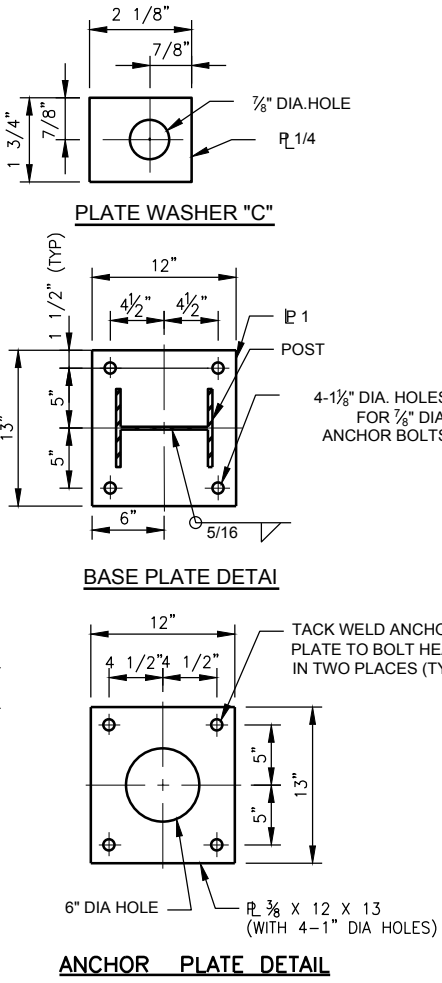
BRIDGE RAIL AND POST CONNECTION DETAIL
SCALE: NTS

2



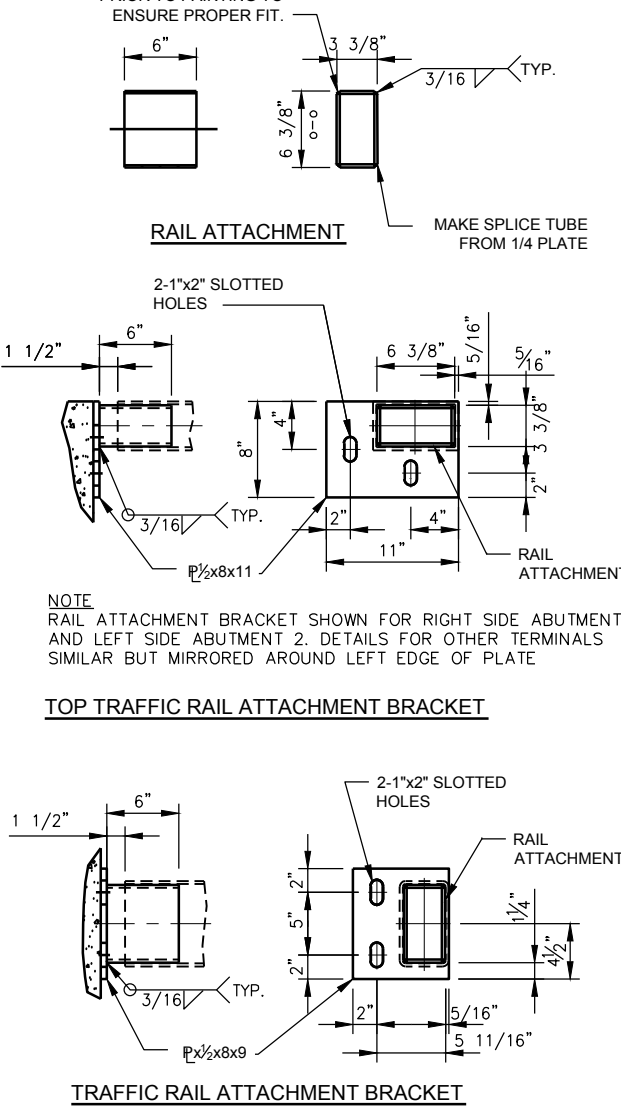
BASE PLATE DETAIL

ANCHOR PLATE DETAIL

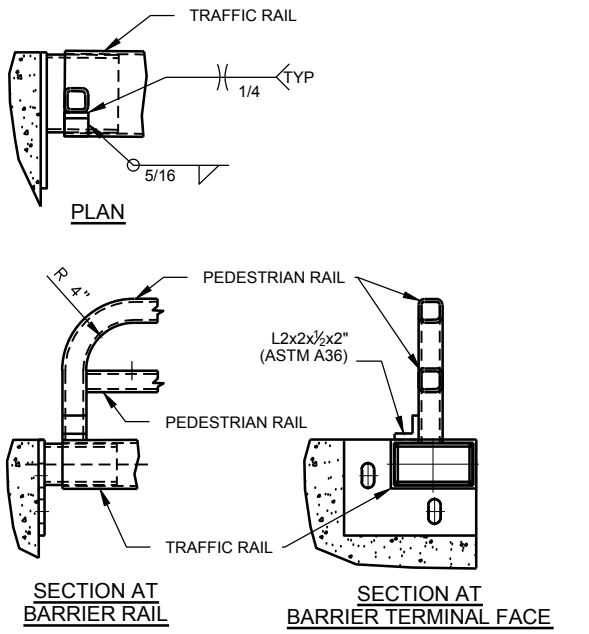


RAIL ATTACHMENT

TOP TRAFFIC RAIL ATTACHMENT BRACKET



TRAFFIC RAIL ATTACHMENT BRACKET



PEDESTRIAN RAIL CONNECTION DETAIL
SCALE: NTS

4

NO	DATE	BY	APPR	REVISIONS



Approved By

DESIGN MANAGER _____ DATE _____

PROJECT MANAGER _____ DATE _____

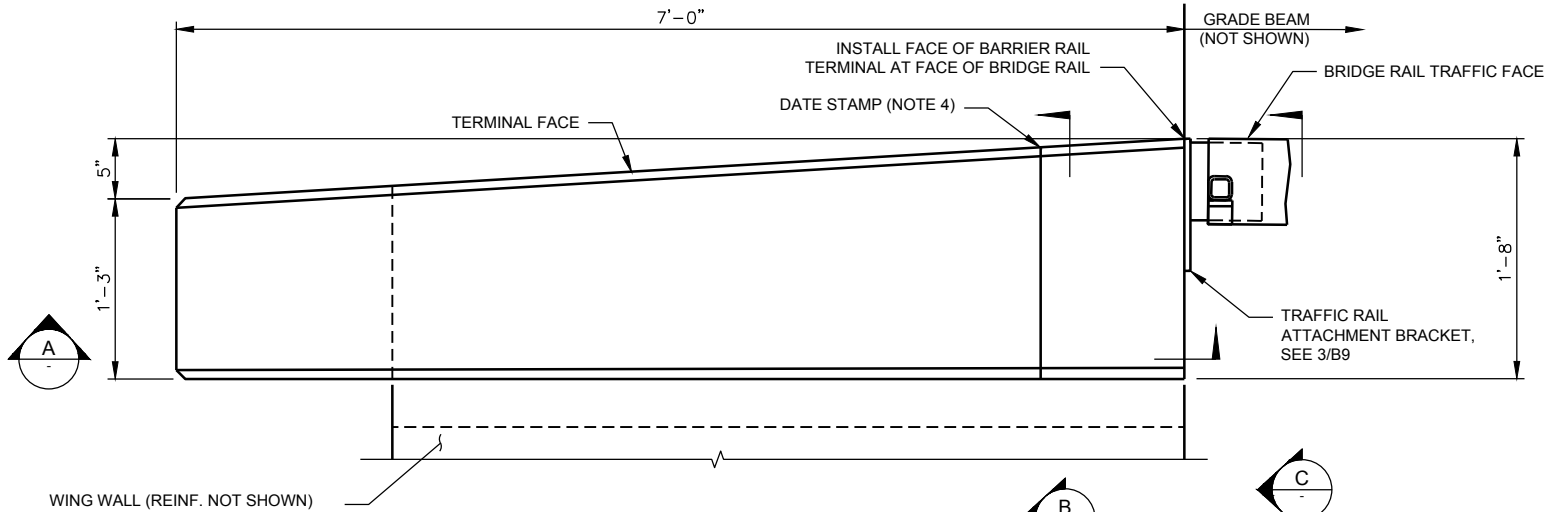


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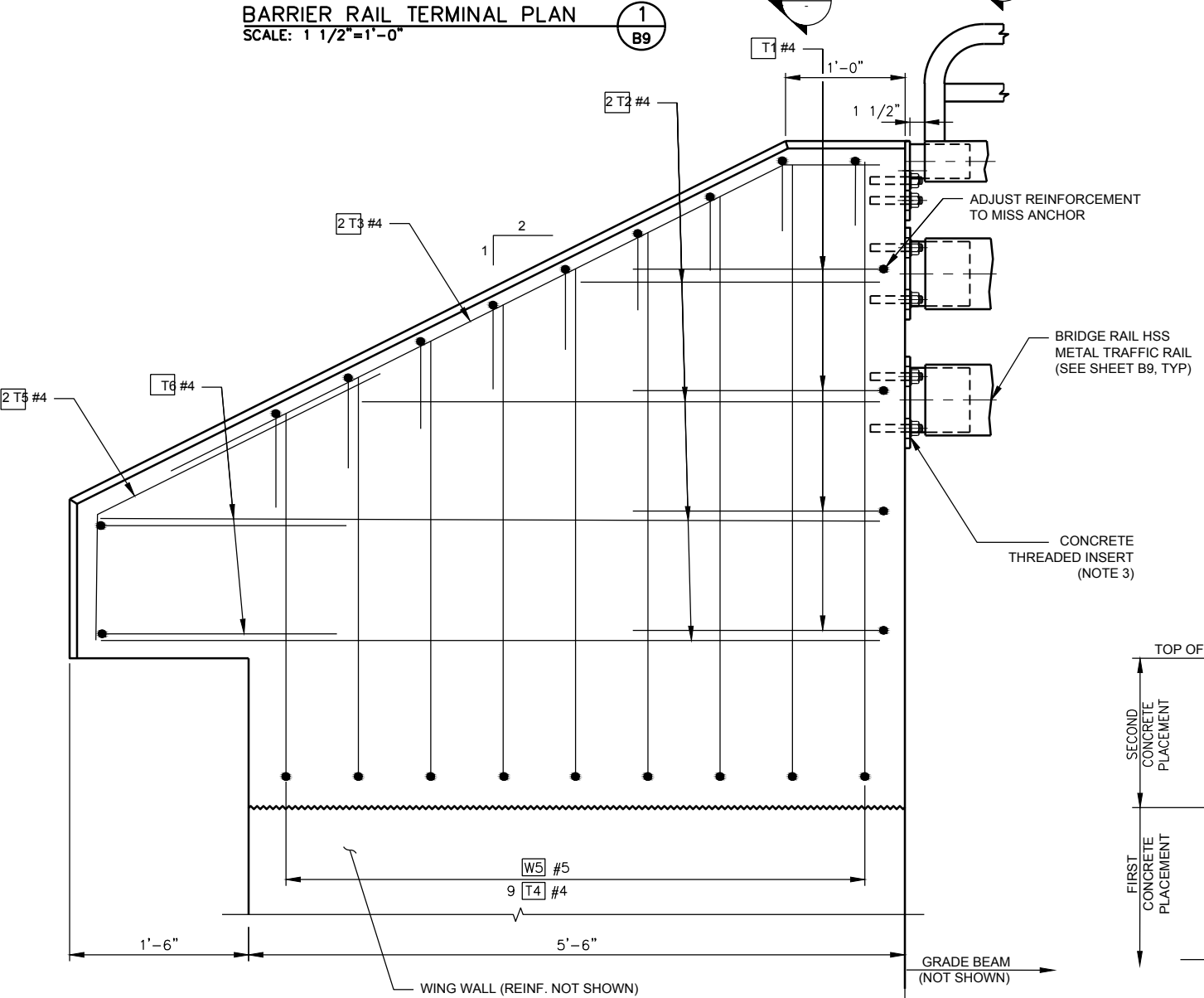
UPPER SKAGIT KEY CULVERT REPLACEMENT
BRIDGE RAIL DETAILS 1

B9 SHT 23 OF 28

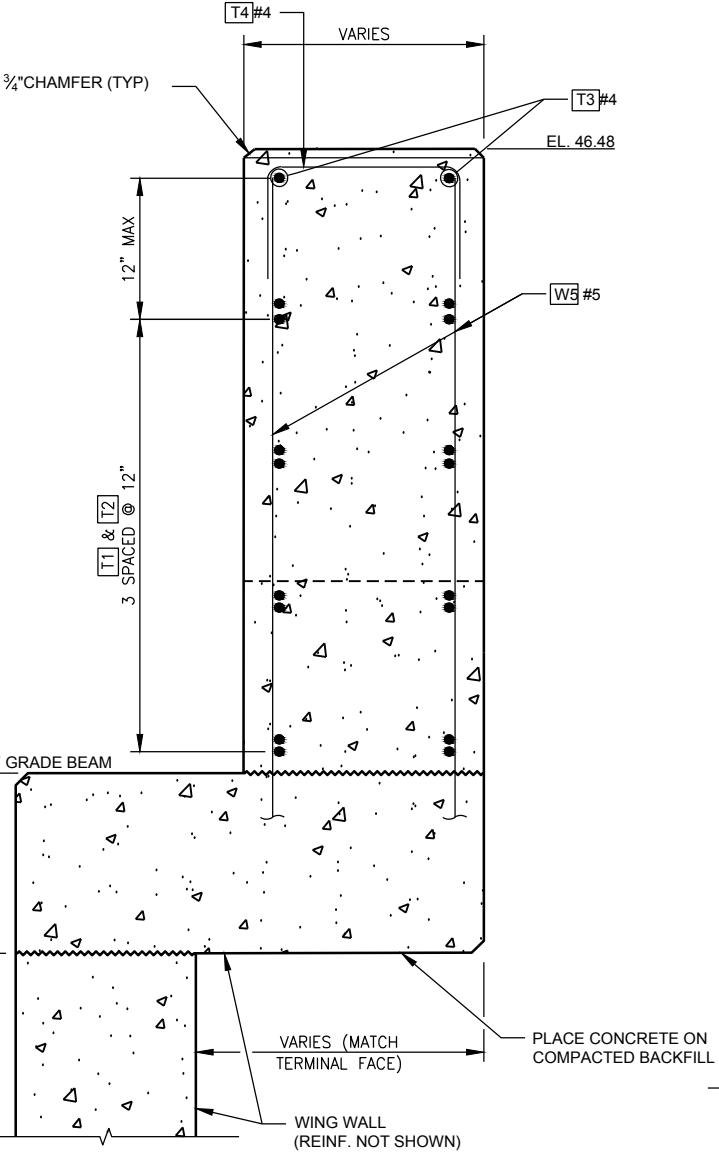
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Plot filename: 134271-008 [C-39-BRIDGE RAIL DETAILS]



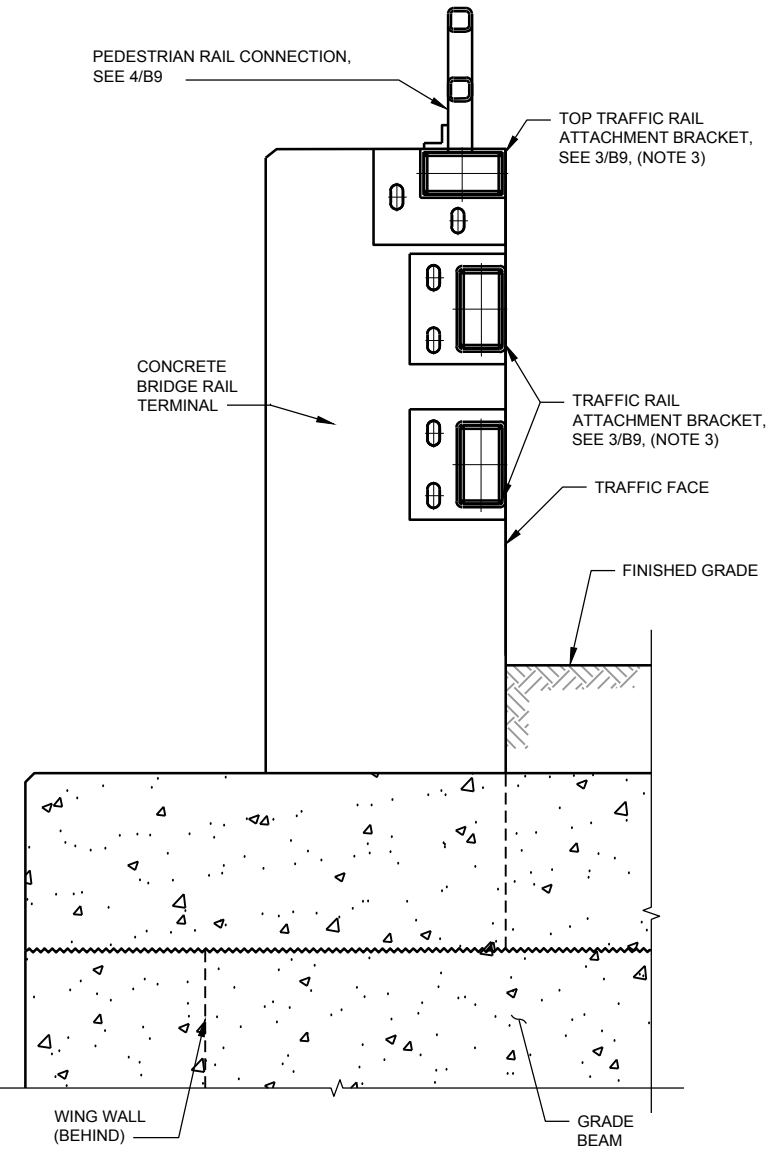
BARRIER RAIL TERMINAL PLAN
SCALE: 1 1/2"=1'-0"



SECTION A
SCALE: 1-1/2" = 1'-0"



SECTION B
SCALE: 1 1/2"=1'-0"



SECTION C
SCALE: 1 1/2"=1'-0"

GENERAL NOTES

- SEE NOTES ON B9 FOR HARDWARE REQUIREMENTS FOR BRIDGE RAILING.
- ALL REINFORCEMENT SHALL CONFORM TO ASTM A706 OR AASHTO M31 (ASTM A615) GRADE 60.
- CONCRETE INSERTS SHALL BE HOT-DIP GALVANIZED EXPANDED COIL INSERTS WITH CLOSED-BACK FERULE THREADED TO RECEIVE GALVANIZED 3/4 INCH DIAMETER BOLTS (ASTM A307)
MINIMUM EMBEDMENT LENGTH = 6"
MINIMUM SAFE WORKING LOAD IN TENSION = 4000 POUNDS
MINIMUM SAFE WORKING LOAD IN SHEAR = 4000 POUNDS
- STAMP BRIDGE YEAR CONSTRUCTION NUMERAL "2017" ON BARRIER FACE PER WSDOT STD PLAN E-1. PLACE CENTER OF DATE STAMP 12" FROM BRIDGE FACE OF BRIDGE RAIL TERMINAL AND 14" FROM TOP OF BRIDGE RAIL TERMINAL.
- RIGHT SIDE ABUTMENT 1 TERMINAL SHOWN. DETAILS FOR OTHER ABUTMENTS SIMILAR BUT MIRRORED ABOUT THE CENTERLINE AND MIDSPAN OF THE BRIDGE.

BID SET

**UPPER SKAGIT KEY CULVERT REPLACEMENT
BRIDGE RAIL DETAILS 2**

B10

SHT 24 OF 28

Path: P:\134271 Lower Coal Creek Ph. 2 Early Action\CAD\SheetFiles\Group\133 B9_MISCELLANEOUS BRIDGE DETAILS.dwg Plot date: Mar 16, 2017-02:22:28pm CAD User: Adam Forcier
File Name: 134271-006 [C-S-BRIDGE RAIL DETAILS]

NO	DATE	BY	APPR	REVISIONS



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www.tetratech.com
1420 Fifth Avenue, Suite 550
Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

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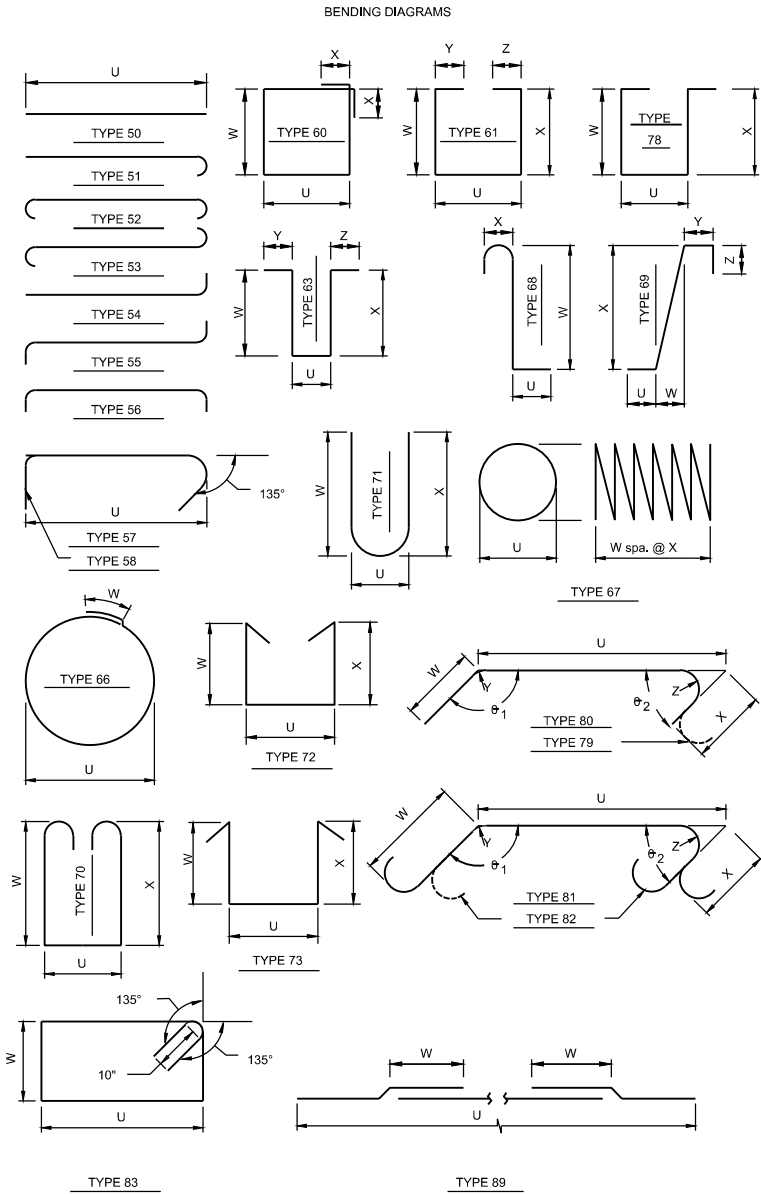
DESIGN MANAGER	DATE	DS DESIGNED BY	DATE
PROJECT MANAGER	DATE	NS DRAWN BY	DATE
		AA CHECKED BY	DATE



**City of
Bellevue**
UTILITIES

S = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES
L - LUMP SUM QUANTITY
T OR S - FOR TIE & STIRRUP RADIUS
E - FOR EARTHQUAKE TAIL WITH TIE & STIRRUP RADIUS
E = BAR IS TO BE EPOXY COATED.
V = BAR DIMENSIONS VARY BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.

NO MARK	LOCATION	SIZE	NO REQD	BEND TYPE	BEND RADIUS	LUMP SUM	SUBSTR.	EPOXY COAT	VARIES	NO EACH	DIMENSIONS (OUT TO OUT)												LENGTH		WEIGHT												
											U		W		X		Y		Z		1	2	FT	IN	LBS												
											FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	DEG	DEG															
SHAFT																																					
S1	LONGITUDINAL	11	48	50			S		V	24	46	1.4													46	1.4	11251										
S2	LONGITUDINAL	11	48	50			S		V	24	33	9.0													33	9.0	8097										
S3	HOOP	7	784	66			S				2	10.0	0	9.0											9	5.1	15100										
GRADE BEAM																																					
G1	LONGITUDINAL	11	12	56			S				50	2.0													53	5.7	3409										
G2	LONGITUDINAL	7	24	56			S				50	2.0													52	1.6	2558										
G3	STIRRUP	5	130	72	T		S				4	3.0	2	8.0	2	8.0									10	3.5	1396										
G4	STIRRUP	5	138	72	T		S				2	7.0	4	1.0	4	1.0									11	5.5	1650										
G5	TIE	5	284	58	T		S				4	3.0													5	0.9	1503										
G6	TIE	5	130	58	T		S	E			2	7.0													3	4.9	462										
G7	U BAR	5	24	63	T		S	E			1	0.0	2	6.0	2	6.0	0	0.0	0	0.0					5	9.4	145										
G8	STIRRUP	4	16	78	T		S	E			1	9.0	2	4.8	2	4.8									6	11.5	74										
G9	LONGITUDINAL (TOP)	11	8	56			S	E			50	2.0													53	5.7	2273										
G10	TIE	5	8	58	T		S				4	1.0													4	10.9	41										
G11	TIE	5	8	58	T		S	E			4	3.0													5	0.9	42										
G12	TIE	5	104	58	T		S				4	1.0													4	10.9	532										
WING WALL																																					
W1	HORIZONTAL BAR	5	40	50			S				8	0.0													8	0.0	334										
W2	HORIZONTAL BAR	5	48	50			S				8	0.0													8	0.0	400										
W3	VERTICAL BAR	5	72	56	T		S				3	11.5													4	8.2	351										
W4	STIRRUP	5	36	72	T		S				2	11.0	0	10.0	0	10.0									5	3.5	199										
W5	TIE	5	36	58	T		S				2	11.0													3	8.9	140										
W6	VERTICAL TO TERMINAL	5	72	54	T		S		V	8	5	3.4													5	7.7	339										
											3	0.4													3	4.7											
PRECAST CONCRETE PANEL																																					
P1	BOTTOM LONGITUDINAL	9	96	50							26	9.0													26	9.0	8732										
P2	TOP LONGITUDINAL	5	60	50			E				26	9.0													26	9.0	1674										
P3	STIRRUP	4	540	72	T						3	3.6	1	0.5	1	0.5	0	0.0	0	0.0					5	11.4	2147										
P4	TIE	4	540	63	T		E				3	3.6	0	8.0	0	8.0	0	0.0	0	0.0					4	5.5	1609										
P5	STIRRUP	4	108	72	T						3	6.1	1	0.5	1	0.5									6	1.9	444										
P6	TIE	4	108	63	T		E				3	6.1	0	8.0	0	8.0	0	0.0	0	0.0					4	8.0	337										
P7	ADDITIONAL TIE	5	36	63			E				3	6.1	0	8.0	0	8.0	0	0.0	0	0.0					4	7.0	172										
P8	STIRRUP	4	62	62	T		E				1	9.0	2	7.4	2	7.4	0	8.0	0	8.0					7	11.7	330										
SIDEWALK																																					
M1	LONGITUDINAL	4	20	56			E				2	9.0													3	10.5	52										
M2	LONGITUDINAL	4	10	56			E				26	9.0													27	10.5	186										
M3	LONGITUDINAL	4	20	56			E				2	6.0													3	7.5	48										
M4	LONGITUDINAL	4	20	50			E				9	3.0													9	3.0	124										
M5	LONGITUDINAL	4	10	50			E				7	0.0													7	0.0	47										
M6	TRANSVERSE	4	60	56			E				5	3.0													6	4.5	255										
BRIDGE RAIL TERMINAL																																					
T1	U BAR	4	16	63			S				1	2.8	2	0.0	2	0.0	0	0.0	0	0.0					5	0.3	54										
T2	LONGITUDINAL	4	32	50			S		V	4	6	9.0													6	9.0	99										
											2	6.0													2	6.0											
T3	TOP LONGITUDINAL	4	8	69			S				0	0.0	5	6.0	2	9.0	0	10.0	1	0.0					7	10.8	42										
T4	TOP U BAR	4	36	63	T		S		V	4	1	5.0	0	8.0	0	8.0	0	0.0	0	0.0					2	6.9	57										
											1	0.0	0	8.0	0	8.0	0	0.0	0	0.0					2	1.9											
T5	TOP LONGITUDINAL	4	8	69			S				1	2.0	1	5.0	2	10.0	0	0.0	0	0.0					4	3.5	23										
T6	U BAR	4	8	63			S				0	11.0	2	0.0	2	0.0	0	0.0	0	0.0					4	8.5	25										



FOR INFORMATION PURPOSES ONLY

NO	DATE	BY	APPR	REVISIONS



TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 550
Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER _____ DATE _____
PROJECT MANAGER _____ DATE _____

DS
DESIGNED BY _____ DATE _____
VR
DRAWN BY _____ DATE _____
AA
CHECKED BY _____ DATE _____



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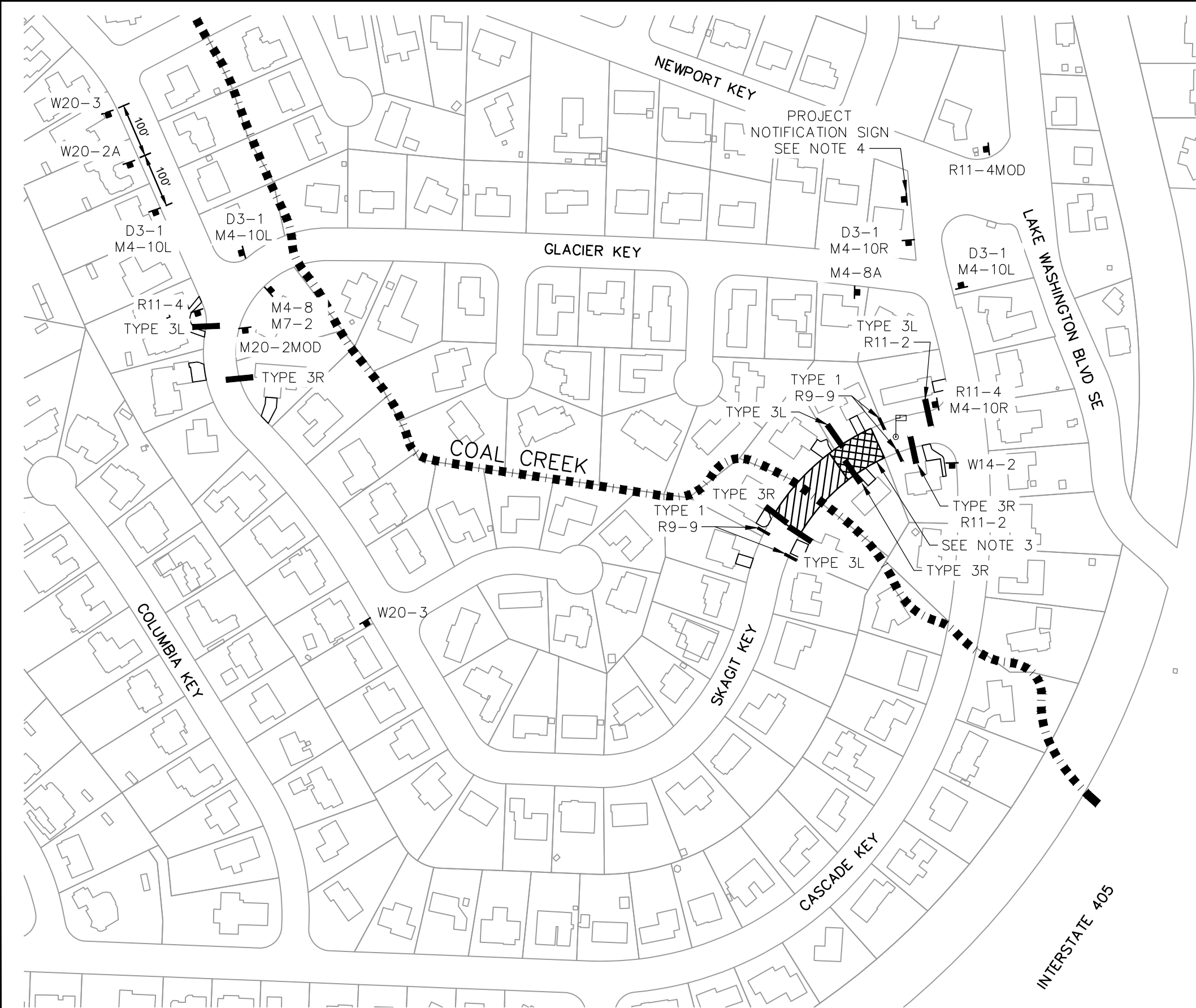
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UPPER SKAGIT KEY CULVERT REPLACEMENT
BAR LIST

B11

SHT 25 OF 28

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Plot filename: [C:\JP-COS-FARGEL Border-B06]



LEGEND

TYPE 1 BARRICADE

TYPE 3L BARRICADE

TYPE 3R BARRICADE

TEMPORARY TRAFFIC CONTROL ZONE SIGN

FLAGGER

TEMPORARY WORK ZONE

R11-4MOD

W20-2MOD

M7-2

W14-2

R9-9

M4-8

WORK SPACE

R11-2

R11-4

M4-10L

M4-10R

W20-2A

W20-3

M4-8A

D3-1

SKAGIT KEY CLOSED
FOLLOW DETOUR

NO TURNAROUND

NO OUTLET

SIDEWALK CLOSED

DETOUR

ROAD CLOSED

ROAD CLOSED TO THRU TRAFFIC

DETOUR

DETOUR

DETOUR AHEAD

ROAD CLOSED AHEAD

END DETOUR

SKAGIT KEY

NOTES:

1. DO NOT PLACE BARRICADES TO BLOCK ACCESS TO DRIVEWAYS. MAINTAIN DRIVEWAY ACCESS AT ALL TIMES DURING CONSTRUCTION.

2. INSTALL TEMPORARY TRAFFIC CONTROL ZONE SIGNS PER WSDOT STD. PLAN K-80.10-01.

3. TEMPORARY WORK ZONE EXPANDED 100' EAST DURING DRILLING OPERATION. MAINTAIN DRIVEWAY ACCESS IN TEMPORARY WORK ZONE AT ALL TIMES. FLAGGER REQUIRED TO ESCORT VEHICLES IN TEMPORARY WORK ZONE.

4. CONTRACTOR TO INSTALL PROJECT NOTIFICATION SIGN, PROVIDED BY COB, PER COB STD PLAN W-53.

BID SET

UPPER SKAGIT KEY CULVERT REPLACEMENT
TRAFFIC CONTROL

TC1

SHT 26 OF 28

NAV 88

0 50 100 150 200
SCALE IN FEET

NO	DATE	BY	APPR	REVISIONS



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www.tetrattech.com
1420 Fifth Avenue, Suite 550
Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER

PROJECT MANAGER

DATE

DATE

KA
DESIGNED BY

NS
DRAWN BY

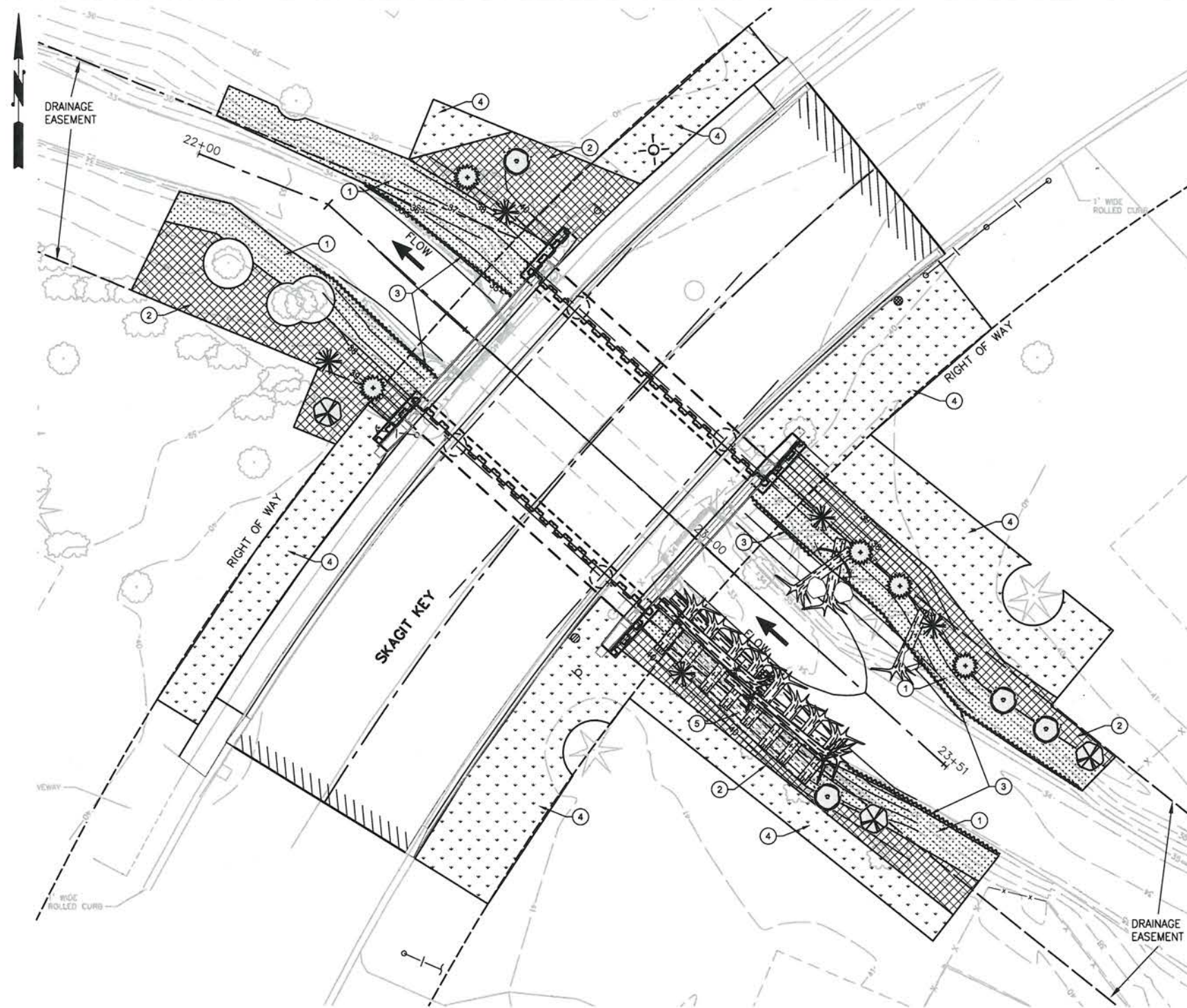
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DATE

DATE

DATE

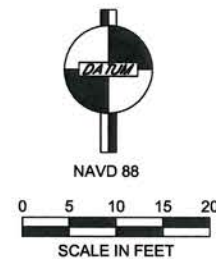




PLANTING LEGEND AND MATERIALS LIST:						
	SCIENTIFIC NAME	COMMON NAME	QTY	MIN SIZE / CONDITION	SPACING	NOTES
TREES						
	ACER MACROPHYLLUM	BIG LEAF MAPLE	4	3/4" CAL / #5 CONT	AS SHOWN	SEE DETAIL 4/L2
	PRUNUS EMARGINATA	BITTER CHERRY	3	3/4" CAL / #5 CONT	AS SHOWN	
	PSEUDOTSUGA MENZIESII	DOUGLAS-FIR	5	4' TALL / #5 CONT	AS SHOWN	
	THUJA PLICATA	WESTERN RED CEDAR	5	4' TALL / #5 CONT	AS SHOWN	
ZONE 1 PLANTINGS						
	CORNUS SERICEA	RED OSIER DOGWOOD	630	30" x 1/2" / LIVESTAKE	1' OC	SEE DETAIL 1/L2
	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	140	12" / #1 CONT	3' OC	
	RUBUS SPECTABILIS	SALMONBERRY	140	12" / #1 CONT	3' OC	
	SALIX SITCHENSIS	SITKA WILLOW	630	30" x 1/2" / LIVESTAKE	1' OC	
ZONE 2 PLANTINGS						
	CORNUS SERICEA	RED OSIER DOGWOOD	70	12" / #1 CONT	3' OC	SEE DETAIL 2/L2
	CORYLUS CORNUTA	WESTERN HAZELNUT	65	12" / #1 CONT	3' OC	
	RIBES SANGUINEUM	RED FLOWERING CURRANT	65	12" / #1 CONT	3' OC	
	ROSA PISOCARPA	CLUSTER ROSE	70	12" / #1 CONT	3' OC	
	SYMPHORICARPOS ALBUS	SNOWBERRY	70	12" / #1 CONT	3' OC	
SOIL LIFT PLANTINGS						
	CORNUS SERICEA	RED OSIER DOGWOOD	124	30" x 1/2" / LIVESTAKE	1' OC	
	SALIX HOOKERIANA	HOOKER'S WILLOW	124	30" x 1/2" / LIVESTAKE	1' OC	
	SALIX SITCHENSIS	SITKA WILLOW	124	30" x 1/2" / LIVESTAKE	1' OC	
COIR LOG PLANTINGS						
	SALIX SITCHENSIS	SITKA WILLOW	124	30" x 1/2" / LIVESTAKE	1' OC	SEE DETAIL 3/L2
LAWN RESTORATION - SEE DETAIL 6/L2						

CONSTRUCTION NOTES:

GENERAL NOTES

[illegible]

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719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM



Approved By

DESIGN MANAGER

DATA

PROJECT MANAGER

DAT

JC	03/14/17
DESIGNED BY	DATE
JC	03/14/17
DRAWN BY	DATE
BB	03/14/17
CHECKED BY	DATE



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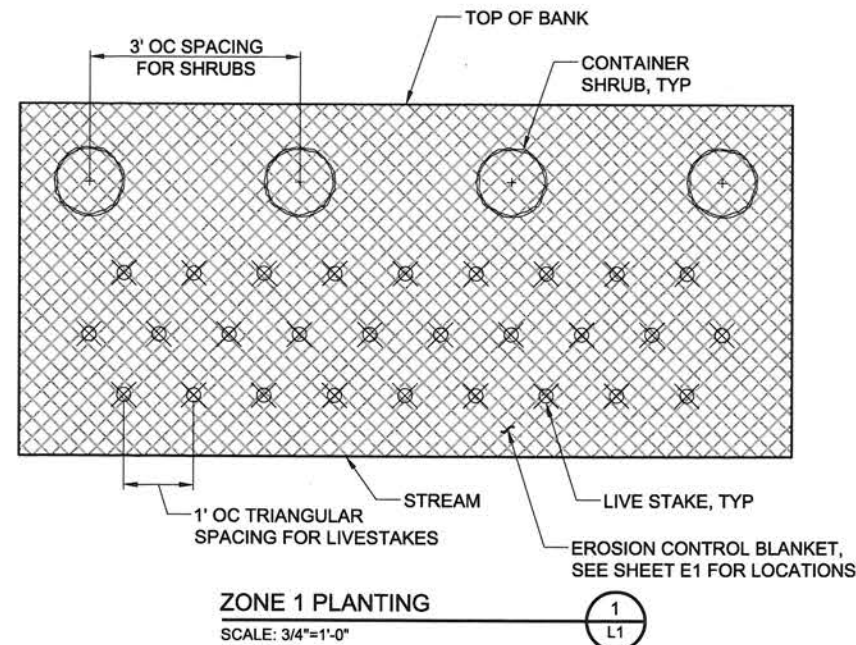
UPPER SKAGIT KEY CULVERT REPLACEMENT
LANDSCAPE RESTORATION PLAN

L1

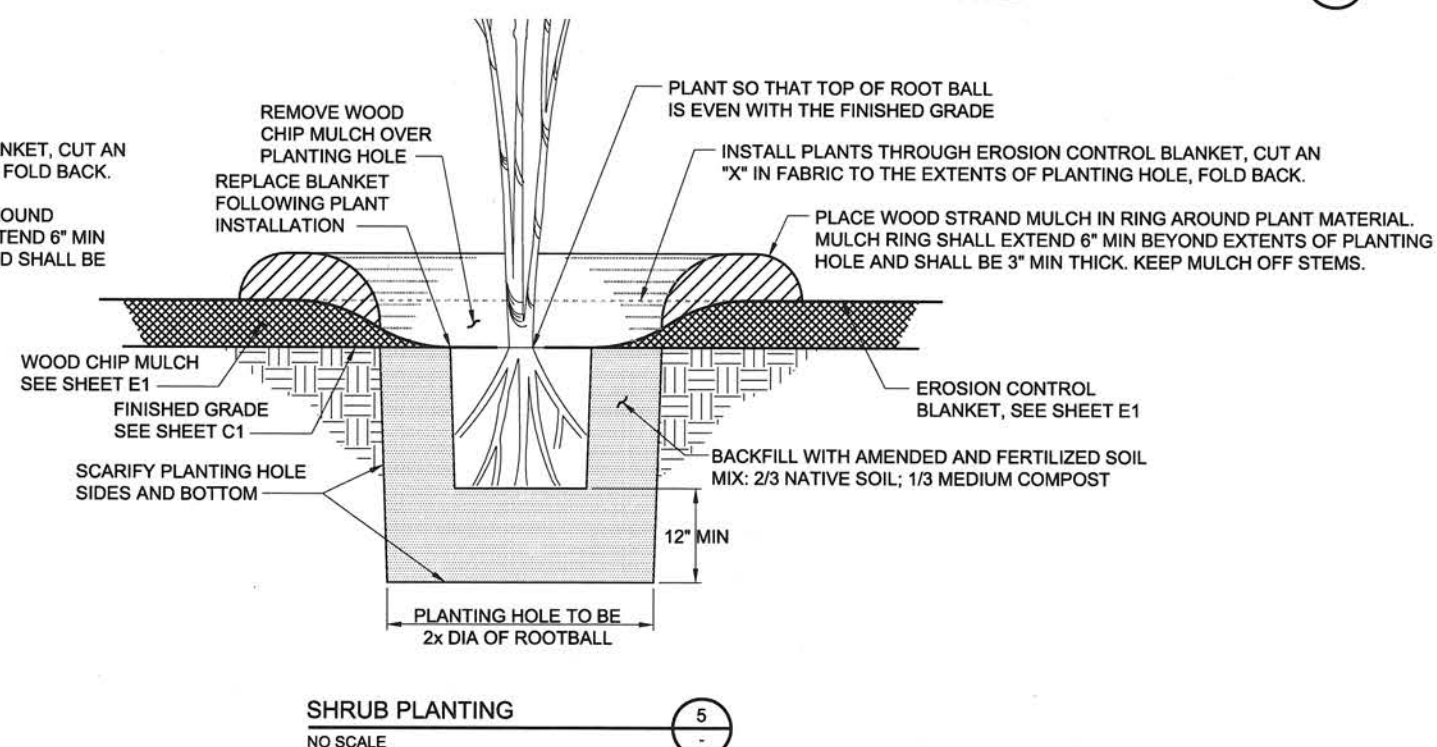
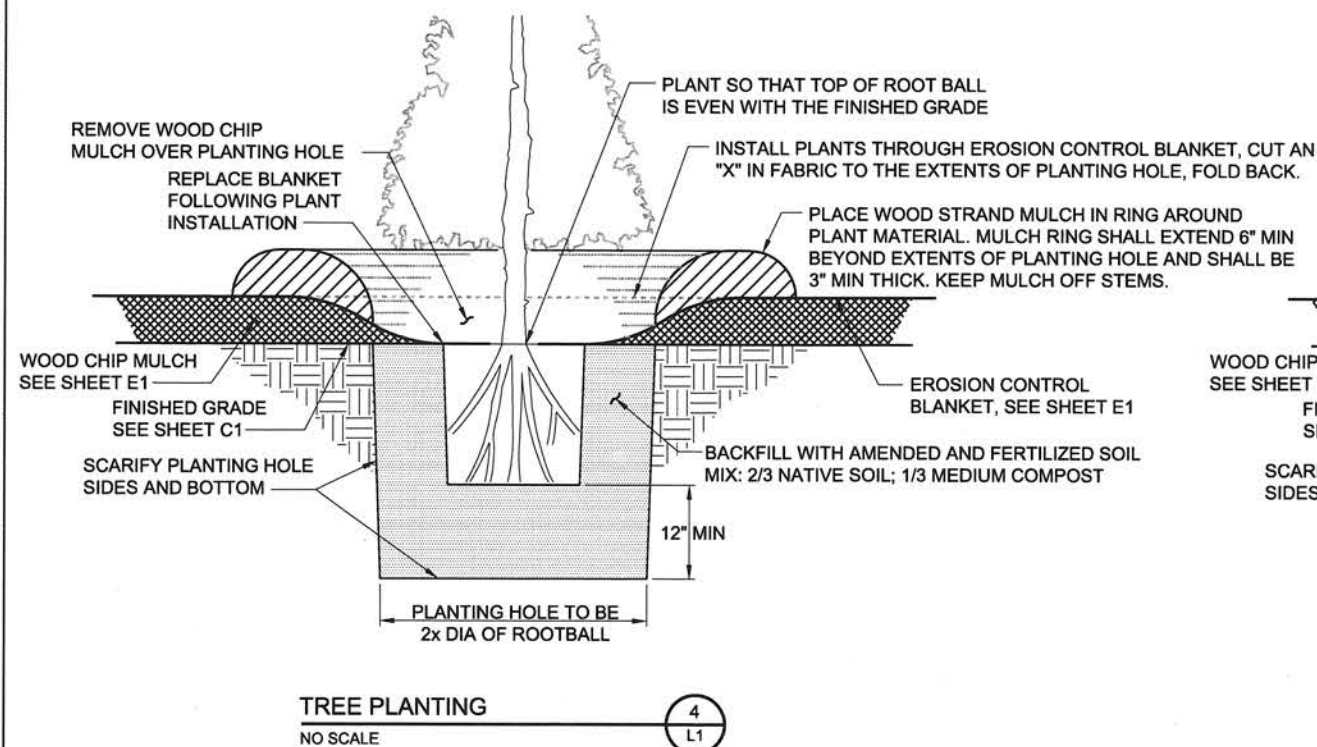
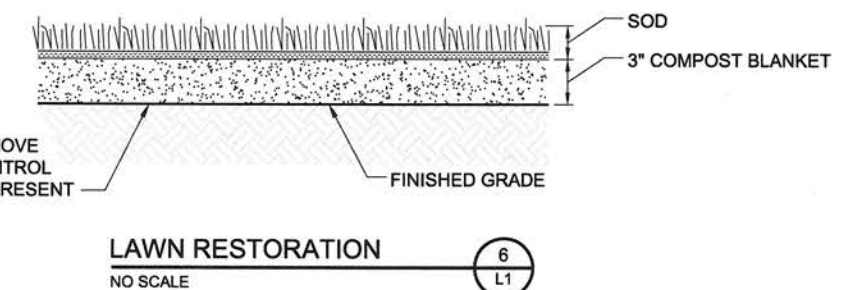
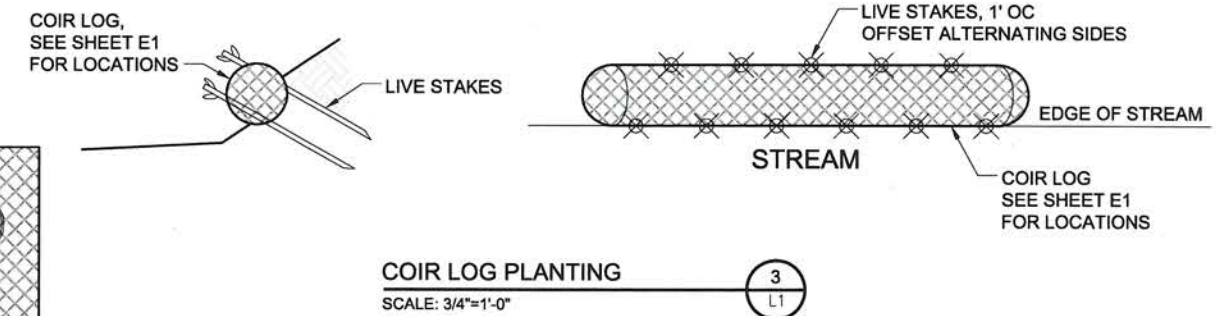
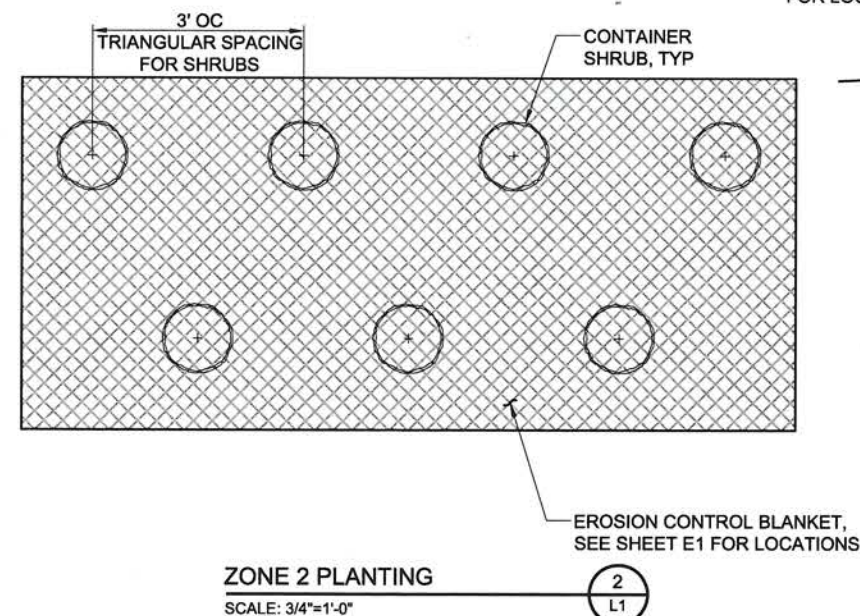
SHT 27 OF 28



1. PLANT SHRUBS IN SINGLE SPECIES GROUPS OF 2 TO 3 PLANTS
2. INSTALL SHRUBS THROUGH EROSION CONTROL BLANKET, SEE DETAIL 5/-.



1. PLANT SHRUBS IN SINGLE SPECIES GROUPS OF 3 TO 5 PLANTS
2. INSTALL SHRUBS THROUGH EROSION CONTROL BLANKET, SEE DETAIL 5/-.

[illegible]

Parametrix
ENGINEERING · PLANNING · ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM



TETRA TECH
www.tetrattech.com
1420 Fifth Avenue, Suite 550
Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER	D
PROJECT MANAGER	D

JC	03/14/15
DESIGNED BY	DAT
JC	03/14/15
DRAWN BY	DAT
BB	03/14/15
CHECKED BY	DAT



**City of
Bellevue**
UTILITIES

BID SET UPPER SKAGIT KEY CULVERT REPLACEMENT LANDSCAPE RESTORATION DETAILS		LICENSE NO. 1424 EXPIRES ON 12-6-17
L2	SHT 28 OF 28	