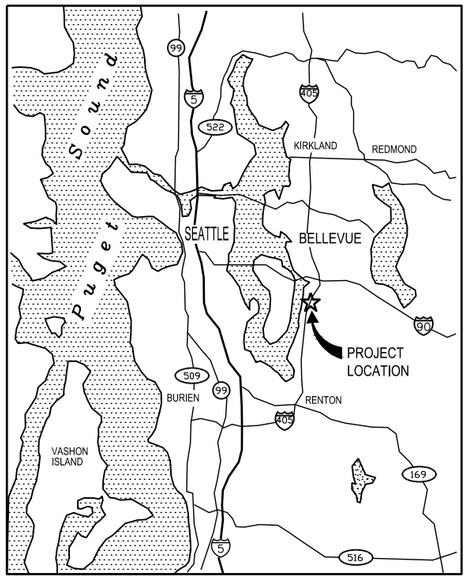
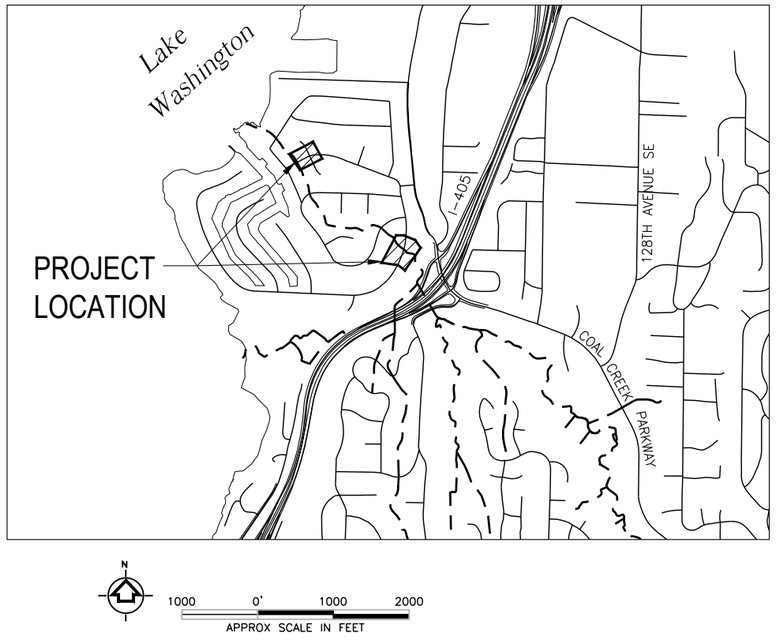
CITY OF BELLEVUE

UTILITIES DEPARTMENT

LOWER COAL CREEK
FLOOD HAZARD REDUCTION PROJECT - GROUP 2
CASCADE KEY AND NEWPORT KEY CULVERT REPLACEMENTS
C.I.P. # D-106
BID NO.: 18006



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
JARED NIEUNHUIS
JENNIFER ROBERTSON
LYNNE ROBINSON
KEVIN WALLACE
JANICE ZAHN

SHEET INDEX

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NO	DATE	BY	APPR	REVISIONS

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www.tetratech.com
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Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER DATE

PROJECT MANAGER DATE

GMS DESIGNED BY DATE
ACF DRAWN BY DATE
GG CHECKED BY DATE

City of Bellevue UTILITIES

FLOOD HAZARD REDUCTION PROJECT
TITLE SHEET - SHEET INDEX

G1 | SHT 01 OF 58

ABBREVIATIONS

&	AND
Δ	ANGLE
°	DEGREE
ø	DIAMETER
E	EPOXY COATED
'	FEET, MINUTES
"	INCHES, SECONDS
#	NUMBER
%	PERCENT
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ASBESTOS CONCRETE
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BMP	BEST MANAGEMENT PRACTICE
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE, CLASS
COB	CITY OF BELLEVUE
CONC	CONCRETE
CONT	CONTAINER
CPE	CORRUGATED POLYETHYLENE PIPE
CSBC	CRUSHED SURFACING BASE COURSE
CSL	CROSS SONIC LOGGING
CSTC	CRUSHED SURFACING TOP COURSE
CTR	CENTER
D	STORM DRAIN
DI	DUCTILE IRON
DIA	DIAMETER
E	EAST
EQ	EQUAL
EL	ELEVATION
ESC	EROSION AND SEDIMENT CONTROL
ESMT	EASEMENT
EX, EXIST	EXISTING
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FIC	FOUND IN CASE
FL	FLOW LINE
FLXFL	FLANGE BY FLANGE
FOGB	FACE OF GRADE BEAM
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
NC	NON-CORRODING
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
PERM	PERMANENT
PI	POINT OF INTERSECTION
PL	PLATE
PS	PRESTRESSED
PSE	PUGET SOUND ENERGY
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
QTY	QUANTITY
R	RIGHT
REINF	REINFORCEMENT
ROW	RIGHT OF WAY
RT	RIGHT
S	SANITARY SEWER
S	SOUTH
SD	STORM DRAIN
SDCB	STORM DRAIN CATCH BASIN
SE	SOUTH EAST
SF	SQUARE FEET
SP	SPACED
SPEC	SPECIFICATION
SS	SANITARY SEWER, STAINLESS STEEL
SSMH	SANITARY MANHOLE
SSS	SANITARY SIDE SEWER
STA	STATION
STD	STANDARD
SW	SOUTHWEST
SWLK	SIDEWALK
T	TELEPHONE
TEMP	TEMPORARY
TOC	TOP OF CURB
TL	TRAFFIC LOAD
TYP	TYPICAL
UGP	UNDERGROUND POWER
UNO	UNLESS NOTED OTHERWISE
VC	VERTICAL CURVE
VIF	VERIFY IN FIELD
VERT	VERTICAL
W	WATER
W	WEST
W/	WITH
WM	WATERMAIN
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WSE	WATER SURFACE ELEVATION

SYMBOLS

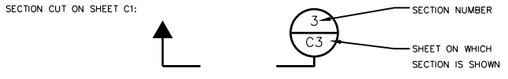
DESCRIPTION	SYMBOL EXIST.	SYMBOL PROP.
CAP/PLUG	]	]
COUPLING	#	#
GUARD POST	○	●
REDUCER	▷	▶
THRUST BLOCK	◅	◀
WATER METER	⊞	◪
FIRE HYDRANTS:		
2-NOZZLE		
3-NOZZLE		
JOINTS:		
FLANGE/BLIND FL	‖	‖
MECHANICAL	[	[
PUSH-ON/HUB	(	(
THREAD	⌇	⌇
VALVES:		
AIR RELIEF		
BLOW-OFF		
BUTTERFLY		
CHECK		
GATE/GENERAL		
PLUG VALVE		
GAS METER	◘	◘
GAS VALVE		
PAD MOUNTED TRANSFORMER	△	▲
POWER VAULT	P	P
TRANSMISSION TOWER	⊠	
UTILITY POLE	○	●
UTILITY POLE ANCHOR	←	←
TELEPHONE RISER	▫	■
TELEPHONE VAULT	T	T
MONUMENT (IN CASE)	⊕	⊕
MONUMENT (SURFACE)	◎	◉
SOIL BORING	⊘	⊗
SPOT ELEVATION	×	⊗
SAN. SEWER MANHOLE	○	●
STORM DRAIN CATCH BASIN	□	■
STORM DRAIN CATCH BASIN	▣	▣
STORM DRAIN MANHOLE	▣	▣
STREETLIGHT ASSEMBLY W/ UNDERGROUND POWER	UG	UG
EMBANKMENT		
MAIL BOX	▫	▪
RIP RAP		
ROCKERY		
STREAMBED MATERIAL		
SHRUB		
WOOD SIGN POST		
METAL SIGN POST		
TREE (Conifer)		
TREE (Deciduous)		
YARD LIGHT		
TREE REMOVAL		

	SURFACE FEATURES:
	BUILDING LINE (EXISTING)
	BUILDING LINE (PROPOSED)
	CREEK/DITCH CENTERLINE (EXIST.)
	CREEK/DITCH CENTERLINE (PROP.)
	CURB/PAVEMENT/SIDEWALK (EX)
	CURB/PAVEMENT/SIDEWALK (PROP)
	FENCE (EXISTING)
	FENCE (PROPOSED)
	GUARDRAIL (EXISTING)
	GUARDRAIL (PROPOSED)
	LAKE/POND
	RETAINING WALL (EXISTING)
	RETAINING WALL (PROPOSED)
	RIVERBANK/SHORELINE
	SURVEY:
	CENTERLINE (EXISTING)
	CENTERLINE (PROPOSED)
	CONTOUR (DEPRESSION)
	CONTOUR (EXISTING)
	CONTOUR (INDEX)
	CONTOUR (PROPOSED)
	EASEMENT (PERMANENT)
	EASEMENT (TEMPORARY)
	PROPERTY LINE (EXISTING)
	RIGHT-OF-WAY (EXISTING)
	RIGHT-OF-WAY (PROPOSED)
	UTILITIES (EXISTING):
TV	CABLE TELEVISION (BURIED)
FM	FORCE MAIN
I	IRRIGATION
G	GAS
P	POWER (AERIAL)
P	POWER (BURIED)
S	SANITARY SEWER
SSS	SIDE SEWER SERVICE
S	REMOVED SANITARY SEWER
S	PROPOSED SANITARY SEWER
FM	PROPOSED FORCEMAIN
D	STORM DRAINAGE
D	REMOVED STORM DRAINAGE
D	PROPOSED STORM DRAINAGE
T	TELEPHONE (BURIED)
	UTILITY SERVICE LINE (GENERAL)
W	WATER
W	REMOVED WATER
W	PROPOSED WATER
	HIGH VISIBILITY FENCE
	COIR LOG PLACEMENT
XXXX	LOT NUMBER

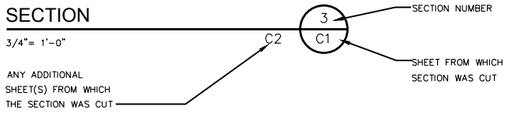
SHEET REFERENCE

SECTIONS ARE CROSS REFERENCED IN THE FOLLOWING MANNER:

SECTION CUT ON SHEET C1:



ON SHEET C3 THIS SECTION IS DEFINED AS:



SECTION OR DETAIL CUT AND SHOWN ON THE SAME SHEET:

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2017 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.
2. 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.
3. CALL 1-800-424-5555, OR 8-1-1, 72 HOURS BEFORE CONSTRUCTION FOR UTILITY LOCATES.
4. A COPY OF THE APPROVED PLANS MUST BE AT THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
5. AVOID CROSSING WATER OR SEWER MAINS AT HIGHLY ACUTE ANGLES. THE SMALLEST ANGLE MEASURE BETWEEN UTILITIES SHOULD BE 45 TO 90 DEGREES.
6. AT POINTS WHERE EXISTING THRUST BLOCKING IS FOUND, MINIMUM CLEARANCE BETWEEN THE CONCRETE BLOCKING AND OTHER BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
7. 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.
8. 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.
9. ALL TRENCHES SHALL BE COMPACTED, AND HOT MIX ASPHALT IN PLACE IN PAVED AREAS, PRIOR TO TESTING STORM AND SEWER LINES FOR ACCEPTANCE.

90% SUBMITTAL

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City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
ABBREVIATIONS - LEGEND - SYMBOLS - ESC GENERAL NOTES

G2

SHT 02 OF 58

WATER GENERAL NOTES

1. NOT USED.
2. ALL PIPE SHALL BE DUCTILE IRON CLASS 52 UNLESS OTHERWISE SHOWN.
3. ALL PIPE AND FITTINGS NOT TO BE DISINFECTED IN PLACE SHALL BE SWABBED WITH 1% AVAILABLE CHLORINE SOLUTION PRIOR TO INSTALLATION.
4. 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.
5. AFTER DISINFECTING THE WATERMAIN, DISPOSE OF CHLORINATED WATER BY DISCHARGING TO THE NEAREST OPERATING SANITARY SEWER.
6. 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 FIVE DAYS BEFORE NOR ONE DAY AFTER A CITY HOLIDAY, UNLESS OTHERWISE APPROVED BY THE UTILITY.
7. NOT USED.
8. 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.
9. WRAP ALL DUCTILE IRON PIPE AND ADJACENT VALVES AND FITTINGS WITH 8-MIL. POLYETHYLENE CONFORMING TO AWWA C105.
10. THE WATERMAIN SHALL BE INSTALLED ONLY AFTER THE ROADWAY SUBGRADE IS BACKFILLED, GRADED AND COMPACTED IN CUT AND FILL AREAS.
11. NOT USED.
12. ALL FITTINGS SHALL BE BLOCKED PER STANDARD DETAILS UNLESS OTHERWISE SPECIFIED.
13. NOT USED.
14. 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.
15. NOT USED.
16. NOT USED.
17. NOT USED.
18. NOT USED.
19. NOT USED.
20. NOT USED
21. NOT USED.
22. WHERE WATERMAIN CROSSES ABOVE OR BELOW SANITARY SEWER, ONE FULL LENGTH OF WATER PIPE SHALL BE CENTERED FOR MAXIMUM JOINT SEPARATION.
23. NOT USED.
24. NOT USED.
25. NOT USED.
26. NOT USED.
27. NOT USED.

STORM DRAINAGE GENERAL NOTES

1. NOT USED.
2. UNLESS OTHERWISE NOTED, STORM PIPE SHALL BE CORRUGATED POLYETHYLENE CULVERT AND STORM DRAIN PIPE JOINTS SHALL BE CLASSIFIED AS "WATERTIGHT." WATERTIGHT JOINTS SHALL BE MADE WITH A SLEEVE OR WITH A BELL SPIGOT AND SHALL CONFORM TO ASTM D 3212 (10.8 PSI) USING ELASTOMERIC GASKETS CONFORMING TO ASTM F 477. GASKETED JOINTS SHALL BE LUBRICATED AS RECOMMENDED BY THE PRODUCER DURING INSTALLATION. "SOILTIGHT" JOINTS SHALL NOT BE PERMITTED. UNLESS OTHERWISE NOTED, BEDDING AND BACKFILL SHALL BE AS SHOWN IN THE STANDARD DETAILS D-25 AND D-46.
3. NOT USED.
4. NOT USED.
5. 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.
6. 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.
7. NOT USED
8. 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.
9. NOT USED
10. 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.
11. NOT USED
12. ALL TESTING AND CONNECTIONS TO EXISTING MAINS SHALL BE DONE IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT.
13. NOT USED.
14. 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.
15. NOT USED
16. ALL MANHOLES/ CATCH BASINS IN UNPAVED AREAS SHALL INCLUDE A CONCRETE SEAL AROUND ADJUSTMENT RINGS PER STANDARD DETAILS.
17. 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.
18. NOT USED.
19. 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.
20. NOT USED.
21. PLACEMENT OF SURFACE APPURTENANCES (MH LIDS, VALVE LIDS, ETC) IN TIRE TRACKS OF TRAFFIC LANES SHALL BE AVOIDED WHENEVER POSSIBLE.
22. NOT USED.
23. THE CONTRACTOR SHALL PERFORM A VIDEO INSPECTION PER CONTRACT SPEC. 7-04 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.
24. NOT USED.
25. ALL CONCRETE STRUCTURES (VAULTS, CATCH BASINS, MANHOLES, OIL/WATER SEPARATORS, ETC.) SHALL BE VACUUM TESTED.
26. 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.
27. TOPS OF MANHOLES/ CATCH BASINS WITHIN PUBLIC RIGHT-OF-WAY SHALL NOT BE ADJUSTED TO FINAL GRADE UNTIL AFTER PAVING.
28. CONTRACTOR SHALL ADJUST ALL MANHOLE/ CATCH BASIN RIMS TO FLUSH WITH FINAL FINISHED GRADES, UNLESS OTHERWISE SHOWN.
29. CONTRACTOR SHALL INSTALL, AT ALL CONNECTIONS TO EXISTING DOWNSTREAM 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.
30. NOT USED.
31. 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.
32. 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.
33. NOT USED.
34. MINIMUM COVER OVER STORM DRAINAGE PIPE SHALL BE 2 FEET, UNLESS OTHERWISE SHOWN.
35. NOT USED.
36. NOT USED.
37. NOT USED.
38. NOT USED.
39. NOT USED.

SANITARY SEWER GENERAL NOTES

1. NOT USED.
2. ALL NEW MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48" AND SHALL CONFORM TO THE STANDARD DETAILS.
3. SANITARY SEWER PIPE BEDDING AND BACKFILL SHALL BE AS SHOWN IN THE STANDARD DETAILS.
4. WHERE SHOWN AS C900 PVC, THE SEWER PIPE SHALL HAVE DIMENSION RATIO (DR 18) AND CONFORM TO AWWA C900 OR AWWA C905.
5. ALL SIDE SEWERS SHALL BE 6" DIAMETER PIPE AT A MINIMUM 2% SLOPE, UNLESS OTHERWISE NOTED ON THE STANDARD DETAILS.
6. SIDE SEWER STATIONS ARE REFERENCED FROM NEAREST DOWNSTREAM MANHOLE.
7. NOT USED.
8. NOT USED.
9. NOT USED.
10. ALL TESTING AND CONNECTIONS TO EXISTING MAINS SHALL BE DONE IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT.
11. NOT USED.
12. SIDE SEWER SHALL BE TESTED FOR ACCEPTANCE AT THE SAME TIME THE MAIN SEWER IS TESTED.
13. TOPS OF MANHOLES WITHIN PUBLIC RIGHTS-OF-WAY SHALL NOT BE ADJUSTED TO FINAL GRADE UNTIL JUST PRIOR TO PAVING.
14. NOT USED.
15. CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS TO FLUSH WITH FINAL FINISHED GRADES, UNLESS OTHERWISE SHOWN.
16. ALL SEWER 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.
17. CONTRACTOR SHALL INSTALL, AT ALL CONNECTIONS TO EXISTING DOWNSTREAM MANHOLES, SCREENS OR PLUGS TO PREVENT FOREIGN MATERIALS FROM ENTERING EXISTING SANITARY SEWER SYSTEM. SCREENS OR PLUGS SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF 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.
18. NOT USED.
19. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF TEN FEET (10') HORIZONTAL SEPARATION BETWEEN ALL WATER AND SEWER LINES. ANY CONFLICTS SHALL BE REPORTED TO THE UTILITY AND THE ENGINEER PRIOR TO CONSTRUCTION.
20. THE CONTRACTOR SHALL ENSURE AND VERIFY THAT NO CONFLICTS EXIST BETWEEN SANITARY SEWER LINES AND PROPOSED OR EXISTING UTILITIES PRIOR TO CONSTRUCTION.
21. MINIMUM COVER OVER SEWER PIPE SHALL BE FIVE FEET, UNLESS OTHERWISE SHOWN.
22. NOT USED.
23. NOT USED.
24. NOT USED.
25. NOT USED.
26. NOT USED.
27. WHERE NEW UTILITY LINE CROSSES BELOW AN EXISTING AC MAIN, THE AC PIPE SHALL BE REPLACED WITH DI PIPE TO 3 FEET PAST EACH SIDE OF THE TRENCH AS SHOWN ON STANDARD DETAIL W-8. ALTERNATIVELY, WHERE DIRECTED BY THE ENGINEER, THE TRENCH SHALL BE BACKFILLED WITH CONTROLLED DENSITY FILL (CDF, AKA FLOWABLE FILL) FROM BOTTOM OF TRENCH TO BOTTOM OF THE AC MAIN.
28. NOT USED.
29. NOT USED.
30. PERFORM A VIDEO INSPECTION OF THE SANITARY PIPE INTERIOR PER CONTRACT SPEC. 9-04. THE CONTRACTOR SHALL PROVIDE COLOR CCTV EQUIPMENT SHALL INCLUDE TELEVISION CAMERAS, A TELEVISION MONITOR, CABLES, POWER SOURCES, SIDE-LAUNCH CAPABLE IF NECESSARY, AND OTHER EQUIPMENT. FOCAL DISTANCE SHALL BE ADJUSTABLE THROUGH A RANGE FROM 6 INCHES TO INFINITY. THE CCTV EQUIPMENT SHALL INCLUDE A DISTANCE MEASURING INSTRUMENT (DMI) TO MEASURE THE HORIZONTAL DISTANCE TRAVELED BY THE CAMERA. THE DMI READOUT SHALL APPEAR CONTINUOUSLY ON THE VIDEO PRODUCED BY THE INSPECTION AND SHALL BE ACCURATE TO LESS THAN 1 PERCENT ERROR OVER THE LENGTH OF THE SECTION OF PIPELINE BEING INSPECTED. FOR STORM OR SANITARY SEWERS, THE LENGTH IS MEASURED FROM THE CENTERLINE OF THE MANHOLE OR CATCH BASIN TO THE CENTERLINE OF THE NEXT MANHOLE OR CATCH BASIN.

SEE COB CITY UTILITY STANDARDS SECTION S5-13, CLOSED CIRCUIT TELEVISION (CCTV) SANITARY SEWER INSPECTION FOR VIDEO FORMATTING, NAMING, AND DELIVERY REQUIREMENTS. THE CCTV INSPECTION SYSTEM SHALL BE PERFORMED UTILIZING ONE OF THE FOLLOWING VIDEO CAMERA SYSTEMS:

- REMOTE-FOCUS STATIONARY LENS CAMERAS;
- ROTATING LENS CAMERAS; OR
- PAN-AND-TILT CAMERAS.

THE CCTV CAMERA SHALL BE MOUNTED ON A SKID, FLOATABLE RAFT SYSTEM, OR TRANSPORTER BASED ON THE CONDITIONS OF THE PIPELINE TO BE TELEVISED. TELEPHONES, RADIOS, OR OTHER SUITABLE MEANS OF COMMUNICATION SHALL BE UTILIZED TO ENSURE COMMUNICATION EXISTS BETWEEN MEMBERS OF THE CREW. THE CONTRACTOR SHALL INSPECT THE PIPELINE DURING OPTIMUM LOW-FLOW LEVEL CONDITIONS, AS PRE-APPROVED BY THE UTILITY INSPECTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY INSPECTOR PRIOR TO VIDEO INSPECTION. THE TELEVISION CAMERA UTILIZED SHALL BE SPECIFICALLY DESIGNED AND CONSTRUCTED FOR SEWER INSPECTION. THE CAMERA SHALL BE OPERATIVE IN 100 PERCENT HUMIDITY CONDITIONS. LIGHTING FOR THE CAMERA SHALL MINIMIZE REFLECTIVE GLARE. LIGHTING AND PICTURE QUALITY SHALL BE SUITABLE TO PROVIDE A CLEAR, IN-FOCUS PICTURE OF THE ENTIRE PERIPHERY OF THE PIPELINE FOR ALL CONDITIONS ENCOUNTERED DURING THE WORK. IF THE QUALITY OF THE VIDEO IS DEEMED TO BE UNACCEPTABLE BY THE UTILITY INSPECTOR, THE PIPELINE SHALL BE RE-TELEVISED AT NO COST TO THE CITY. THE CAMERA SHALL BE MOVED THROUGH THE PIPELINE AT A UNIFORM RATE, STOPPING WHEN NECESSARY TO ENSURE PROPER DOCUMENTATION OF THE PIPELINE CONDITION, BUT IN NO CASE SHALL THE TELEVISION CAMERA BE PULLED AT A SPEED GREATER THAN 30 FEET PER MINUTE STOPPING WHEN NECESSARY TO ENSURE PROPER DOCUMENTATION OF THE PIPE CONDITION. THE VIDEO SHALL BE TAKEN AFTER INSTALLATION, CLEANING, AND PRESSURE TEST TO INSURE THAT NO DEFECTS EXIST. THE PROJECT WILL NOT BE ACCEPTED UNTIL ALL DEFECTS HAVE BEEN REPAIRED.

31. NOT USED
32. NOT USED

TRANSPORTATION DEPARTMENT CONSTRUCTION NOTES

1. NOT USED.
2. 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.
3. 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.).
4. 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.
5. THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR MAY ISSUE A STOP WORK ORDER IF APPROVED PLANS ARE NOT AVAILABLE AT THE SITE WHEN NEEDED.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY RIGHT OF WAY USE PERMITS BEFORE BEGINNING WORK.
7. 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.
8. NOT USED.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY TELEPHONE, GAS, POWER, AND CABLE TV COMPANIES OF PROPOSED WORK PRIOR TO CONSTRUCTION.
10. 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.
11. 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.
12. NOT USED.
13. 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.
14. NOT USED.
15. 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.
16. RELOCATION OF STREET SIGNS MUST BE COORDINATED WITH THE TRANSPORTATION DEPARTMENT CONSTRUCTION INSPECTOR.
17. NOT USED.
18. DRIVEWAY APRONS MUST BE PLACED AND CONSTRUCTED PER THE CITY OF BELLEVUE TRANSPORTATION DEPARTMENT DESIGN MANUAL.
19. NOT USED.
20. THE CONTRACTOR MUST CALL FOR CONCRETE FORM INSPECTION AND/OR STRING INSPECTION PRIOR TO POURING CONCRETE.
21. 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.
22. 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.
23. 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.

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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www.tetratech.com
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Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

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PROJECT MANAGER DATE

GMS
DESIGNED BY DATE
ACF
DRAWN BY DATE
GG
CHECKED BY DATE

City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NOTES

G3

SHT 03 OF 58

Path: P:\TI427 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\3 G3_NOTES.dwg Plot date: Dec 11, 2017-01:07:23pm CAD User: Adam.Forcier.
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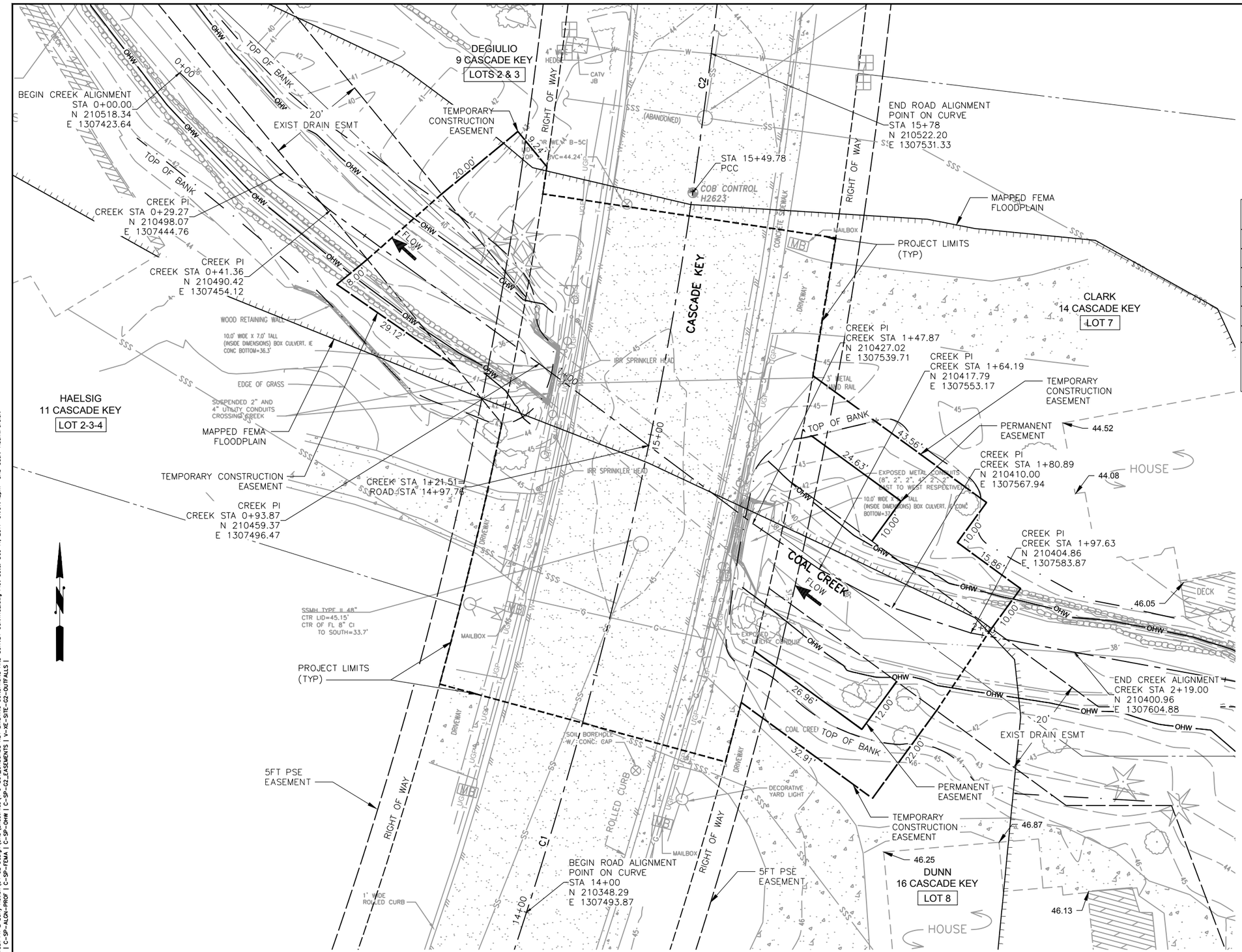

CITY OF BELLEVUE CONTROL POINTS

ID	DESCRIPTION	NORTHING	EASTING	ELEVATION
H2623/V421	4"X4" CONC. MON. W/ ½" DIA. BRASS PLUG CASE	210494.06	1307527.54	43.89
H2622 (NOT SHOWN)	PK NAIL W/ COB DISK #2622. IN ASPHALT ON SE SIDE OF CASCADE KEY BETWEEN RESIDENCES #18 & #20 CASCADE KEY	210211.61	1307452.14	--

ROAD CURVE DATA TABLE

CURVE NO.	PI STATION	DELTA Δ	RADIUS	TANGENT	LENGTH
C1	12+83.77	35°00'00"	900.00'	283.77	549.78'
C2	17+24.48	15°18'27"	1300.00'	174.70	347.32'

INCOMING BEARING AT STA 10+00.00	N 43°14'14" E
BEARING PI STA 12+83.77 TO PI STA 17+24.48	N 08°14'14" E
OUTGOING BEARING FROM PI STA 17+24.48	N 07°04'13" W
PC STATION 10+00 (NOT SHOWN)	
NORTHING 210006.48	
EASTING 1307292.49	

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.

DATUM
NAVD 88

0 5 10 15 20
SCALE IN FEET

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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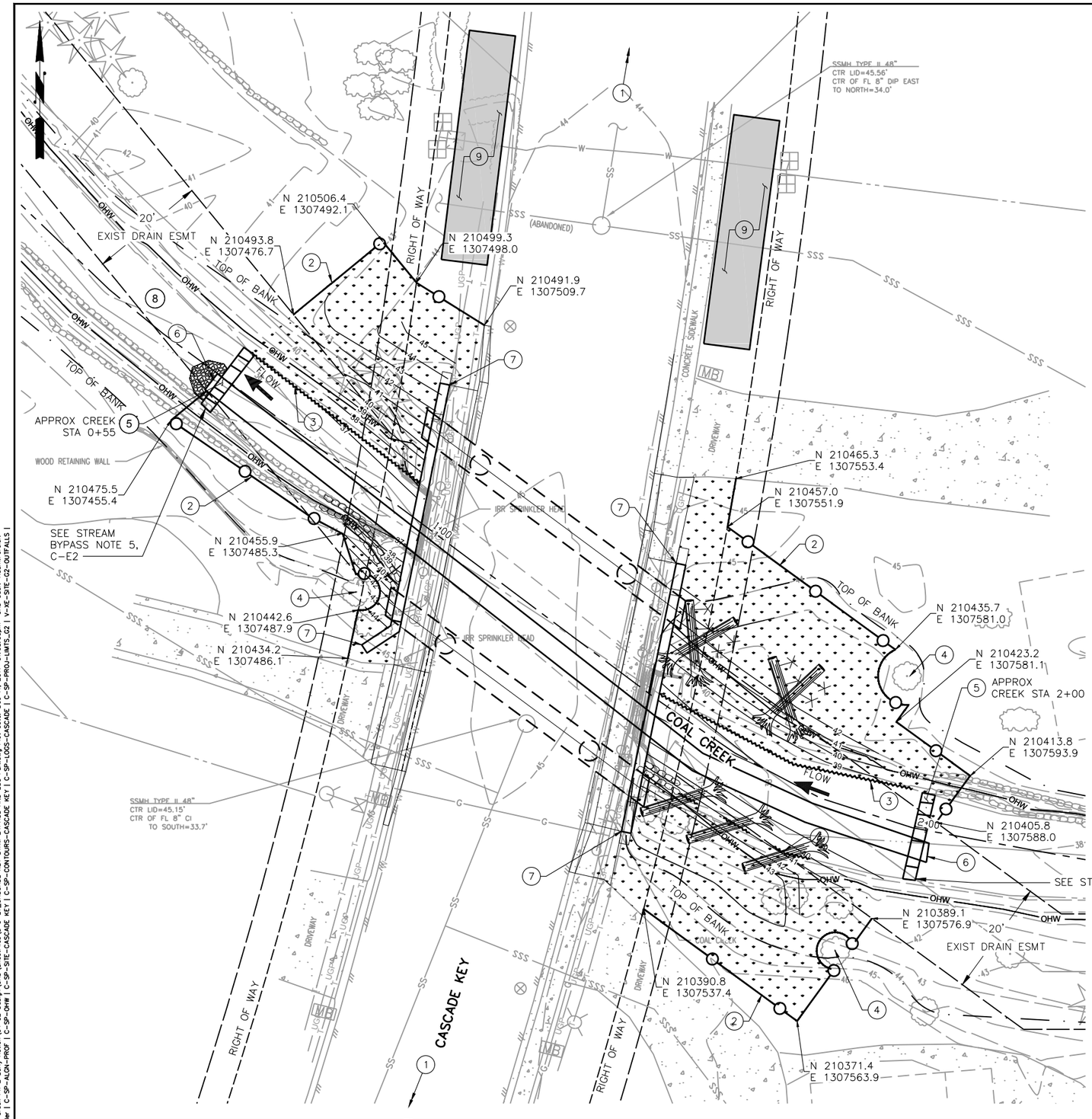
City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY EXISTING CONDITIONS AND SURVEY CONTROL

C-EC1 | SHT 04 OF 58



CONSTRUCTION NOTES:

1. CATCH BASIN INLET PROTECTION PER COB BMP C220. INSTALL ON ALL CB WITHIN 200 FT DOWNSTREAM OF PROJECT.
2. HIGH VISIBILITY FENCE PER WSDOT STANDARD PLAN I-10.10-01, APPROX 260 LF
3. COIR LOG PLACEMENT, SEE DETAIL 1/C-E2, APPROX 120 LF.
4. TREE PROTECTION PER COB BMP T101, EXCEPT FOR WEED CONTROL.
5. TEMPORARY GRAVEL BAG BERM
6. TEMPORARY STREAM BYPASS PIPELINE. MINIMUM 42" DIA SMOOTH BORE AND 62 CFS CAPACITY, APPROX 150 LF.
7. PROTECT NEW BRIDGE WING WALLS AFTER CONSTRUCTION DURING SITE ACCESS.
8. ESTABLISH TURBIDITY MONITORING LOCATION WITHIN 50 FT DOWNSTREAM OF STREAM BYPASS END.
9. SUGGESTED BAKER TANK LOCATION. FINAL LOCATION BY CONTRACTOR.

EROSION & SEDIMENTATION CONTROL NOTES:

1. SEE SHEET G2 FOR ABBREVIATIONS AND SYMBOLS.
2. SEE SHEET C-E2 FOR COB STANDARD EROSION CONTROL NOTES AND EROSION & SEDIMENTATION CONTROL NOTES.
3. SEE SHEETS C-L1 & C-L2 FOR PERMANENT VEGETATION RESTORATION (NURSERY PLANTINGS). NOTE LOCATIONS TO RECEIVE TOPSOIL.
4. SEE SHEET C-EC1 FOR ROAD AND CREEK ALIGNMENTS.

STREAM BYPASS NOTES:

1. SEE SHEET C-E2 FOR STREAM BYPASS NOTES.

LEGEND:

- BIODEGRADABLE EROSION CONTROL BLANKET PER COB BMP C122. NO WOOD CHIP MULCH. LANDSCAPE PER SHEET C-L1.
- HIGH VISIBILITY FENCE
- COIR LOG

DATUM
NAVD 88

0 5 10 15 20
SCALE IN FEET

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City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY STREAM BYPASS AND ESC PLAN

C-E1 | SHT 05 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\5 C-E1_CASCADE KEY STRM BYPASS AND ESC PLN.dwg Plot date: Dec 11, 2017-01:08:00pm CAD User: Adam.Forcier
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EROSION CONTROL GENERAL NOTES

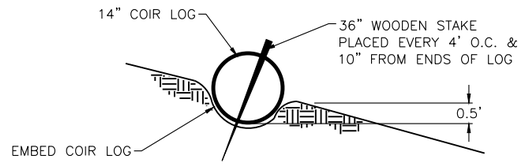
1. ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF BELLEVUE (COB) CLEARING & GRADING CODE, CLEARING & GRADING DEVELOPMENT STANDARDS, LAND USE CODE, UNIFORM BUILDING CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE 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.
2. NOT USED.
3. NOT USED.
4. 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.
5. 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.
6. 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.
7. NOT USED.
8. 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.
9. 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.
10. 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.
11. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT.
12. 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.
13. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
14. 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.
15. 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.
16. FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM 5% SLOPE, PER THE INTERNATIONAL RESIDENTIAL CODE (IRC) R401.3.
17. THE CONTRACTOR SHALL PREPARE AN UPDATE TO THE 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.

EROSION & SEDIMENTATION CONTROL NOTES:

1. EXPOSED SOIL SHALL BE COVERED IN ACCORDANCE WITH COB EROSION CONTROL GENERAL NOTE 9. SOIL COVERING SHALL BE SELECTED FROM COB BMP C120-TEMPORARY SEEDING, COB BMP C121-MULCHING, COB BMP C122-EROSION CONTROL NETS AND BLANKETS, OR COB BMP C123-PLASTIC COVERING FOR SLOPES AND STOCKPILES, AS APPROPRIATE.
2. 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.
3. 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.
4. 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 SWEPT FOLLOWING CONSTRUCTION ACTIVITIES WHEN DIRECTED BY THE ENGINEER.
5. 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 BYPRODUCTS, AND CONSTRUCTION MATERIALS.
6. REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DONE AFTER THE WORKING AREA IS STABILIZED OR AS DIRECTED BY THE ENGINEER.

STREAM 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, GRAVEL 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 BANKS DURING RAINFALL EVENTS OR FLOWS GREATER THAN BASE FLOW BEFORE THE BYPASS IS IN PLACE.
9. MATERIALS USED FOR DIVERSION SHALL BE REMOVED FROM THE SITE AT THE COMPLETION OF THE PROJECT.



COIR LOG PLACEMENT 1
SCALE: NTS C-E1 & N-E1

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY STREAM BYPASS AND ESC NOTES

C-E2 SHT 06 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 G2 Design\CAD\Sheetfiles\6 C-E2_CASCADE KEY STRM BYPASS AND ESC PLN.dwg Plot date: Dec 11, 2017-01:08:15pm CAD User: Adam.Forcier.
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SITE PREPARATION NOTES

1. REMOVE EXISTING CONCRETE BOX CULVERT, WINGWALLS AND PEDESTRIAN RAIL.
2. REMOVE EXISTING SANITARY SEWER MANHOLE AND 8" SEWER PIPE, SEE SHEET C-C2. STA 14+70.0 TO STA 14+78.0±.
3. REMOVE EXISTING TREE.
4. SAWCUT EXISTING ROAD, SIDEWALK, AND ROLLED CURB.
5. REMOVE EXISTING 8" CI WM. SEE C-C1 FOR NEW WATER LINE. STA 14+80.90 TO STA 15+41.80
6. REMOVE ABANDONED AND DECOMISSIONED GEOTECHNICAL WELL CASING AND SURFACE MONUMENT TO THE DEPTH NEEDED FOR CONSTRUCTION.
7. RELOCATE STREET SIGN, SEE SHEET C-C1 FOR LOCATION.
8. RELOCATE GAS MAIN (EAST SIDE) AND UNDERGROUND POWER (EAST AND WEST SIDE) BY OTHERS (PSE).
9. RELOCATE TELEPHONE AND CABLE, BY OTHERS (CENTURYLINK, COMCAST).
10. REMOVE EXISTING CONCRETE DRIVEWAY.
11. SALVAGE SHRUBS, BY OTHERS (PROPERTY OWNER). CONTRACTOR SHALL PROVIDE 2 WEEKS NOTICE TO PROPERTY OWNER.
12. PROTECT EXISTING SURVEY MONUMENT DURING CONSTRUCTION.
13. SAWCUT EXISTING CONCRETE DRIVEWAY AT CONSTRUCTION JOINT. PROTECT EXISTING DECORATIVE CONCRETE DRIVEWAY BEYOND SAWCUT.
14. REMOVE EXISTING IRRIGATION IMPACTED BY CONSTRUCTION. CAP IRRIGATION LATERAL PRIOR TO REMOVAL.

GENERAL NOTES:

1. SEE SHEET G2 FOR GENERAL NOTES.
2. SEE SHEET G3 FOR WATER GENERAL NOTES, STORM DRAINAGE GENERAL NOTES, SANITARY SEWER GENERAL NOTES, AND TRANSPORTATION DEPARTMENT CONSTRUCTION NOTES.

LEGEND

- STORM DRAIN/WATER/SEWER REMOVAL
- CONCRETE DRIVEWAY/SIDEWALK/ROLLED CURB REMOVAL

NAVD 88

0 5 10 15 20
SCALE IN FEET

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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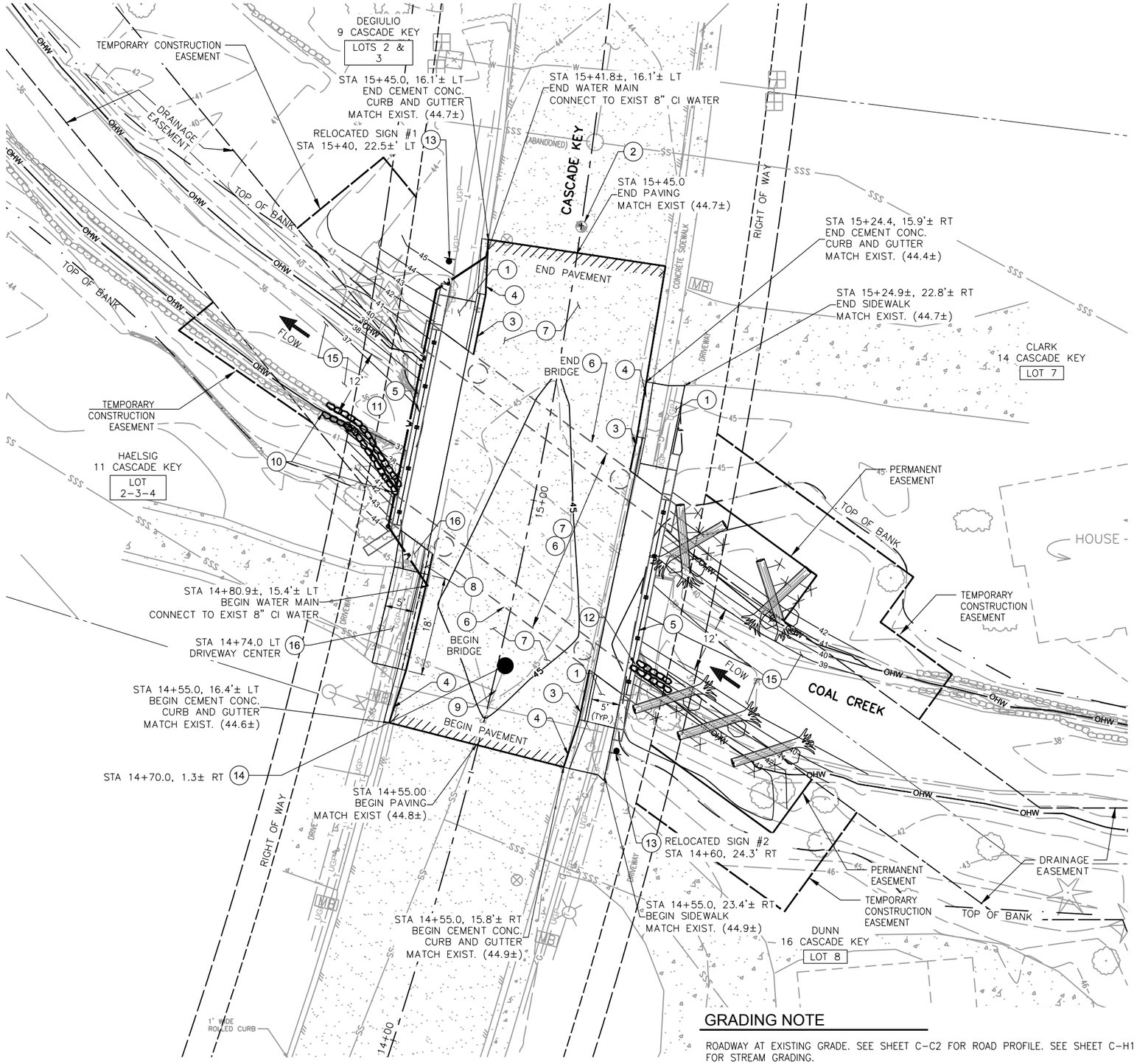
City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY SITE PREPARATION PLAN

C-SP1 SHT 07 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\7 C-SP1_CASCADE KEY SITE PREP PLAN.dwg Plot date: Dec 11, 2017-01:08:29pm CAD User: Adam.Forcier.
Xref Filename: | C-SP-SITE-CASCADE KEY | Group2-border | C-SP-ALGN-PROF | C-SP-FEMA | C-SP-GRW | C-SP-SITE-CASCADE KEY | C-SP-02_EASEMENTS | V-XE-SITE-02-OUTFALLS |

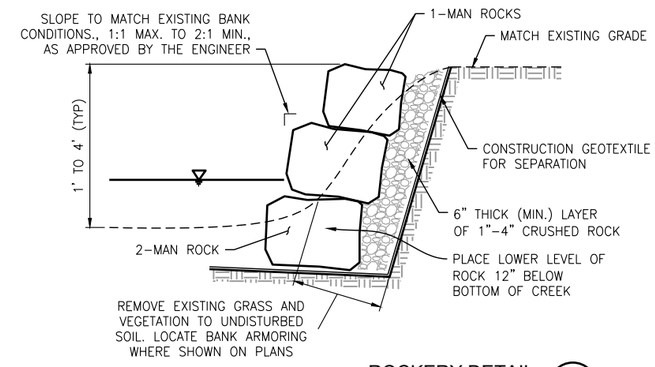


GRADING NOTE

ROADWAY AT EXISTING GRADE. SEE SHEET C-C2 FOR ROAD PROFILE. SEE SHEET C-H1 FOR STREAM GRADING.

CONSTRUCTION NOTES:

1. CEMENT CONCRETE SIDEWALK, SEE COB STD DETAIL SW-110-1/C-C5.
2. PROTECT EXISTING SURVEY MONUMENT DURING PAVING OPERATIONS.
3. CEMENT CONCRETE TRAFFIC CURB AND GUTTER, SEE COB STD DETAIL SW-100-1/C-C5.
4. TRANSITION ROLLED CURB TO CEMENT CONCRETE TRAFFIC CURB AND GUTTER, SEE 2/C-C4.
5. BRIDGE RAIL WITH MIN TL-1 RATING, SEE SHEET C-B13.
6. BRIDGE, SEE SHEETS C-B1 TO C-B16. STA 14+79.70 TO STA 15+16.12.
7. SEE TYPICAL ROADWAY APPROACH AND BRIDGE SECTIONS FOR PAVING 4/C-C4 AND 3/C-C4.
8. TRANSITION DRIVEWAY CURB TO MATCH HEIGHT OF BRIDGE SIDEWALK SLAB.
9. CONTRACTOR SHALL POTHOLE LOCATION OF SIDE SEWER CONNECTION PRIOR TO EXCAVATION FOR NEW SEWER MH. REPORT ANY CONFLICTS TO THE ENGINEER.
10. ROCKERY ON STREAM BANK. TIE INTO EXIST STREAM ROCKERY, APPROX. 40 SF. SEE 1/-.
11. ATTACH WATER MAIN TO BRIDGE, SEE SHEET C-C3 FOR WATER MAIN PROFILE. SEE A/C-B12 FOR WATER MAIN SUPPORTS ON BRIDGE.
12. ROCKERY ON STREAM BANK, APPROX. 20 SF. SEE 1/-.
13. RELOCATED SIGN, INSTALL SIGN PER COB STD SG-100-1/C-C5.
14. SANITARY SEWER MANHOLE TYPE 1, 48" DIA. SEE COB STD DETAIL S-1. CONNECT TO EXIST 8" AC SEWER PER COB STD DETAIL S-7.
15. SEE SHEET C-H1 FOR CHANNEL GRADING AND HABITAT STRUCTURES.
16. CEMENT CONCRETE DRIVEWAY APPROACH SEE 1/C-C2.



ROCKERY DETAIL 1/-
SCALE: NTS

GENERAL NOTES

1. SEE SHEET G2 AND G3 FOR GENERAL, WATER, STORM DRAINAGE, SEWER AND TRANSPORTATION NOTES.
2. SEE SHEET C-EC1 FOR ROAD ALIGNMENT.
3. SEE WATER MAIN PROFILE, SHEET C-C3 FOR JOINT RESTRAINTS AND HORIZONTAL THRUST BLOCKS.
4. CONTRACTOR TO RELOCATE WATER PIPE ACROSS BRIDGE.
5. RELOCATION OF TELEPHONE (CENTURYLINK), UNDERGROUND POWER (PSE), CABLE (COMCAST), AND GAS (PSE) BY OTHERS.

PAVING NOTES

1. GRIND AND OVERLAY LIMITS FOR FRANCHISE UTILITY TRENCHING MAY BE ADJUSTED BY THE TRANSPORTATION INSPECTOR BASED ON FIELD CONDITIONS AND FINAL LOCATIONS OF STREET CUTS FOR FRANCHISE UTILITIES.
2. ANY DAMAGE TO THE ROADWAY CAUSED DURING CONSTRUCTION MUST BE RESTORED AT THE DIRECTION OF THE TRANSPORTATION INSPECTOR.

DATUM
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City of Bellevue
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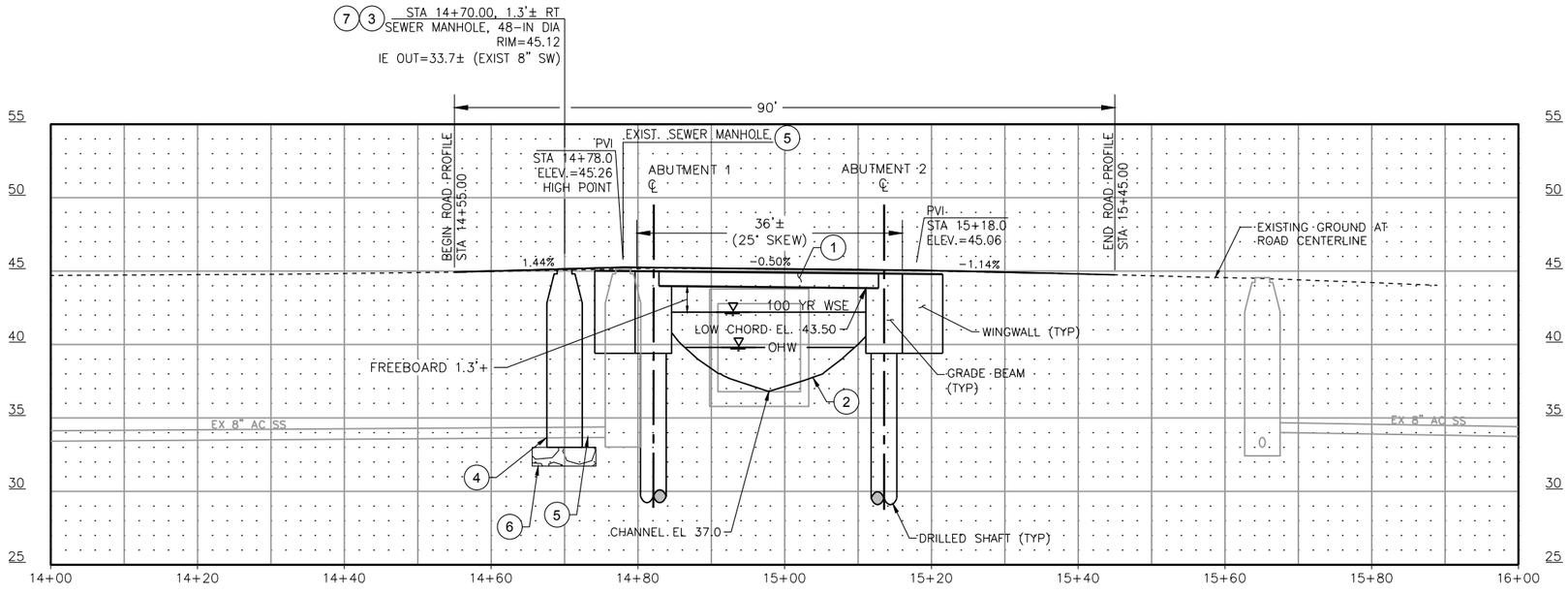
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY ROAD PLAN

C-C1

SHT 08 OF 58



ROAD PROFILE – CASCADE KEY
SCALE: HORIZ: 1"= 10' VERT: 1"=5'

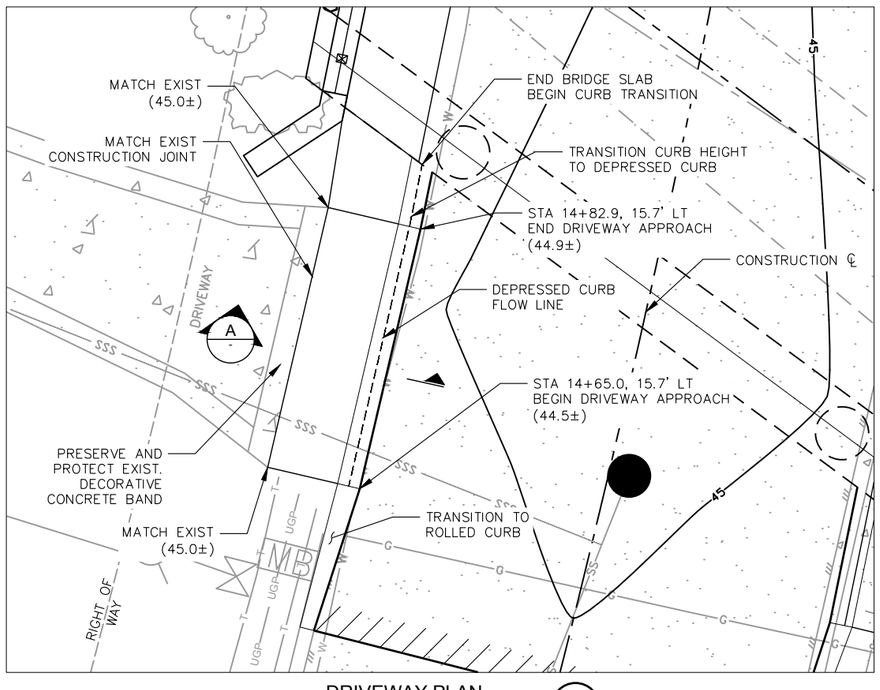
CONSTRUCTION NOTES:

1. SEE C-B1 TO C-B6 FOR BRIDGE.
2. SEE B/C-H2 FOR CREEK SECTION UNDER BRIDGE.
3. SANITARY SEWER MANHOLE TYPE 1, 48" DIA. PER COB STD DETAIL S-1.
4. CONNECT EXISTING 8" AC SEWER TO SEWER MANHOLE, PER COB STD DETAIL S-7.
5. SEE SHEET C-SP1 FOR SEWER REMOVALS.
6. 2' THICK, 4" QUARRY SPALLS WRAPPED IN GEOTEXTILE FABRIC, TOPPED WITH 2" MINUS CRUSHED ROCK LEVELING COURSE.
7. DEWATERING WILL BE REQUIRED FOR SANITARY SEWER MANHOLE INSTALLATION.

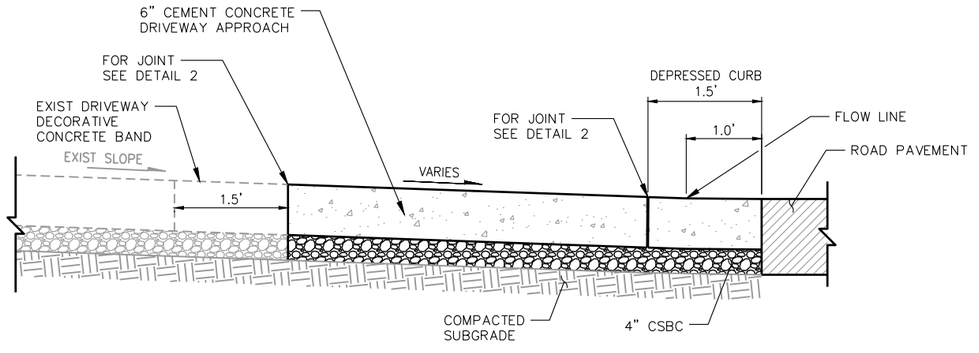
STATION/OFFSET NOTE:

1. ALL STATIONS ARE ROAD ALIGNMENT STATIONS UNLESS OTHERWISE NOTED.
2. STATIONS AND OFFSETS ARE SHOWN TO CENTER OF STRUCTURE, EXCEPT OTHERWISE NOTED.

0 5 10 15 20
SCALE IN FEET

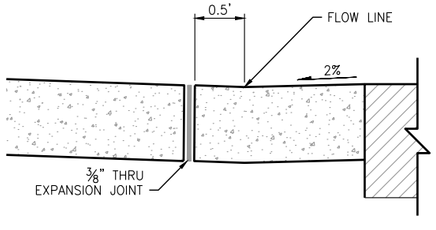


DRIVEWAY PLAN
SCALE: 1" = 5'
1 / C-C1



DRIVEWAY NOTES:
1. ALL JOINTS SHALL BE CLEANED AND EDGED.
2. CONCRETE SHALL BE A CLASS 4000 P.C.C. MIX WITH COMPRESSIVE STRENGTH OF 3000 PSI WITHIN 3 DAYS
3. CONCRETE APPROACH SHALL BE BRUSHED WITH A FIBER OR WIRE BRUSH OF A TYPE APPROVED BY THE ENGINEER, PERPENDICULAR TO THE WALKING DIRECTION.
4. ⅜" THRU EXPANSION JOINTS SHALL BE PLACED AT BACK, SIDES AND FRONT. MAXIMUM EXPANSION JOINT SPACING IS 14' CENTER TO CENTER.

CEMENT CONCRETE
DRIVEWAY APPROACH SECTION
SCALE: NTS
A / –



DETAIL 2
SCALE: NTS

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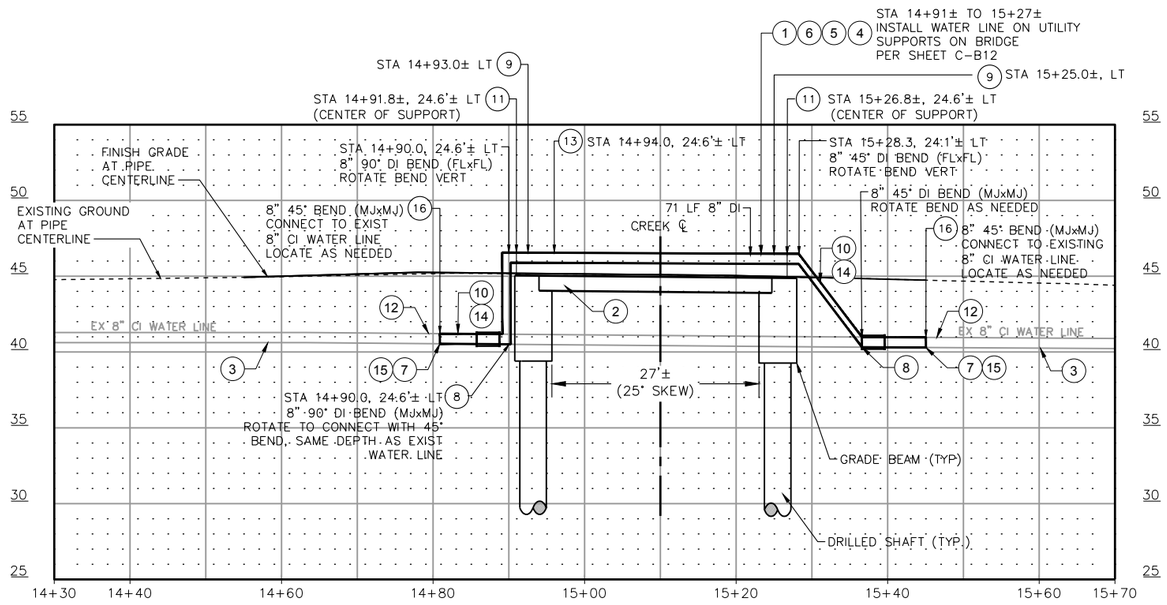
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY ROAD
PROFILE AND DETAILS

C-C2 | SHT 09 OF 58



WATER PROFILE – CASCADE KEY
SCALE: HORIZ: 1"= 10' VERT: 1"=5'

PIPE SUPPORT ON BRIDGE ENDCAP NOTES:

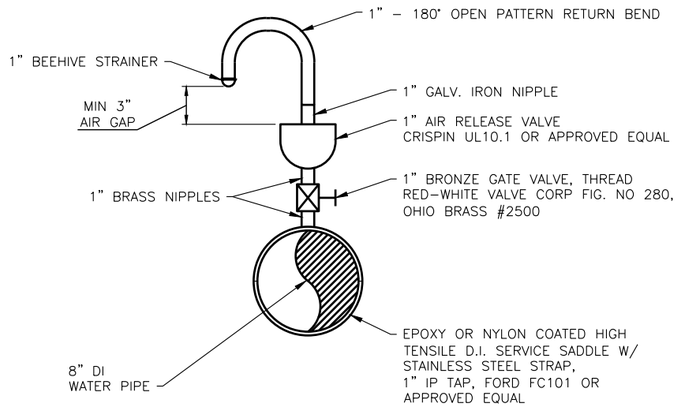
1. SEE SHEET C-B4 FOR BRIDGE ENDCAP REBAR.
2. INSERTS SHALL BE DAYTON SUPERIOR F64 FERRULE LOOP OR APPROVED EQUAL WITH 4" MIN. EMBEDMENT DEPTH AND MIN. SAFE WORKING LOAD OF 3,000 LBS IN TENSION AND 1,800 LBS IN SHEAR.

CONSTRUCTION NOTES:

1. PROVIDE RESTRAINED JOINTS ON NEW WATER PIPE & FITTINGS.
2. SEE C-B1 TO C-B6 FOR BRIDGE.
3. LOCATION AND DEPTH SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL POTHOLE TO DETERMINE EXACT LOCATION AND DEPTH PRIOR TO CONSTRUCTION.
4. PROVIDE PIPE INSULATION W/ ALUMINUM JACKETING ON EXPOSED WATER PIPE STA 14+88± TO 15+30±. ATTACH INSULATION WITH METAL BANDING. INSTALL INSULATION BETWEEN UTILITY SUPPORTS. SEE CONTRACT SPECS SECTION 10-01.
5. INSTALL EPDM WEAR PAD, 1/4" THICK, UNDER PIPE AT ALL UTILITY SUPPORTS. ADVANTEK FRP BY ADVANTAGE INDUSTRIAL SOLUTIONS OR APPROVED EQUAL.
6. PLACE PIPE BELL JOINT IN MIDDLE OF BRIDGE.
7. HORIZONTAL THRUST BLOCK AT CONNECTION TO EXISTING MAIN, SEE COB STD DETAIL W-1. PROVIDE MIN. 7SF BEARING AREA AGAINST UNDISTURBED SOILS.
8. INSTALL PIPE RESTRAINT GLAND (ROMAC 611 OR EQUAL) ON PIPE. INSTALL (2) EYE BOLTS AT BEND MJ FITTING, ON OPPOSITE SIDES OF THE PIPE. CONNECT PIPE GLAND AND EYE BOLTS WITH (2) 316SS ALL-THREAD, 36" LONG. MATERIALS SHALL BE COMPATIBLE WITH JOINT RESTRAINT SYSTEM.
9. 8" DI SLEEVE (MJxMJ), LONG PATTERN.
10. INSTALL FLEX-TEND SERIES 4408F20B, FORCE BALANCED FLEXIBLE EXPANSION JOINT, OR APPROVED EQUAL.
    STA 14+85.4± (CENTER OF JOINT)
    STA 15+31.4± (CENTER OF JOINT)
11. INSTALL SADDLE PIPE SUPPORT, STANDON MODEL C92, OR APPROVED EQUAL. ATTACH PIPE SUPPORT BASEPLATE (4"x6") TO TOP OF BRIDGE ENDCAP USING 1/2" DAYTON SUPERIOR F64 FERRULE LOOP INSERTS, WITH NC THREADED BOLTS. CONTRACTOR SHALL PROVIDE 2" SCH 40 STEEL EXTENSION PIPE, LENGTH AS REQUIRED, PER MANUFACTURER'S PIPE SUPPORT INSTALLATION GUIDE. WELD EXTENSION PIPE TO BASE AND COLLAR AFTER INSTALLATION, AS NOTED IN THE MANUFACTURER'S PIPE SUPPORT INSTALLATION GUIDE.
12. CUT AND INSTALL TEMPORARY CAP ON EXISTING WATER LINE AT BOTH ENDS BEFORE STARTING DEMOLITION OF THE EXISTING CONCRETE BOX CULVERT.
13. AIR RELEASE VALVE (WATER) SEE 1/-.
14. PROVIDE MIN 7FT LENGTH BETWEEN PIPE BENDS FOR INSTALLATION OF FLEX-TEND EXPANSION JOINT.
15. EXPOSE EXISTING PIPE TO NEXT PIPE JOINT BEYOND CONNECTION. MIN. INSTALL JOINT RESTRAINT AT EXISTING PIPE JOINT. NEXT EXISTING JOINT MAY BE FARTHER THAN MIN RESTRAIN LENGTH (12'). JOINT RESTRAINT GLANDS SHALL BE ROMAC 611 OR EQUAL.
16. MJ GLAND ON EXIST PIPE SHALL BE COMPATIBLE WITH CAST IRON.

STATION/OFFSET NOTE:

1. ALL STATIONS ARE ROAD ALIGNMENT STATIONS UNLESS OTHERWISE NOTED.



VALVE NOTE:
ORIENT VALVE HANDLE PARALLEL WITH BRIDGE

INSULATION FOR AIR RELEASE VALVE:
REMOVABLE INSULATION JACKET BY THERMAXX (WEST HAVEN, CT) OR APPROVED EQUAL. INSULATION THICKNESS AS REQUIRED TO PROTECT TO -10°F (-23°C).
WWW.THERMAXXJACKETS.COM

1/– AIR RELEASE VALVE (WATER)
SCALE: NTS

DATUM
NAVD 88

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FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY WATER
PROFILE

C-C3 SHT 10 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\V10 C-C3_CASCADE KEY CRK WM PROF.dwg Plot date: Dec 11, 2017-01:09:22pm CAD User: Adam.Forcier.
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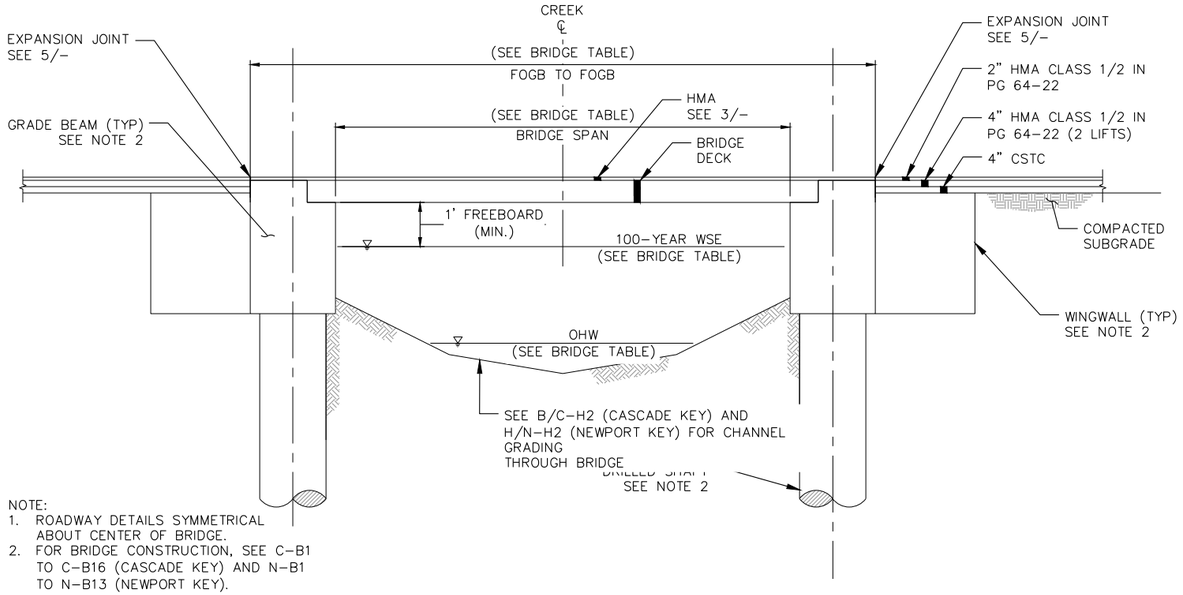
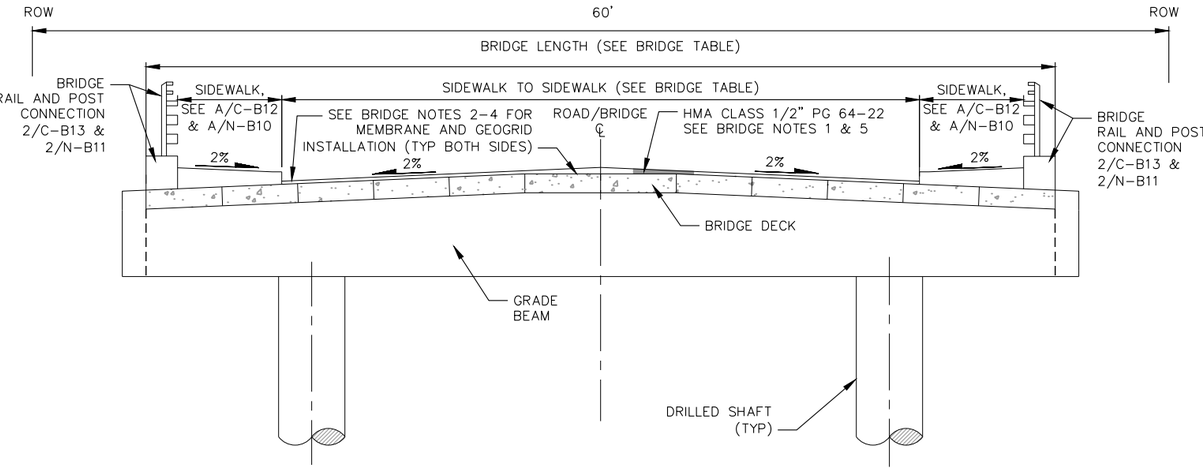


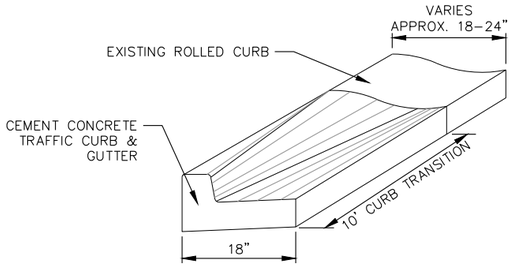
NOTE:
1. ROADWAY DETAILS SYMMETRICAL ABOUT CENTER OF BRIDGE.
2. FOR BRIDGE CONSTRUCTION, SEE C-B1 TO C-B16 (CASCADE KEY) AND N-B1 TO N-B13 (NEWPORT KEY).

BRIDGE SECTION AT CENTERLINE

SCALE: NTS — 1 — C-C1 & N-C1



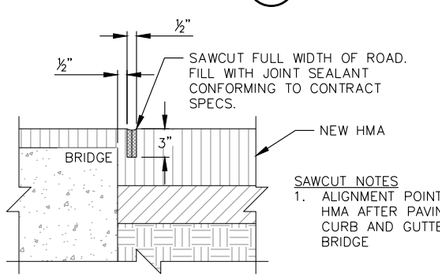
BRIDGE NOTES:
1. MINIMUM HMA THICKNESS 2".
2. INSTALL WATERPROOF MEMBRANE AGAINST BRIDGE DECK PER MANUFACTURERS RECOMMENDATIONS. WRAP MEMBRANE UP SIDES OF SIDEWALK EDGE 0.1 FEET.
3. APPLY TACK COAT TO MEMBRANE PRIOR TO INSTALLING GEOGRID. TACK COAT TO BE PER MANUFACTURER'S RECOMMENDATIONS.
4. INSTALL GEOGRID PER MANUFACTURER'S RECOMMENDATIONS. WRAP GEOGRID UP SIDES OF SIDEWALK EDGE 0.1 FT.
5. HMA DEPTH VARIES, MAX 2" THICK LIFTS FOR HMA PAVING.



CURB NOTES:
1. TRANSITIONS SHALL BE ACCOMPLISHED BY THE USE OF DIRECT STRAIGHT LINE TRANSITIONS OF THE FLOW LINE AND OTHER SURFACE FEATURES.

ROLLED CURB TRANSITION DETAIL

SCALE: NTS — 2 — C-C1 & N-C1



SAWCUT NOTES
1. ALIGNMENT POINTS FOR SAWCUT OF HMA AFTER PAVING IS THE END OF CURB AND GUTTER ADJACENT TO BRIDGE

EXPANSION JOINT

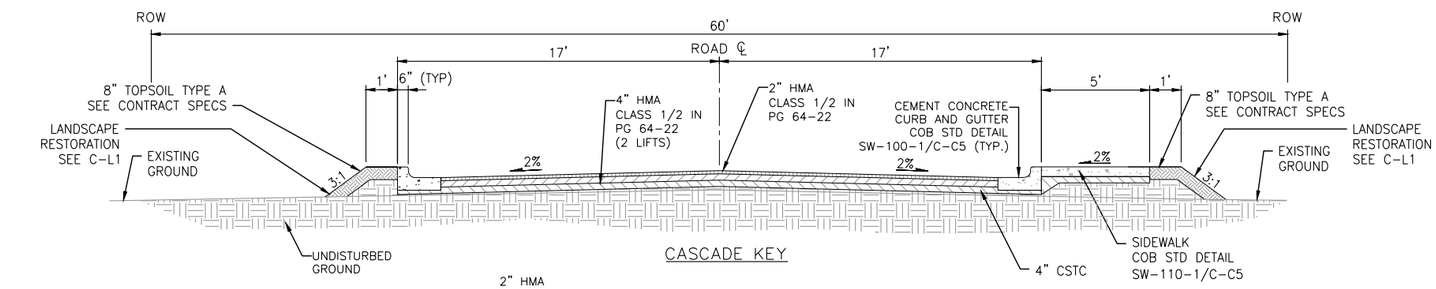
SCALE: NTS — 5 — –

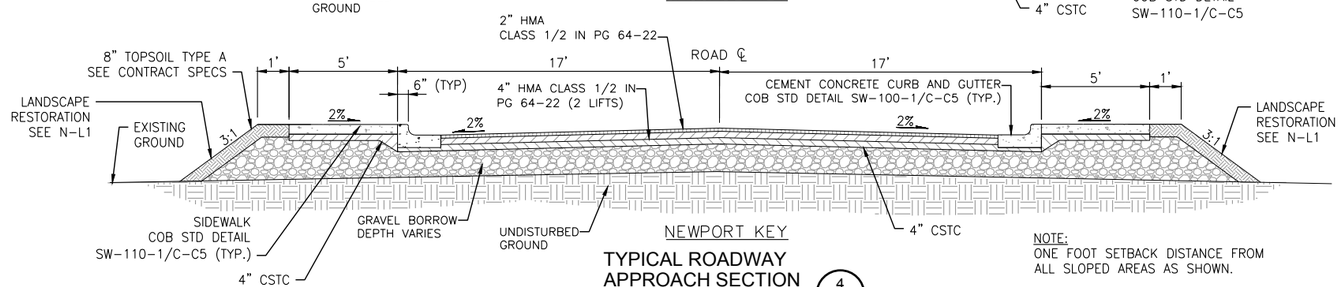
BRIDGE TABLE

LOCATION	FOGB TO FOGB	SPAN	100 YR WSE NAVD 88	OHW NAVD 88	BRIDGE LENGTH	SWLK TO SWLK
CASCADE KEY	36.4'± (25° SKEW)	27'± (25° SKEW)	42.2	39.8±	53.0'± (25° SKEW)	37.1'± (25° SKEW)
NEWPORT KEY	33'	24'	26.8	23.4±	48.0'	33'-8"

TYPICAL BRIDGE SECTION

SCALE: NTS — 3 — C-C1 & N-C1





NOTE:
ONE FOOT SETBACK DISTANCE FROM ALL SLOPED AREAS AS SHOWN.

TYPICAL ROADWAY APPROACH SECTION

SCALE: NTS — 4 — C-C1 & N-C1

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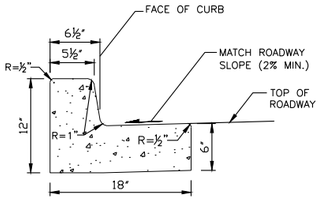
GG CHECKED BY — DATE

City of Bellevue UTILITIES

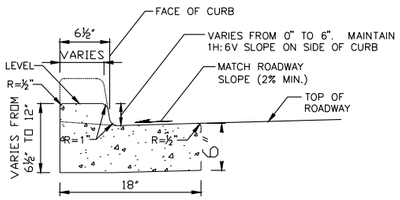
FLOOD HAZARD REDUCTION PROJECT
MISCELLANEOUS DETAILS AND DRIVEWAY PROFILE

C-C4 — SHT 11 OF 58

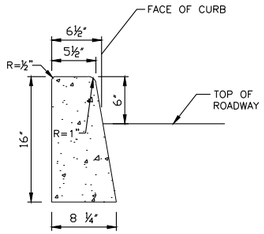
Path: P:\174271 Lower Cool Creek Ph 2 Early Action\04 CD Design\CAD\Sheetfiles\11 C-C4_CASCADE KEY MISC DTLS AND DWY PROF.dwg Plot date: Dec 11, 2017-01:09:31pm CAD User: Adam.Forcier.
Xref Filename: | Group2-border | C-SP-SITE-CASCADE KEY | C-SP-WINGWALL DETAILS |



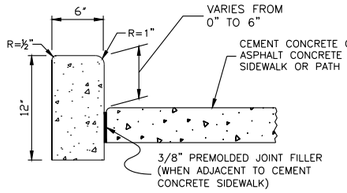
CEMENT CONCRETE TRAFFIC CURB AND GUTTER



DEPRESSED CURB SECTION



CEMENT CONCRETE TRAFFIC CURB

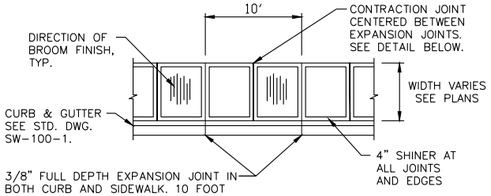


CEMENT CONCRETE PEDESTRIAN CURB

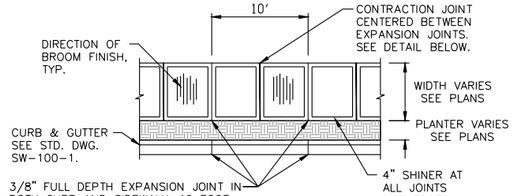
NOTES:

1. ALL CEMENT CONCRETE CURBS SHALL BE CONSTRUCTED WITH AIR ENTRAINED CONCRETE CLASS 3000 CONFORMING TO WSDOT STD. SPEC. 6-02 EXCEPT AS SPECIFIED IN NOTE 2.
2. CEMENT CONCRETE CURB OR CURB AND GUTTER ALONG THE FULL WIDTH OF A DRIVEWAY ENTRANCE SHALL BE CONSTRUCTED WITH AIR ENTRAINED CONCRETE CLASS 4000 CONFORMING TO WSDOT STD. SPEC. 6-02.
3. REMOVAL/REPLACEMENT OF CEMENT CONCRETE CURB SHALL BE FROM EXPANSION JOINT TO EXPANSION JOINT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

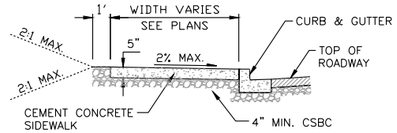
CEMENT CONCRETE CURBS
COB STD SW-100-1



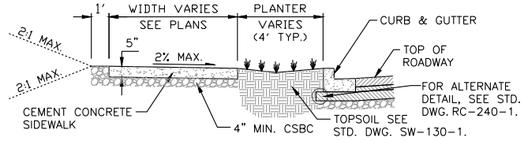
PLAN – CURBSIDE SIDEWALK



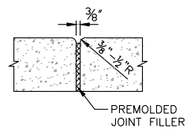
PLAN – SIDEWALK WITH PLANTER STRIP



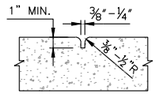
SECTION – CURBSIDE SIDEWALK



SECTION – SIDEWALK WITH PLANTER STRIP



FULL DEPTH EXPANSION JOINT DETAIL

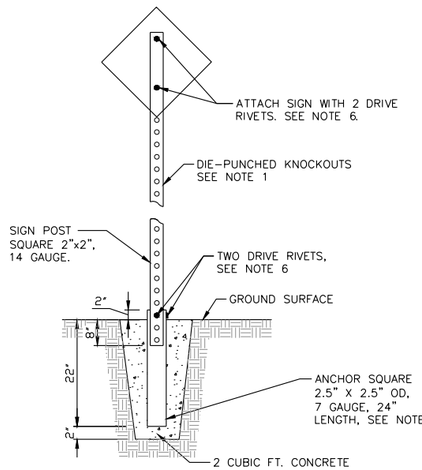


CONTRACTION JOINT DETAIL

NOTES:

1. CONCRETE SHALL BE AIR ENTRAINED CLASS 3000 PER SECTION 6-02 OF WSDOT STANDARD SPECIFICATIONS.
2. FINISH: LIGHT FINISH WITH A STIFF BROOM PERPENDICULAR TO CURB. FOR GRADES OVER 4%, FINISH WITH A STIPPLE BRUSH.
3. REMOVAL/REPLACEMENT OF CEMENT CONCRETE CURB SHALL BE FROM EXPANSION JOINT TO EXPANSION JOINT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. LIDS FOR JUNCTION BOXES AND UTILITY VAULTS SHALL BE NON-SKID AS SPECIFIED BY THE ENGINEER.

SIDEWALK
COB STD SW-110-1



SQUARE METAL POST

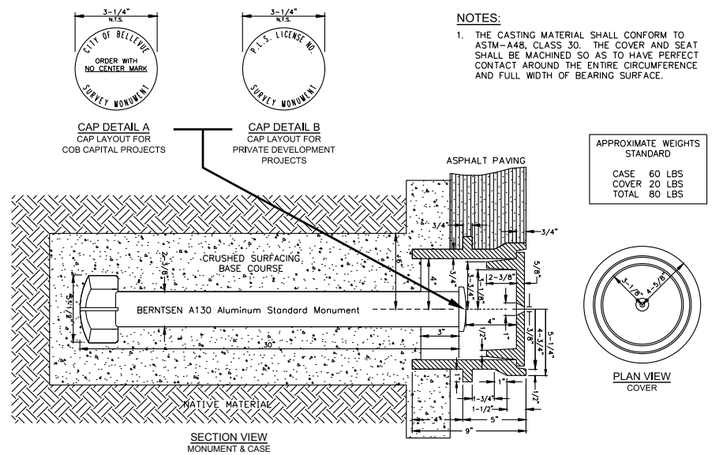
SIGN POST NOTES

1. SIGN POST SHALL BE 2"x2" SQUARE STEEL POSTS, MINIMUM 14 GAUGE, WITH 7/16" DIE-PUNCHED KNOCKOUTS ON 1" CENTERS FULL LENGTH FOUR SIDES..
2. STOP AND YIELD SIGN POSTS SHALL HAVE REFLECTOR ATTACHMENT FOR ALTERNATING 1' BANDS OF RED AND WHITE, SEE STD. DWG. SG-110-1.
3. FOR IN-SIDEWALK INSTALLATIONS, CORE 4" DIAM. HOLE. ANCHOR LENGTH MAY BE DECREASED TO 12".
4. POST SHALL BE ROLLED CARBON SHEET STEEL AND SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A653, G90, STRUCTURAL QUALITY GRADE 50.
5. ANCHOR SHALL HAVE FOUR 7/16" DIAM. HOLES, ONE EACH SIDE, 2" FROM TOP END. ANCHOR SHALL MEET THE REQUIREMENTS OF ASTM A500 GRADE B AND SHALL BE HOT DIPPED GALVANIZED.
6. INSTALL TWO DRIVE RIVETS AT 90 DEGREES TO EACH OTHER. DRIVE RIVETS TO BE 3/8" DIA., ZUMAR TL3806 OR DUNLAP INDUSTRIAL VCR221.

SIGN INSTALLATION NOTES

1. SIGN SHEETING REQUIREMENTS:
   STOP, YIELD, KEEP RT, TURN RESTRICTION, LARGE ARROW, CHEVRON, CURVE/TURN WARNING, PED & ADV PED CROSSING, SCHOOL AND ADV SCHOOL CROSSING, STOP/YIELD/SIGNAL AHEAD, OBJECT MARKERS, END OF ROAD MARKER, ALL STREET NAME SIGNS AND ALL MAST ARM OR OVERHEAD MOUNTED SIGNS SHALL BE 3M DIAMOND GRADE DG3 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL OTHER SIGNS SHALL BE 3M HIGH INTENSITY PRISMATIC SHEETING, OR APPROVED EQUAL.
2. SIGN HEIGHT SHALL BE 7' FROM BOTTOM OF SIGN TO STREET OR SIDEWALK OR 6.5' FROM BOTTOM OF LOWER SIGN FOR MULTIPLE SIGNS ON ONE POST. EXCEPTIONS ONLY AS SPECIFICALLY STATED ON PLANS OR APPROVED BY THE ENGINEER.

SIGN INSTALLATION DETAILS
COB STD SG-100-1



NOTES:

1. THE CASTING MATERIAL SHALL CONFORM TO ASTM-A48, CLASS 30. THE COVER AND SEAT SHALL BE MACHINED SO AS TO HAVE PERFECT CONTACT AROUND THE ENTIRE CIRCUMFERENCE AND FULL WIDTH OF BEARING SURFACE.

PIPE MONUMENT, CASE AND COVER
COB STD RC-260-1

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PROJECT MANAGER DATE

KA DESIGNED BY DATE
ACF DRAWN BY DATE
GG CHECKED BY DATE

City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
TRANSPORTATION STANDARD DETAILS

C-C5

SHT 12 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\12 C-C5_CASCADE KEY RD STD DTLS.dwg Plot date: Dec 11, 2017-01:09:40pm CAD User: Adam.Forcier.
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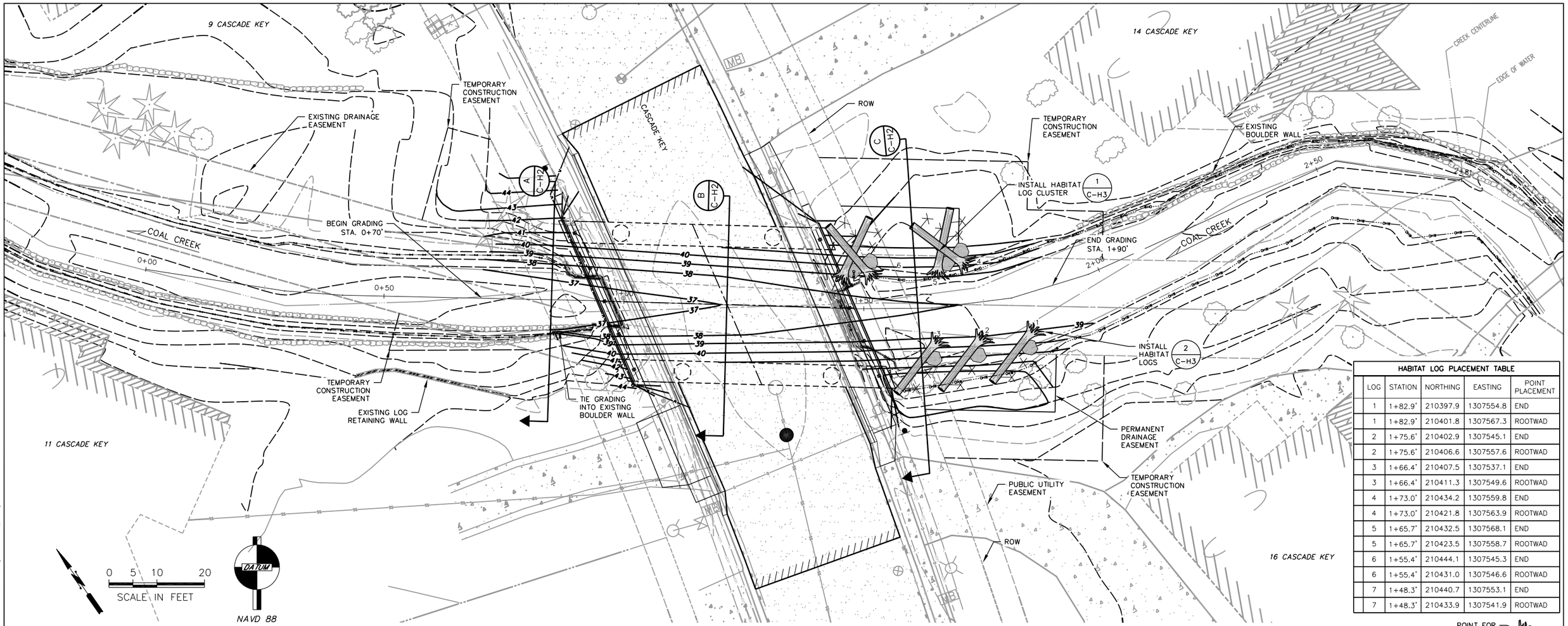
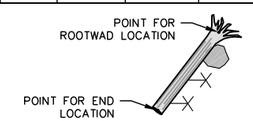
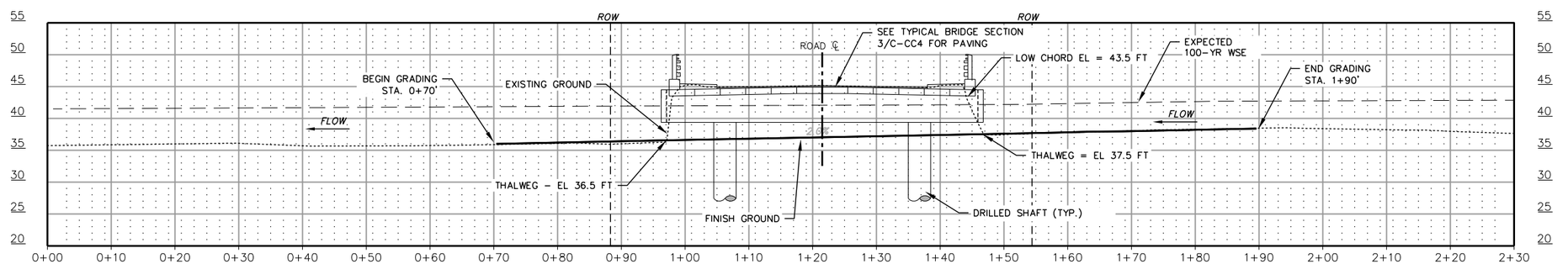


HABITAT LOG PLACEMENT TABLE				
LOG	STATION	NORTHING	EASTING	POINT PLACEMENT
1	1+82.9'	210397.9	1307554.8	END
1	1+82.9'	210401.8	1307567.3	ROOTWAD
2	1+75.6'	210402.9	1307545.1	END
2	1+75.6'	210406.6	1307557.6	ROOTWAD
3	1+66.4'	210407.5	1307537.1	END
3	1+66.4'	210411.3	1307549.6	ROOTWAD
4	1+73.0'	210434.2	1307559.8	END
4	1+73.0'	210421.8	1307563.9	ROOTWAD
5	1+65.7'	210432.5	1307568.1	END
5	1+65.7'	210423.5	1307558.7	ROOTWAD
6	1+55.4'	210444.1	1307545.3	END
6	1+55.4'	210431.0	1307546.6	ROOTWAD
7	1+48.3'	210440.7	1307553.1	END
7	1+48.3'	210433.9	1307541.9	ROOTWAD





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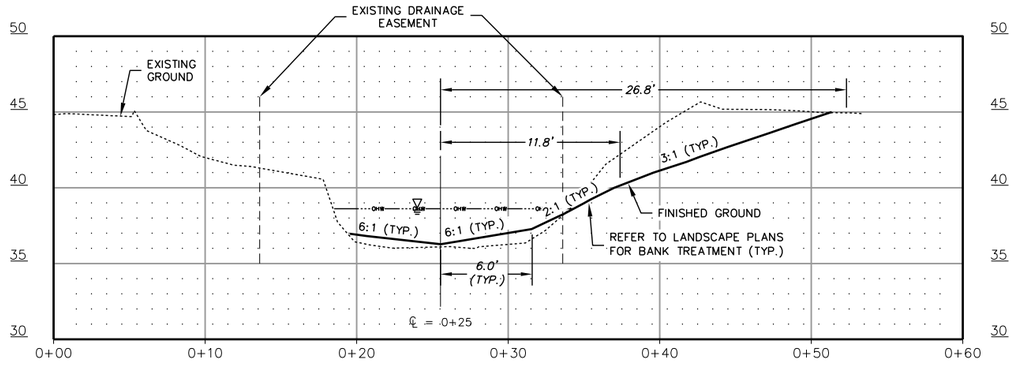
D. HINTON	
DESIGNED BY	DATE
M. OHRT	
DRAWN BY	DATE
D. HINTON	
CHECKED BY	DATE

City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT

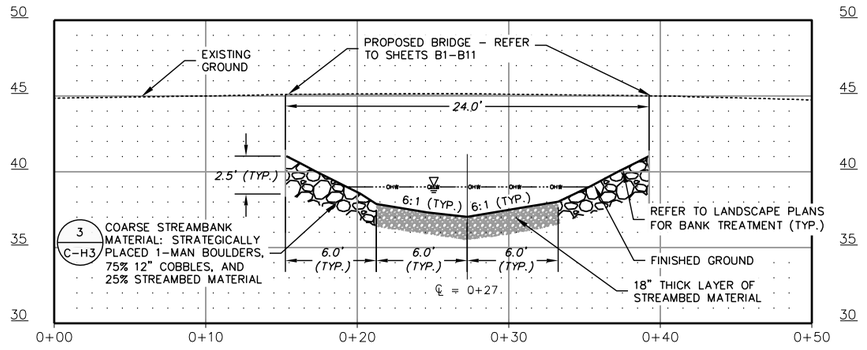
CASCADE KEY HABITAT FEATURES & CREEK GRADING

C-H1 | SHT 13 OF 58



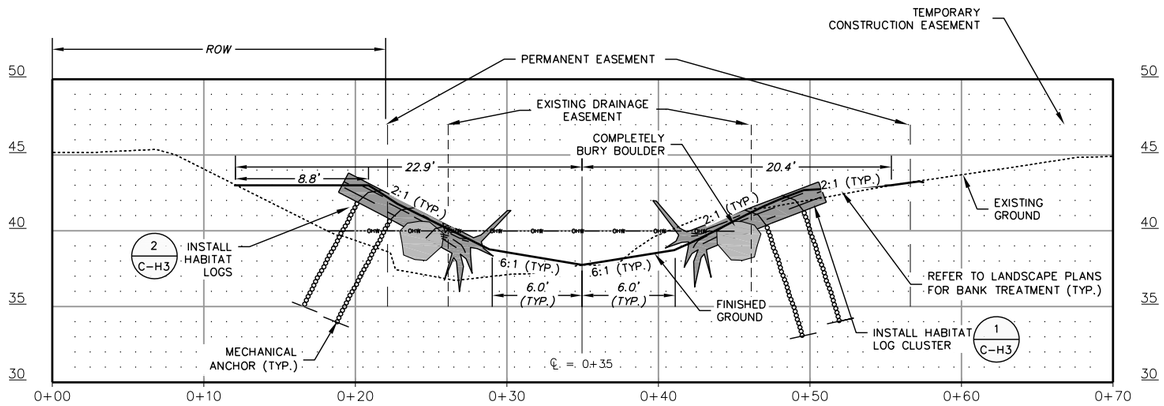
SECTION STA. 0+85 (A / C-H1)

1" = 5' (HORIZ.) 1" = 5' (VERT.)



SECTION STA. 1+21 (B / C-H1)

1" = 5' (HORIZ.) 1" = 5' (VERT.)



SECTION STA. 1+61 (C / C-H1)

1" = 5' (HORIZ.) 1" = 5' (VERT.)

0 5 10 20
SCALE IN FEET

DATUM
NAVD 88

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NOTE:
SECTIONS RELATE TO THE FOLLOWING STATIONS
- SECTION A: STA. 0+75 TO 0+95 (FACE OF BRIDGE)
- SECTION B: 0+95 TO 1+48
- SECTION C: 1+48 TO 1+80

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D. HINTON CHECKED BY DATE

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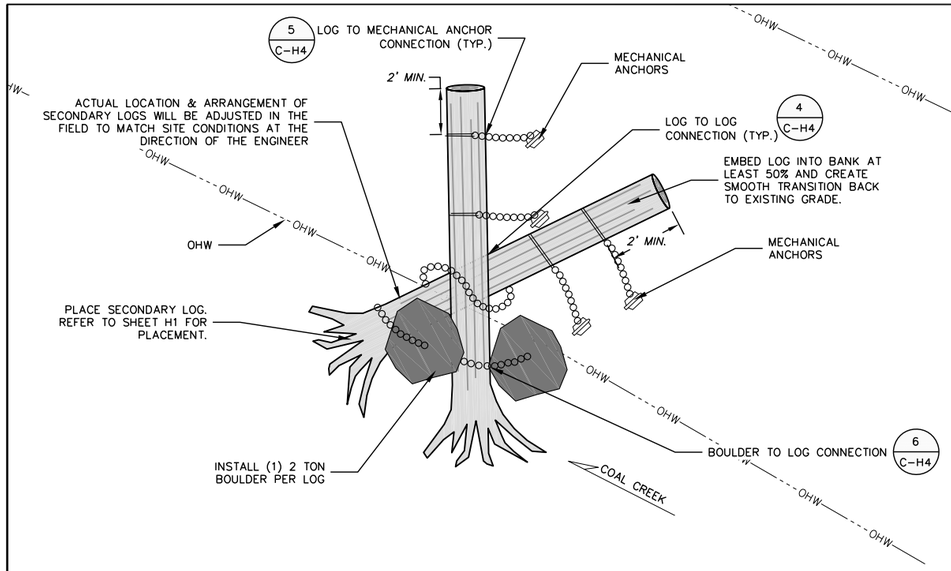
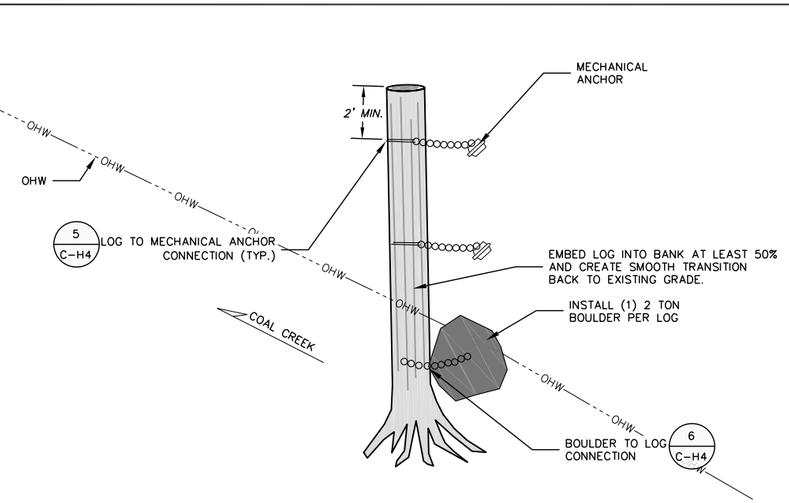
FLOOD HAZARD REDUCTION PROJECT

CASCADE KEY HABITAT SECTION VIEWS

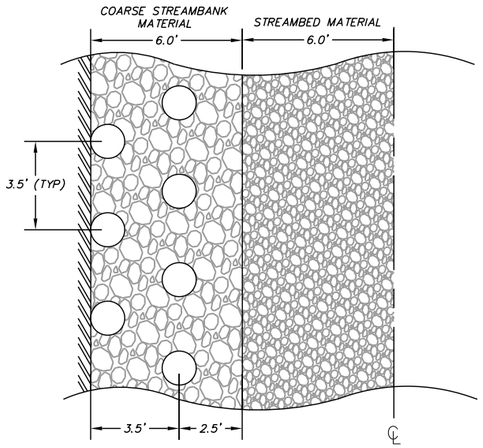
C-H2 | SHT 14 OF 58



TYPICAL HABITAT LOG CLUSTER CONNECTION DETAIL – PLAN VIEW

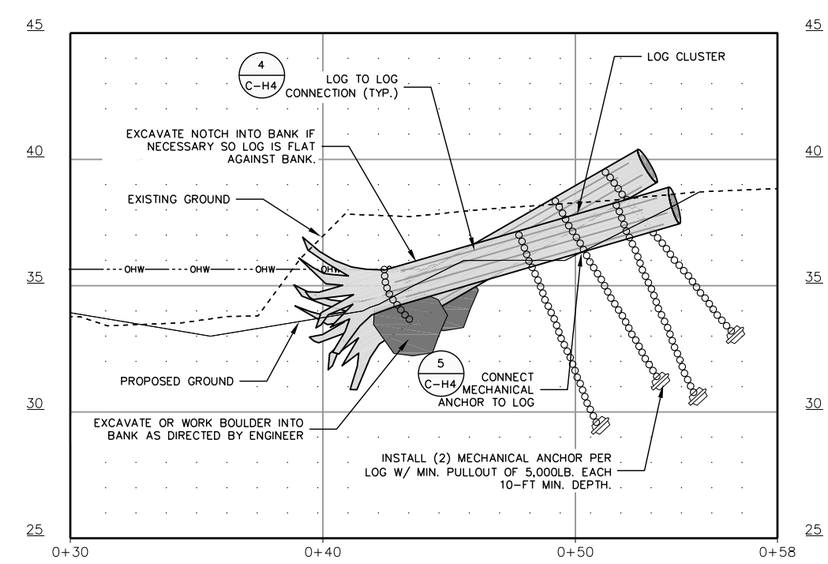


TYPICAL HABITAT LOG CONNECTION DETAIL – PLAN VIEW



COARSE STREAMBANK MATERIAL DETAIL 3 C-H2 / 3 N-H2

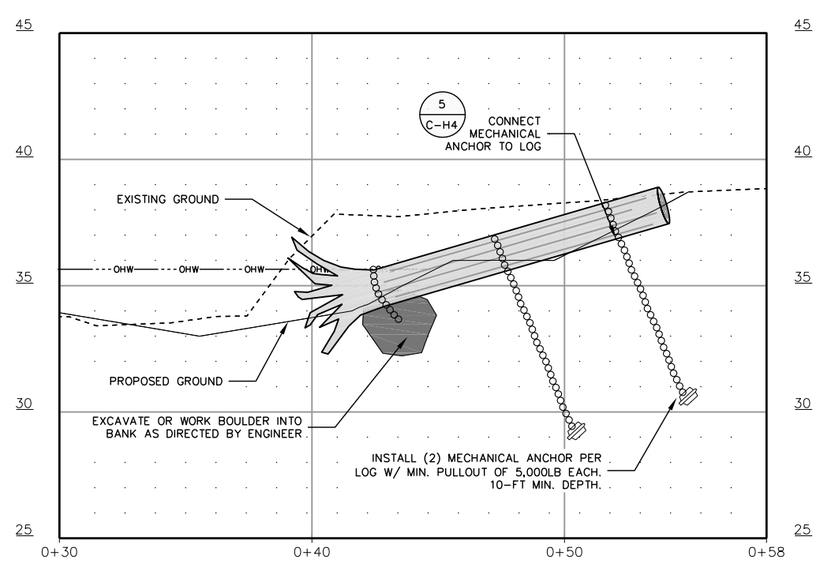
1"= 3'-0"



SECTION VIEW

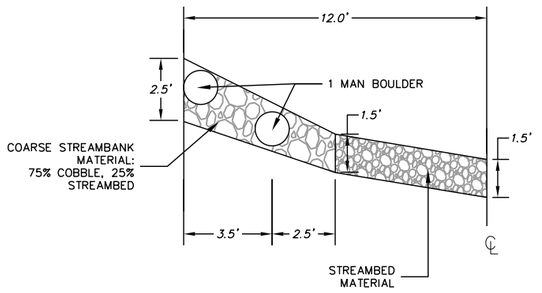
TYPICAL HABITAT LOG CLUSTER CONNECTION DETAIL 1 C-H1 / 1 C-H2 / 1 N-H1 / 1 N-H2

1"= 3'-0"



TYPICAL HABITAT LOG CONNECTION DETAIL 2 C-H1 / 2 C-H2

1"= 3'-0"



DATUM

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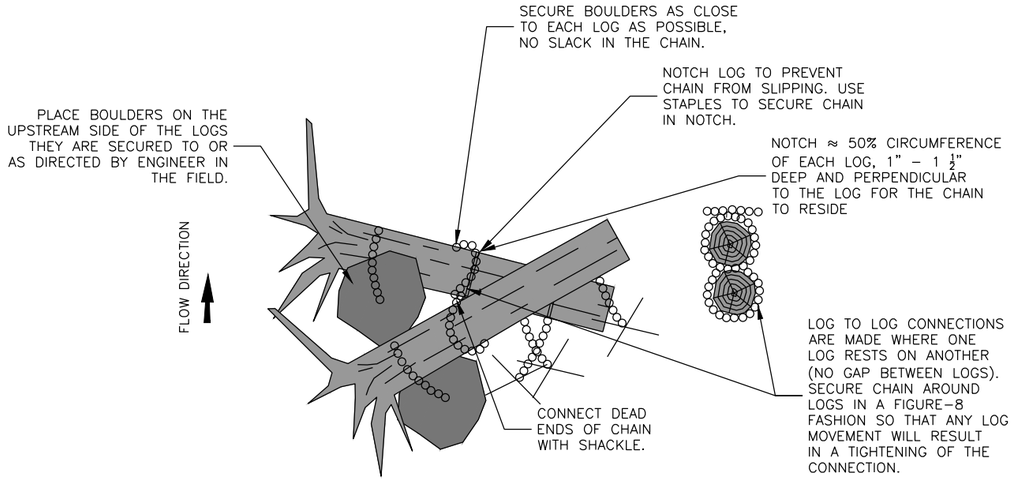
FLOOD HAZARD REDUCTION PROJECT

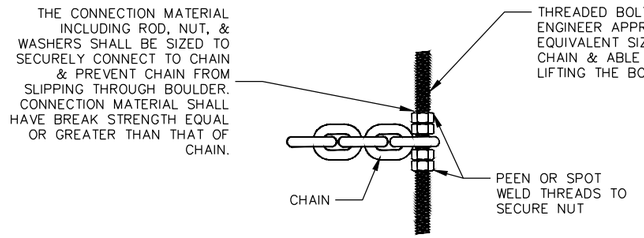
HABITAT DETAILS 1

C-H3 SHT 15 OF 58



LOG TO LOG CONNECTION DETAILS — 4 / C–H3

N.T.S.



CONNECTION DETAIL 1

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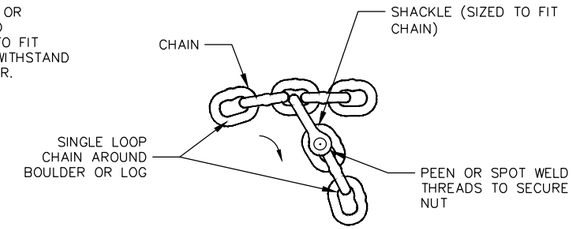

CONNECTION DETAIL 2

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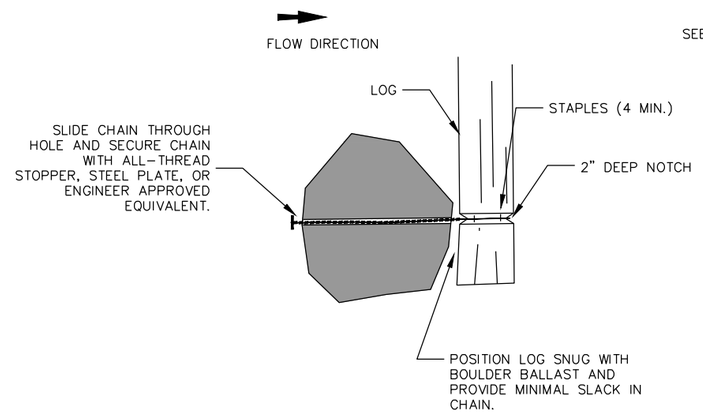

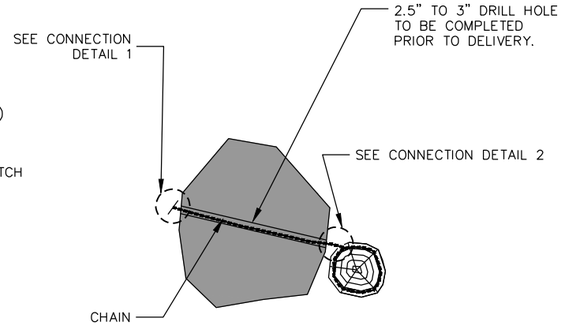

BOULDER TO LOG CONNECTION WITH STOPPER ALTERNATIVE — 7 / C–H3

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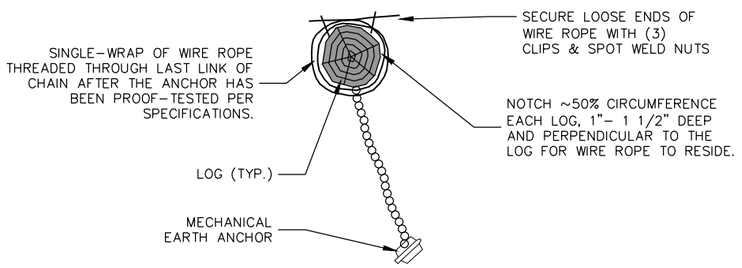

LOG TO MECHANICAL ANCHOR CONNECTION DETAILS — 5 / C–H3

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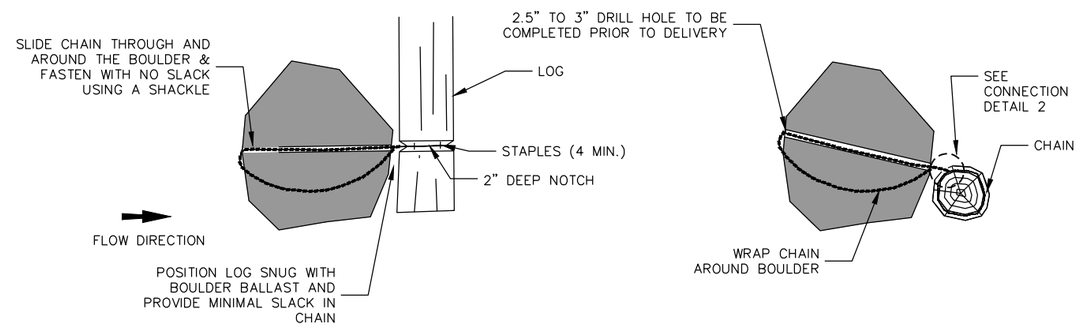

BOULDER TO LOG CONNECTION WITH WRAP ALTERNATIVE — 6 / C–H3

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D. HINTON — CHECKED BY — DATE

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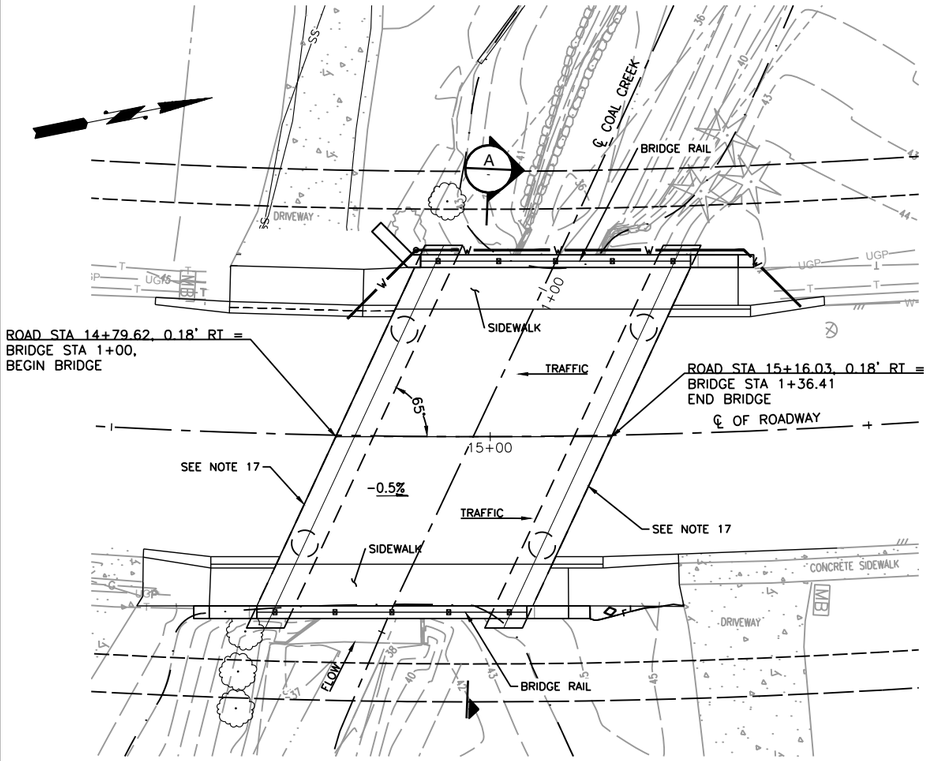
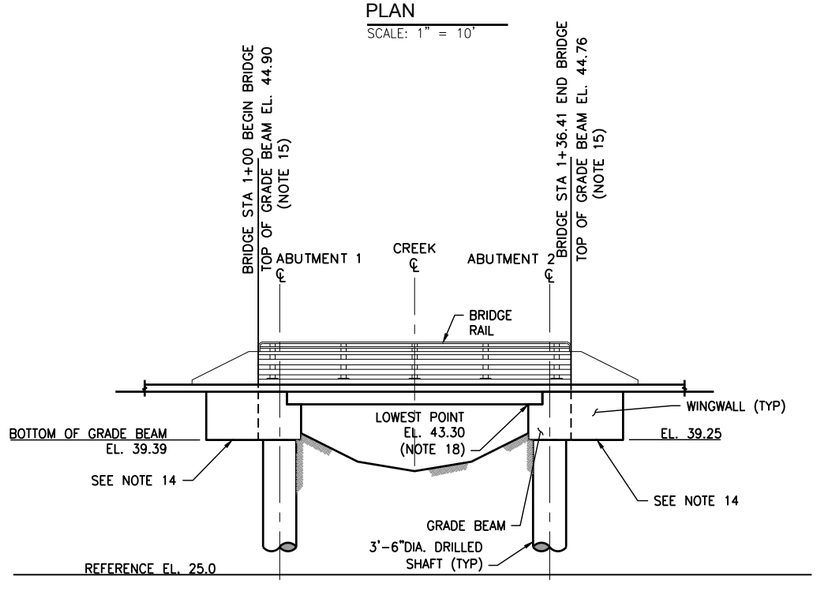
FLOOD HAZARD REDUCTION PROJECT

HABITAT DETAILS

C-H4 — SHT 16 OF 58

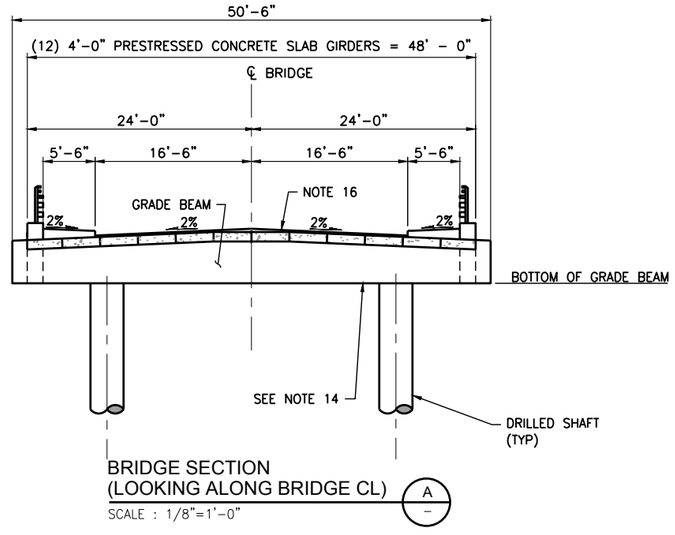


PLAN
SCALE: 1" = 10'



NAVD 88

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



BRIDGE SECTION
(LOOKING ALONG BRIDGE CL)
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)=0.91
(Fv)(S1)=SD1	(2.70)(0.325)=0.88
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 COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:

   DRILLED SHAFT.....CLASS 5,000P
   ALL CAST-IN-PLACE.....CLASS 4000
   PRE-STRESSED CONCRETE SLAB GIRDER.....7000 PSI AT 28 DAYS
   .....6000 PSI AT PRE-STRESSED RELEASED
   GROUT.....5000 PSI AT 24 HOURS
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	1-½ INCHES
CONCRETE CAST AGAINST EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER	
PRIMARY REINFORCEMENT	2 INCHES
SECONDARY REINFORCEMENT (TIES OR STIRRUPS)	1-½ INCHES

8. UNLESS OTHERWISE SHOWN ON THE PLANS, ALL EXTERIOR CORNERS AND EDGES SHALL HAVE ¾" CHAMFER.
9. THE UTILITY CENTERLINES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THESE PLANS WITH RELEVANT UTILITY INFORMATION SHOWN ON SHEETS C-C2 AND C-C3.
10. A PIGMENT SEALER SHALL BE APPLIED TO THE EXTERIOR SURFACE OF THE GRADE BEAM, WING WALL, EXTERIOR PRESTRESSED CONCRETE SLAB GIRDERS 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. EXCAVATE 6" BELOW GRADE BEAM AND WINGWALL BOTTOM ELEVATION, PLACE 6" CSBC FULL WIDTH AND LENGTH OF GRADE BEAM AND WINGWALL.
15. PROVIDED ELEVATION IS TO TOP OF CONCRETE AT THE CENTERLINE OF BRIDGE. FOR ROADWAY PROFILE, SEE SHEET C-C2. SEE SHEET C-C4 FOR TYPICAL CROSS SECTIONS.
16. BRIDGE IS SYMMETRICAL ABOUT BRIDGE CENTERLINE. SEE SHEET C-EC1 FOR ROADWAY CURVE DATA.
17. PLACE STRUCTURAL BACKFILL 12'' LATERALLY FROM GRADE BEAM PER CONTRACT SPECS.
18. LOWEST POINT APPLIES TO GIRDERS 1 & 12.

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FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY BRIDGE LAYOUT
AND GENERAL NOTES

C-B1 | SHT 17 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\V17 C-B1_CASCADE KEY BRIDGE LAYOUT.dwg Plot date: Dec 11, 2017-01:09:59pm CAD User: Adam.Forcier.
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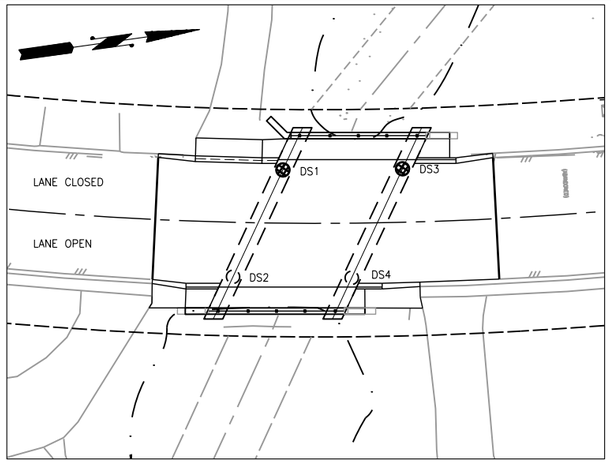
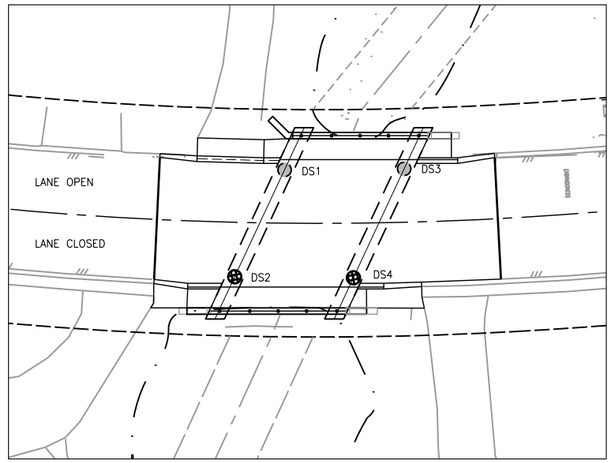
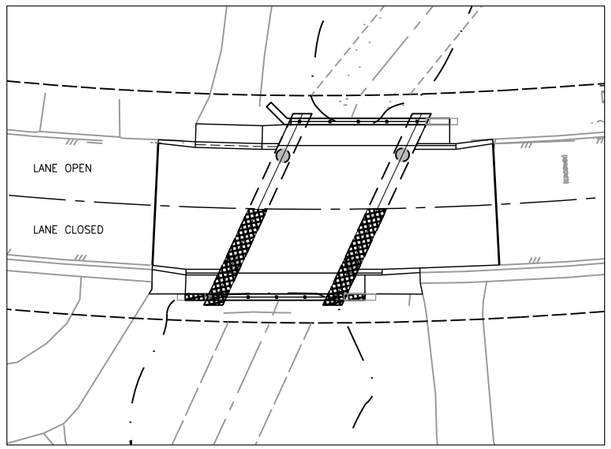


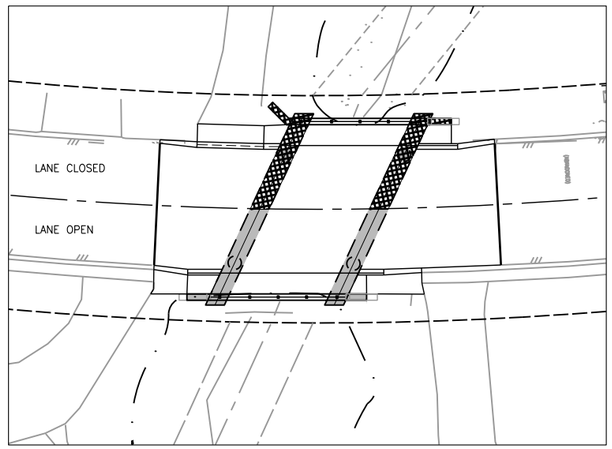
STAGE 1A



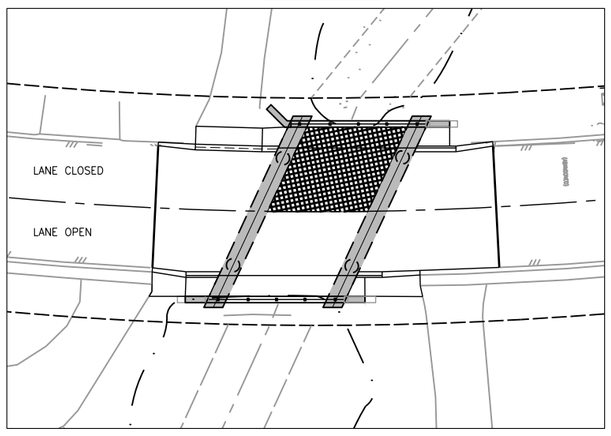
STAGE 1B



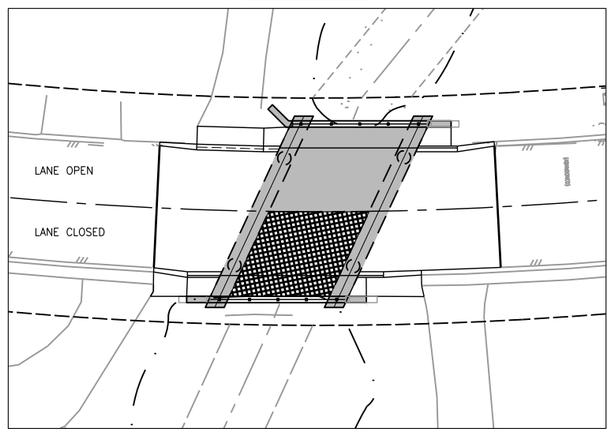
STAGE 2A



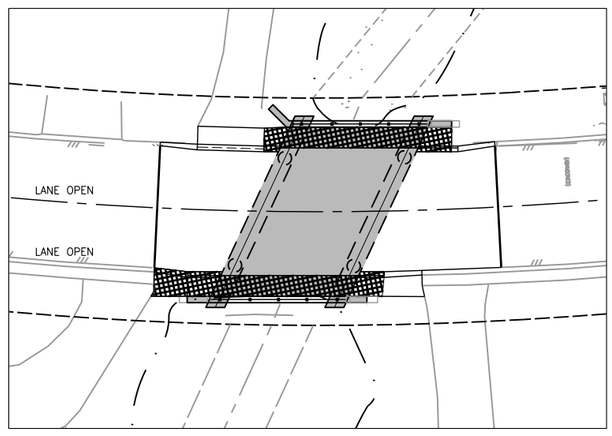
STAGE 2B



STAGE 3A



STAGE 3B



STAGE 4

CASCADE KEY BRIDGE SUGGESTED CONSTRUCTION SEQUENCE

THIS DRAWING SHOULD BE COORDINATED WITH THE TRAFFIC PLAN ON SHEETS C-TC1.

STAGE 1 – INSTALL SHAFTS

STAGE 1A
1. CREATE TEMPORARY 11' WIDE TRAFFIC LANE ON EAST SIDE OF EXISTING ROADWAY.
2. CONSTRUCT SHAFTS DS1 AND DS3 COMPLETELY.
3. FILL HOLES WITH DRAIN ROCK AND COVER WITH STEEL PLATES.

STAGE 1B
4. CREATE TEMPORARY 11' WIDE TRAFFIC LANE ON WEST SIDE OF EXISTING ROADWAY.
5. SHIFT TRAFFIC TO WEST SIDE OF EXISTING ROADWAY.
6. CONSTRUCT SHAFTS DS2 AND DS4 COMPLETELY.

STAGE 2 – CONSTRUCT GRADE BEAM FIRST CONCRETE PLACEMENT

STAGE 2A (TRAFFIC TRAVELING IN 11' WIDE TEMPORARY TRAFFIC LANE ON WEST SIDE OF ROADWAY)
7. USE SHORING TO EXCAVATE EAST PORTION OF GRADE BEAMS 1 AND 2.
8. CONSTRUCT FORMWORK FOR EAST PORTION OF GRADE BEAMS 1 AND 2.
9. PLACE REINFORCEMENT FOR EAST PORTION OF GRADE BEAMS 1 AND 2 AND MAKE READY FOR PLACING CONCRETE.
10. BACKFILL AND FILL ALL VOIDS AROUND OUTSIDE OF SHORING.
11. COVER EXCAVATION WITH STEEL PLATE TO PROVIDE 11' WIDE TRAFFIC LANE.
12. SHIFT TRAFFIC TO EAST SIDE OF EXISTING ROADWAY TRAVELING OVER EXCAVATED AREA ON STEEL PLATES.

STAGE 2B (TRAFFIC TRAVELING ON EAST SIDE OF ROADWAY OVER STEEL PLATES AT EXCAVATED AREA)
13. USE SHORING TO EXCAVATE WEST PORTION OF GRADE BEAMS 1 AND 2.
14. FOLLOW STEPS 8 THRU 11 TO PREPARE ENTIRE GRADE BEAM FOR CONCRETE PLACEMENT.
15. PLACE GRADE BEAM FIRST CONCRETE PLACEMENT AS A SINGLE CONTINUOUS POUR FOR GRADE BEAMS 1 AND 2.

STAGE 3 – CONSTRUCT SUPERSTRUCTURE

STAGE 3A (TRAFFIC TRAVELING OVER STEEL PLATES ON EAST SIDE OF ROADWAY)
16. PLACE GROUT PAD AND INSTALL CONTINUOUS BEARING ON WEST SIDE OF GRADE BEAMS 1 AND 2.
17. DEMOLISH AND REMOVE WEST PORTION OF EXISTING ROADWAY, SIDEWALK, RAILING AND CULVERT BETWEEN THE GRADE BEAMS.
18. COMPLETE WEST PORTION OF CREEK WORK.
19. INSTALL PRESTRESSED CONCRETE SLAB GIRDERS, PLACE BEARING GROUT, WELD SHEAR TABS AND PLACE GROUT BETWEEN PANEL JOINTS.
20. PLACE SECOND CONCRETE PLACEMENT AT WEST PORTION OF GRADE BEAMS 1 AND 2.
21. SHIFT TRAFFIC ONTO COMPLETED SLAB GIRDERS ON WEST SIDE OF ROADWAY.

STAGE 3B (TRAFFIC TRAVELING ON COMPLETED SLAB GIRDERS ON WEST SIDE OF BRIDGE)
22. COMPLETE THE EAST SIDE OF BRIDGE FOLLOWING STEPS 16 THOUGH 21.

STAGE 4 – COMPLETE BRIDGE
(ALL SLAB GIRDERS FULL WIDTH OF BRIDGE AVAILABLE FOR TRAFFIC)
21. PLACE RAIL PEDESTAL AND RAIL TERMINAL CONCRETE AND INSTALL BRIDGE RAILING ON WEST SIDE OF BRIDGE.
22. INSTALL SIDEWALKS, ASPHALT OVERLAY AND TRAFFIC MARKINGS.
23. OPEN COMPLETE BRIDGE TO TRAFFIC.

LEGEND

- PHASE NOT COMPLETED
- CURRENT PHASE
- COMPLETED PHASE

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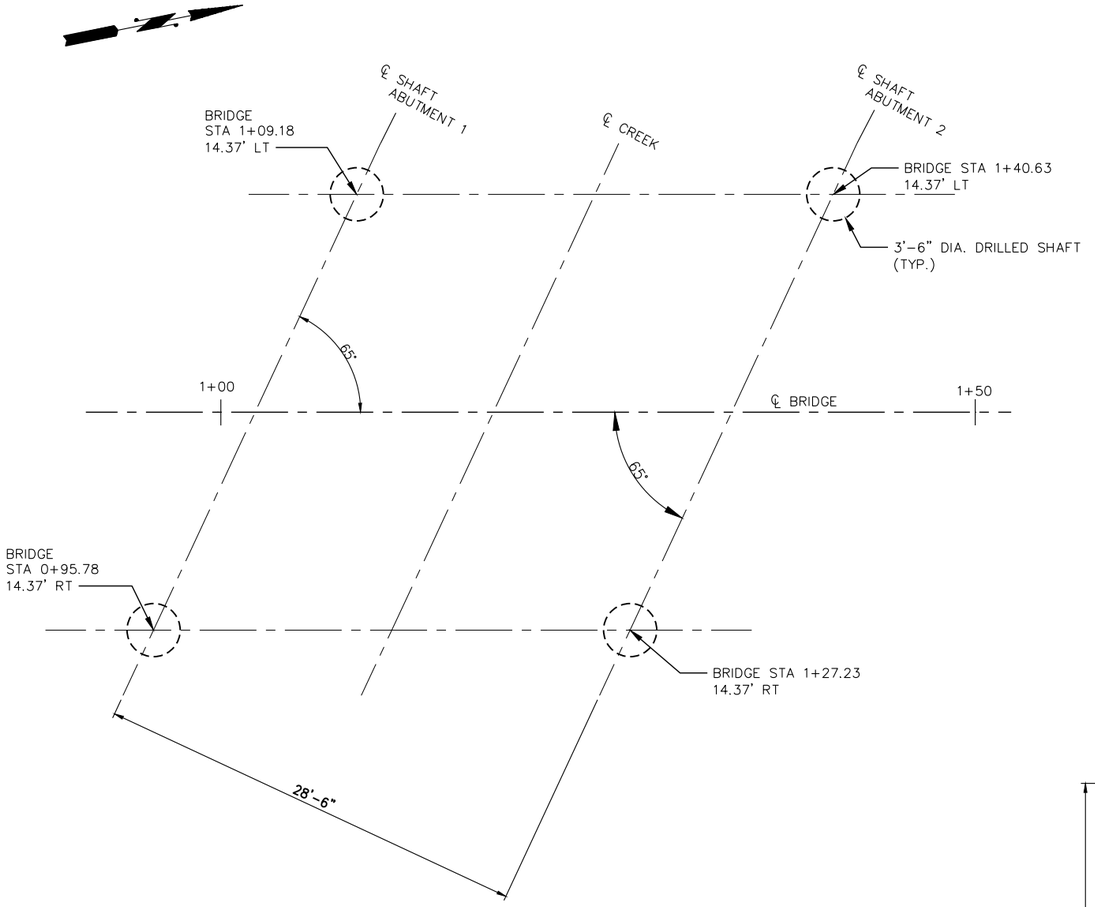
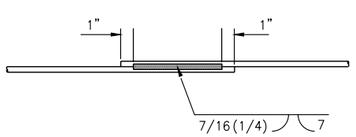
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY SUGGESTED BRIDGE CONSTRUCTION SEQUENCE

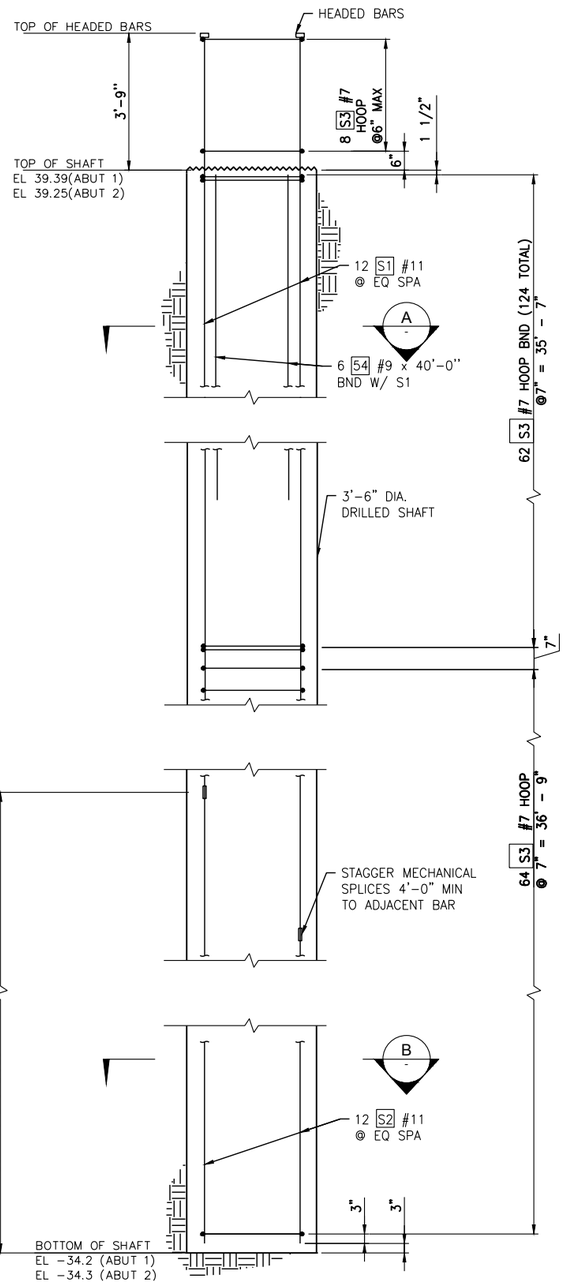
C-B2 | SHT 18 OF 58



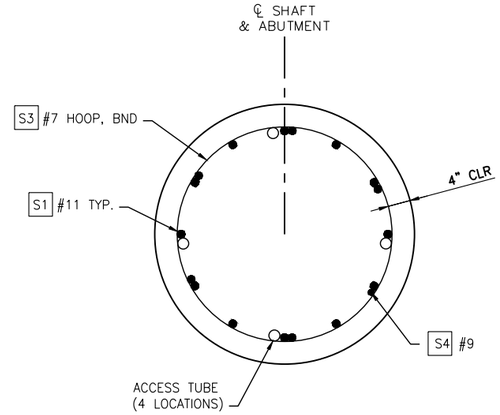
FOUNDATION PLAN
SCALE: 1" = 5'



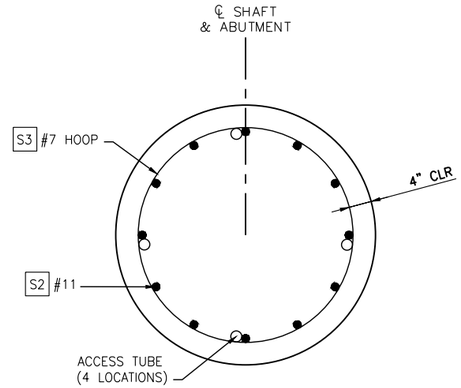
HOOP WELD SPLICE DETAIL
SCALE: NTS
WELDING SHALL MEET THE REQUIREMENTS OF STD SPEC. 6-02.3(24)E



DRILLED SHAFT ELEVATION
SCALE: 1/2" = 1'-0"



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



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

DRILLED SHAFT NOTES:

1. 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.

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UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY FOUNDATION PLAN AND DETAILS

C-B3

SHT 19 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\19 C-B3_CASCADE KEY CULVERT REPLACEMENT FOUNDATION PLAN & DETAILS.dwg Plot date: Dec 11, 2017-01:12:01pm CAD User: Adam.Forcier.
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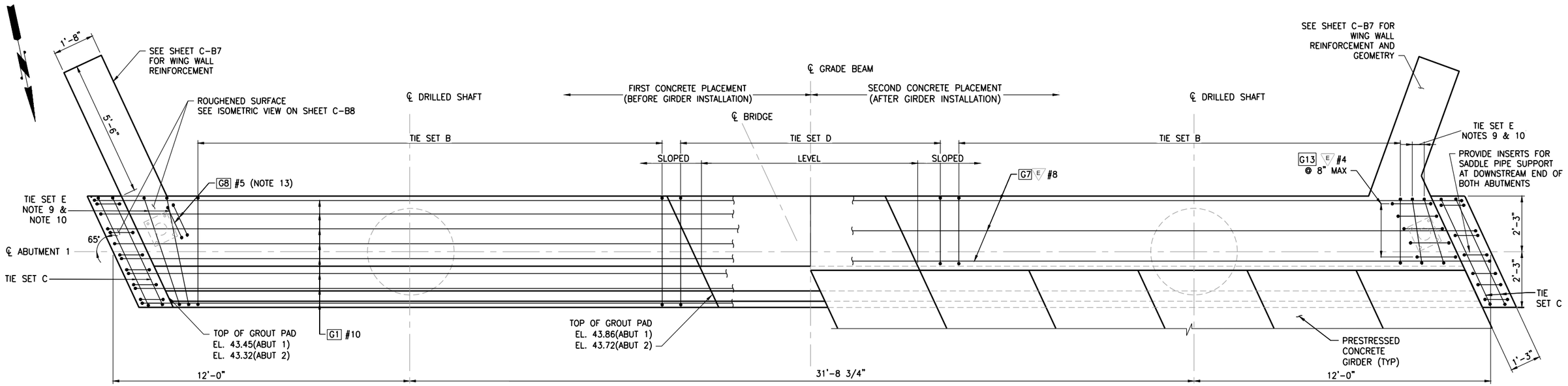
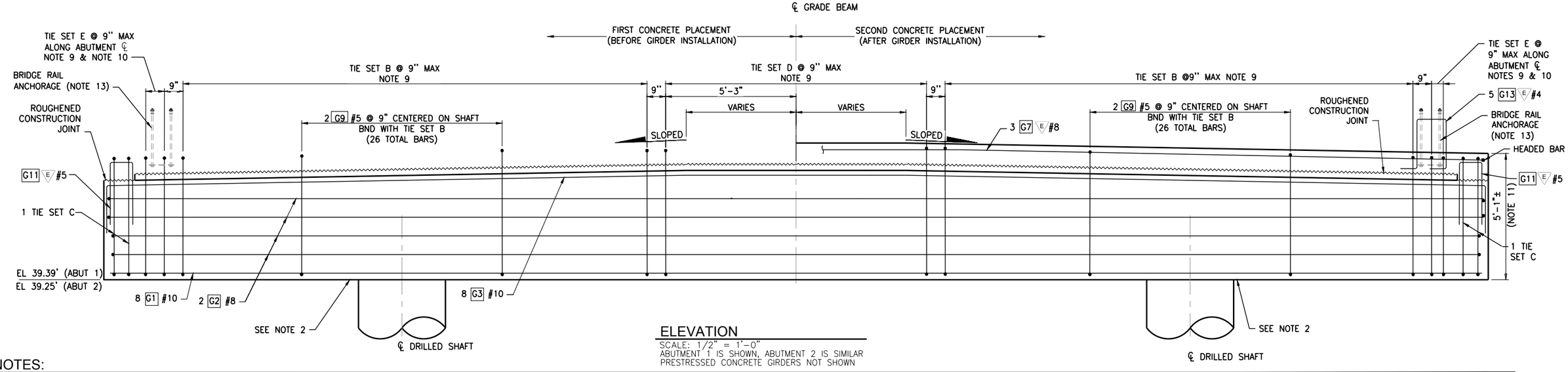


PLAN

SCALE: 1/2" = 1'-0"
ABUTMENT 1 IS SHOWN, ABUTMENT 2 IS SIMILAR
BRIDGE RAIL ANCHORAGE NOT SHOWN



ELEVATION

SCALE: 1/2" = 1'-0"
ABUTMENT 1 IS SHOWN, ABUTMENT 2 IS SIMILAR
PRESTRESSED CONCRETE GIRDERS NOT SHOWN

NOTES:

1. TOP OF GROUT PAD ELEVATION AND GRADE BEAM REINFORCEMENT IS SYMMETRICAL ABOUT CENTERLINE OF GRADE BEAM.
2. GRADE BEAM TO DRILLED SHAFT AND GRADE BEAM TO WING WALL CONNECTION DETAILS ARE NOT SHOWN. SEE SHEETS C-B5 AND C-B7.
3. EACH TIE SET B CONSIST OF 1 G4 #5, 3 G5 #5, 2 G9 #5, & 1 G6 E #5.
4. EACH TIE SET C CONSIST OF 1 G14 #5, 3 G15 #5, 2 G9 #5, & 1 G12 E #5. TIE SET C SHALL BE PARALLEL TO THE ABUTMENT END.
5. EACH TIE SET D CONSISTS OF 1 G16 #5, 1 G17 #5, 2 G9 #5, & 1 G6 E #5.
6. EACH TIES SET E CONSISTS OF 1 G18 #5, 1 G19 #5, 2 G9 #5, & 1 G20 E #5. SPLAY TIE SET E AS SHOWN.
7. SEE SHEET C-B7 FOR SECOND CONCRETE PLACEMENT.
8. BRIDGE RAIL PEDESTAL AND SIDEWALK NOT SHOWN. SEE SHEET C-B12.
9. ADJUST REINFORCEMENT SPACING TO CLEAR SHAFT AND WING WALL REINFORCING.
10. COORDINATE LOCATION OF TIE SET E WITH BRIDGE RAIL POST ANCHORAGE.
11. HEIGHT OF GRADE BEAM IS DEPENDENT ON DEFLECTION OF NEOPRENE RUBBER STRIP DUE TO WEIGHT OF GIRDERS.
12. G1 , G2 , G3 & G4 SHOWN HERE AND BAR LIST AS CONTINUOUS BAR. CONTRACTOR OPTION TO TO LAP SPLICE. TO FACILITATE CONSTRUCTION. X'-X" MIN LAP SPLICE.
13. SEE SHEET C-B12 AND C-B13 FOR ADDITIONAL INFORMATION.

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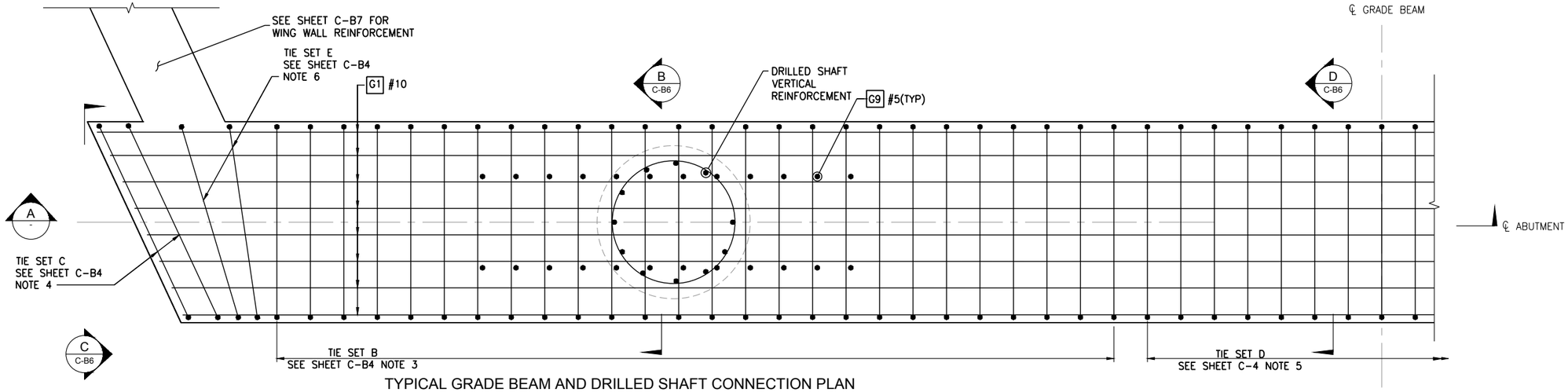
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY ABUTMENT PLAN AND ELEVATION

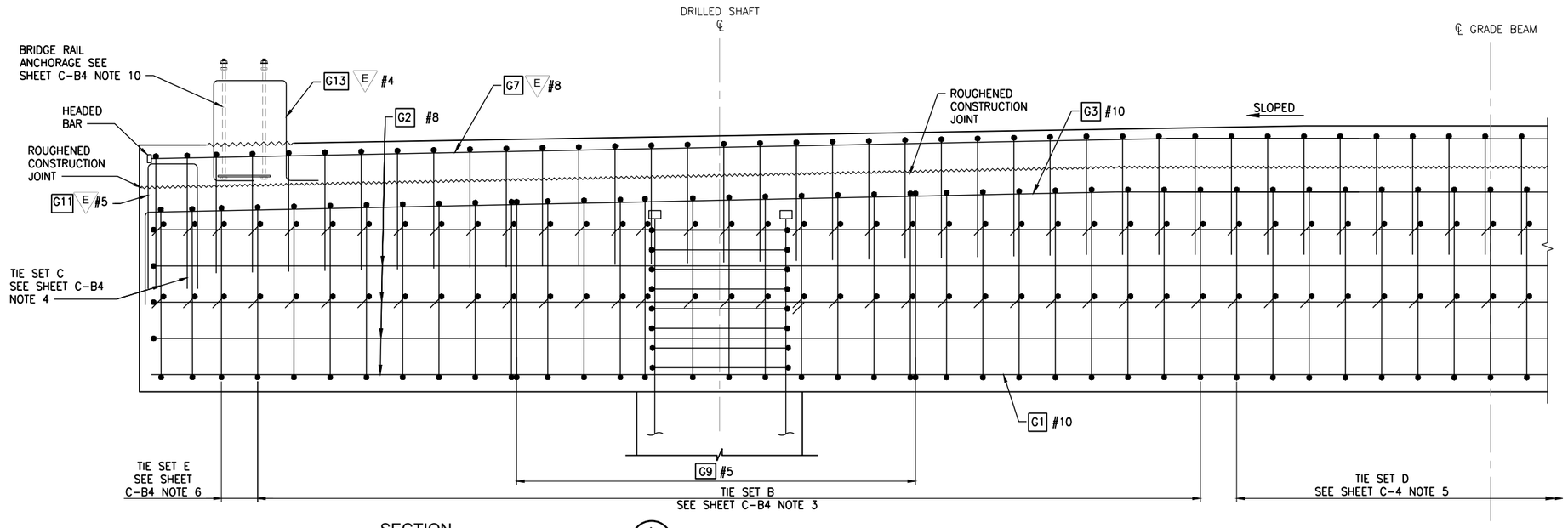
C-B4

SHT 20 OF 58



TYPICAL GRADE BEAM AND DRILLED SHAFT CONNECTION PLAN

SCALE: 3/4" = 1'-0"



SECTION A–A

SCALE: 3/4" = 1'-0

NOTES:

1. FIRST AND SECOND CONCRETE PLACEMENT SHOWN. SEE C-B12 FOR SIDEWALK AND BRIDGE RAIL PEDESTAL REINFORCEMENT.
2. ALTERNATE HOOKS OF HORIZONTAL TIES ALONG LENGTH OF GRADE BEAM.
3. PLACE CONCRETE ON COMPACTED BACKFILL.

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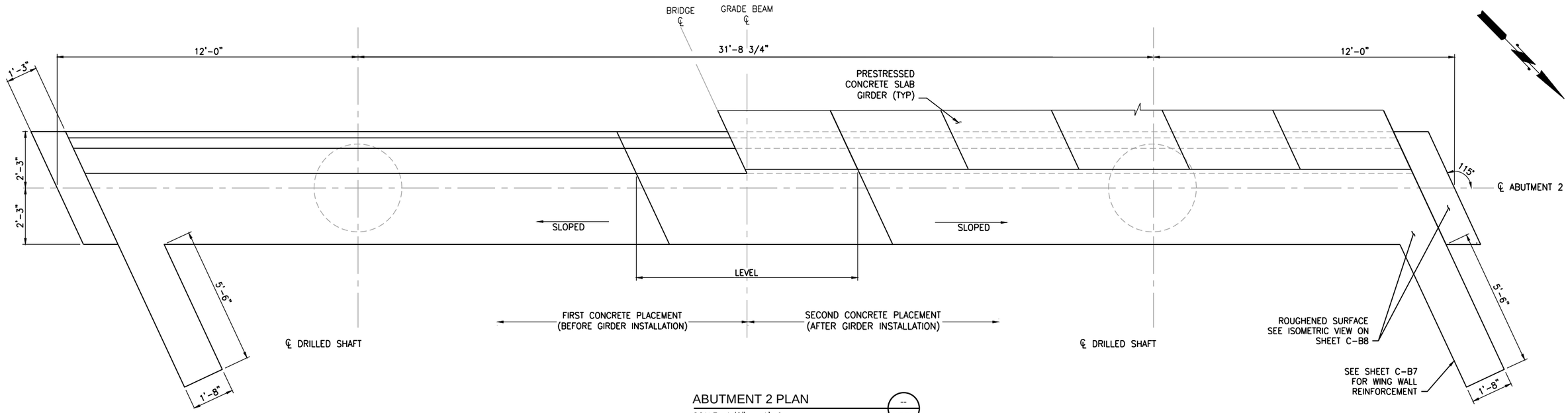
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY ABUTMENT DETAILS 1

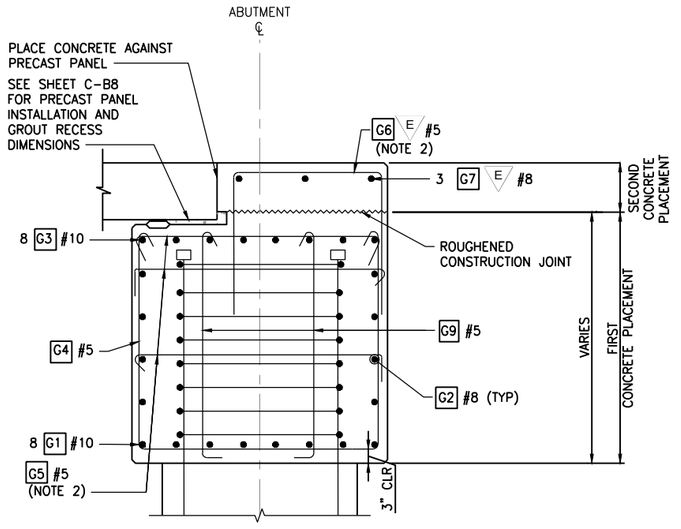
C-B5

SHT 21 OF 58



ABUTMENT 2 PLAN

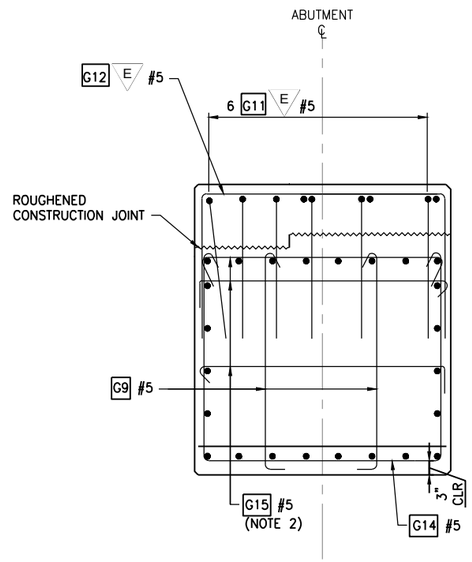
SCALE: 1/2" = 1'-0



SECTION

SCALE: 3/4" = 1'-0

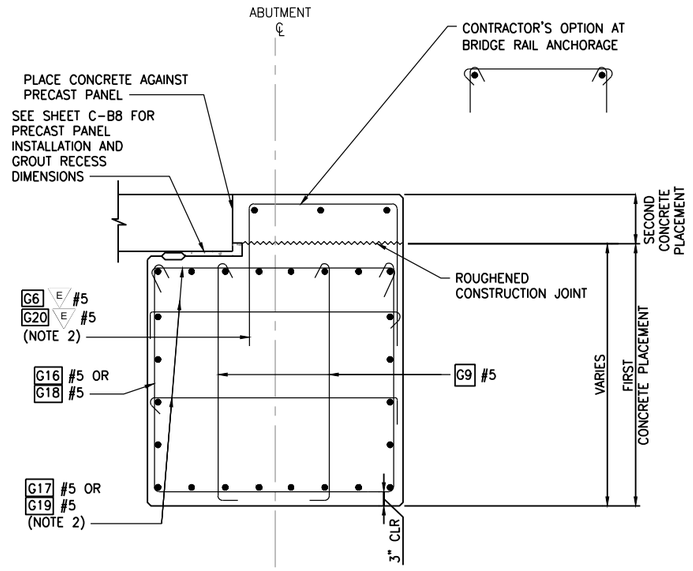
B C-B5



SECTION

SCALE: 3/4" = 1'-0

C C-B5



SECTION

SCALE: 3/4" = 1'-0

D C-B5

NOTES:

1. FIRST AND SECOND CONCRETE PLACEMENT SHOWN. SEE C-B12 FOR SIDEWALK AND BRIDGE RAIL PEDESTAL REINFORCEMENT.
2. ALTERNATE HOOKS OF HORIZONTAL TIES ALONG LENGTH OF GRADE BEAM.
3. PLACE CONCRETE ON COMPACTED BACKFILL.

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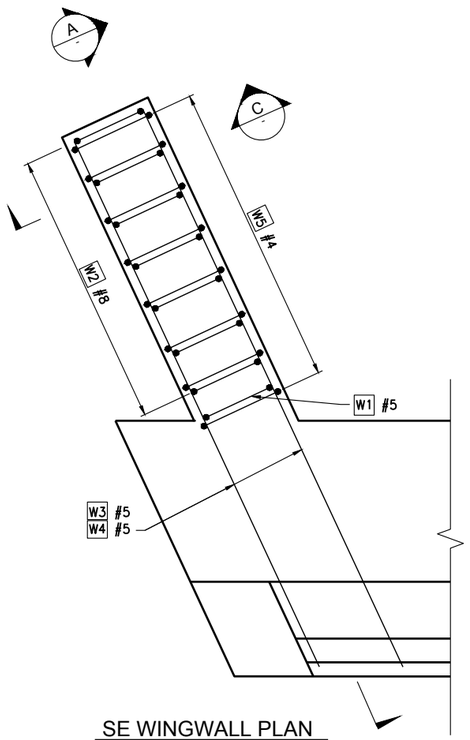
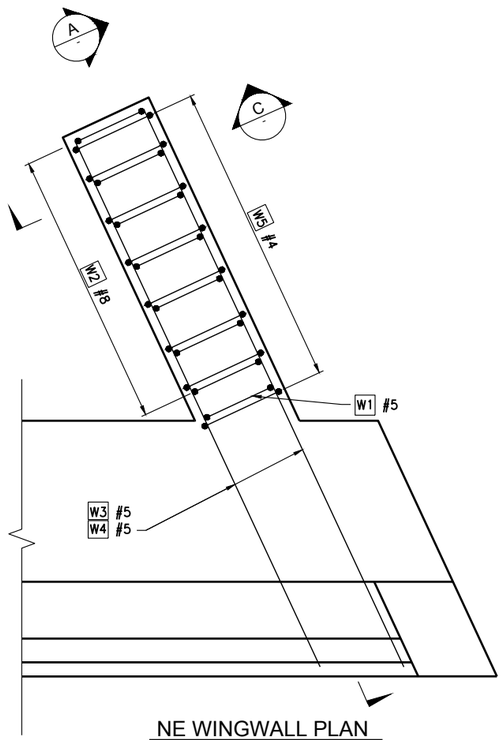
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY ABUMTMENT DETAILS 2

C-B6

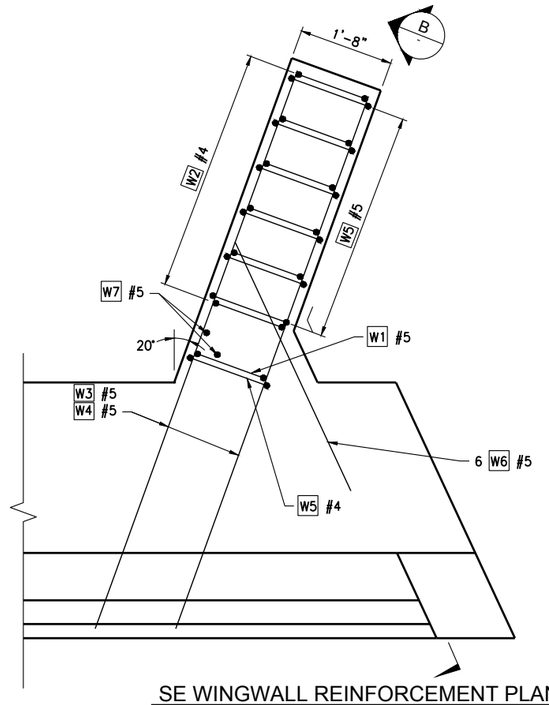
SHT 22 OF 58



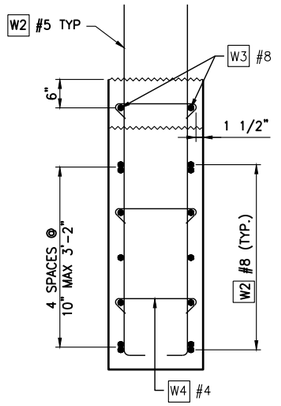
SE WINGWALL PLAN
SCALE: 3/4" = 1'-0"
NE AND NW WINGWALL SIMILAR



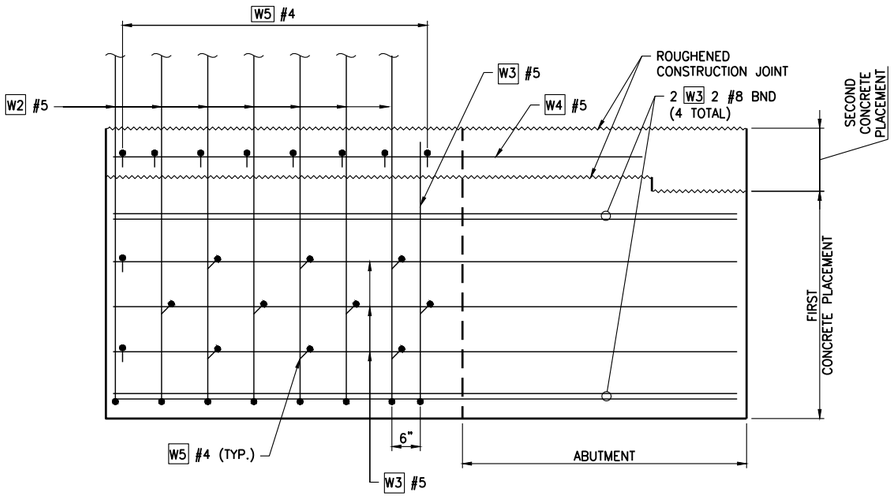
NE WINGWALL PLAN
SCALE: 3/4" = 1'-0"



SE WINGWALL REINFORCEMENT PLAN
SCALE: 3/4" = 1'-0"



SECTION
SCALE: 3/4" = 1'-0
C



SECTION
SCALE: 3/4" = 1'-0
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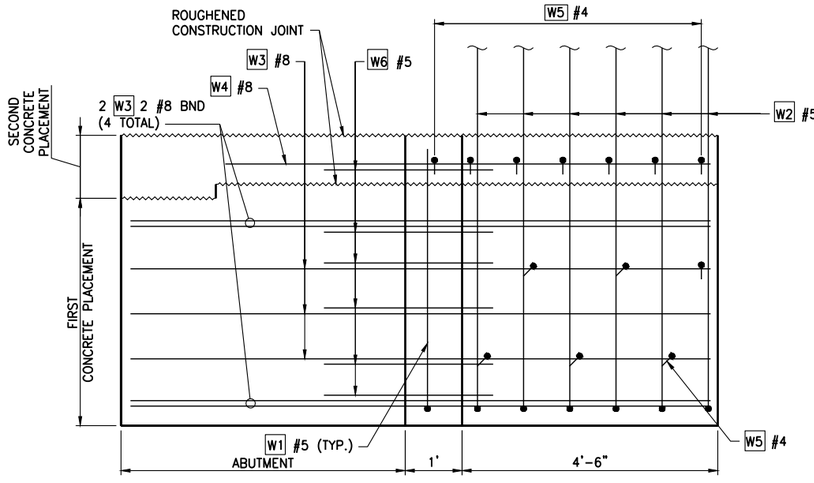

SECTION
SCALE: 3/4" = 1'-0
B

NOTES:

1. PLACE CONCRETE ON COMPACTED BACKFILL.
2. ADJUST WINGWALL REINFORCEMENT TO MISS GRADE BEAM REINFORCEMENT.
3. SEE BRIDGE RAIL TERMINAL SHEETS FOR LOCATION OF W1 #5 AND W2 #5 AND W7 #5.

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CASCADE KEY WINGWALL DETAILS

C-B7

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Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\23 C-B7_WINGWALL AND TERMINAL SUPPORT DETAILS 2.dwg Plot date: Dec 11, 2017-01:12:58pm CAD
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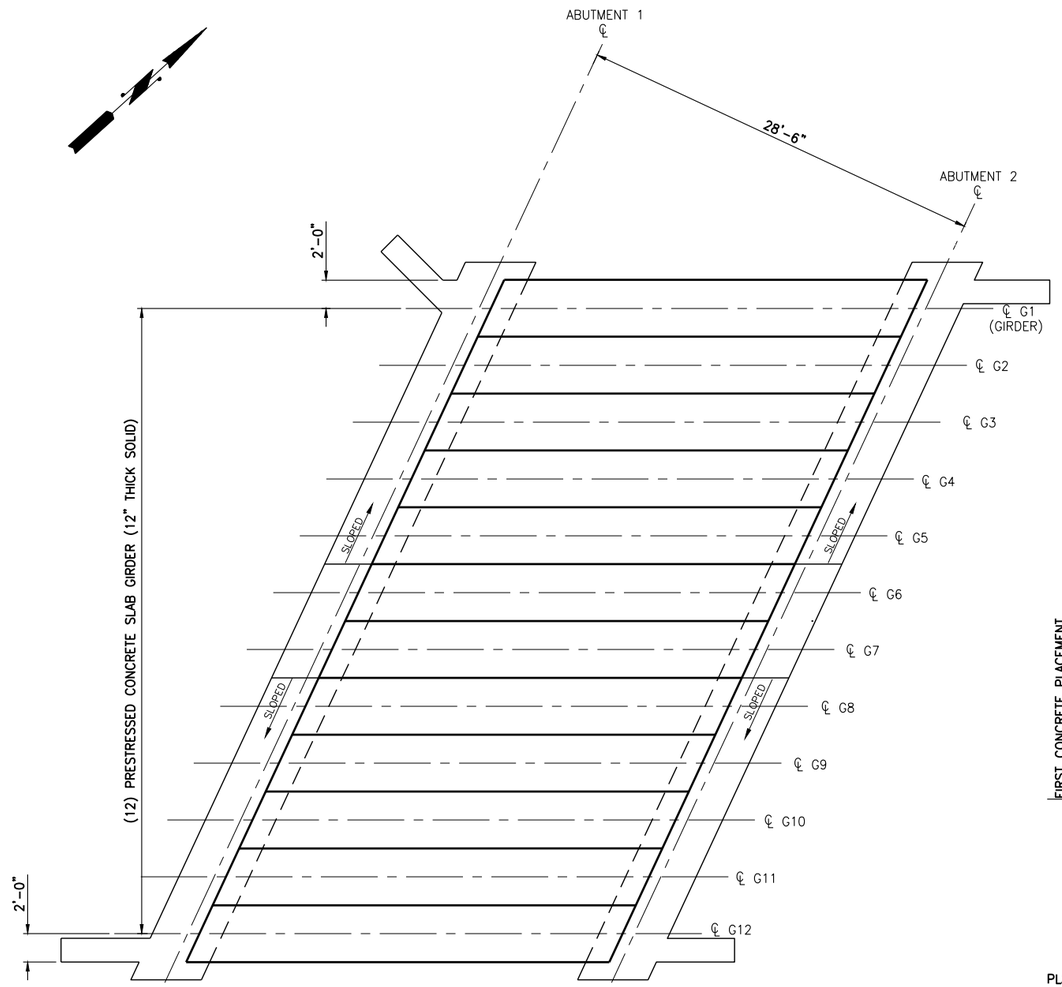
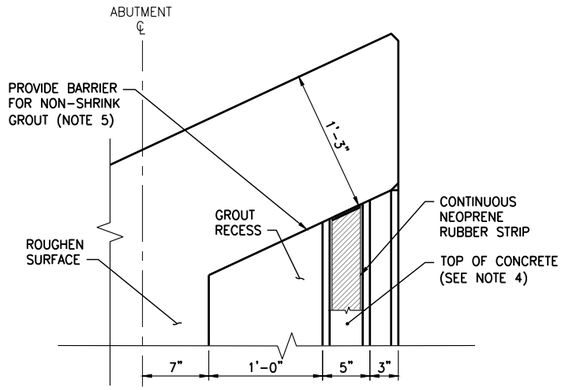


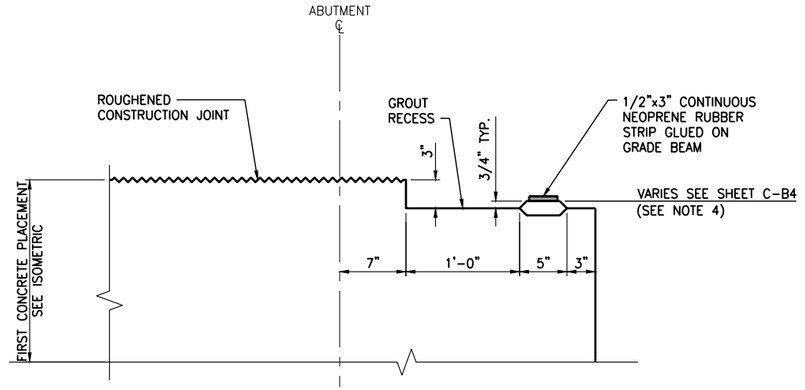
FRAMING PLAN

SCALE: 3/16" = 1'-0"



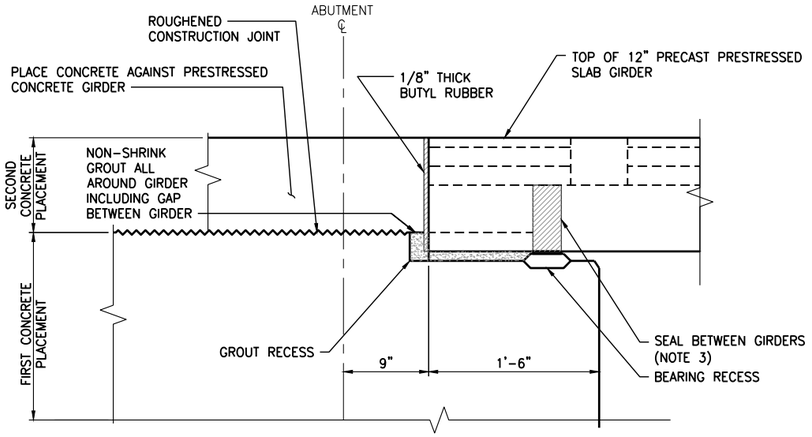
PLAN AT GRADE BEAM END FIRST CONCRETE PLACEMENT

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



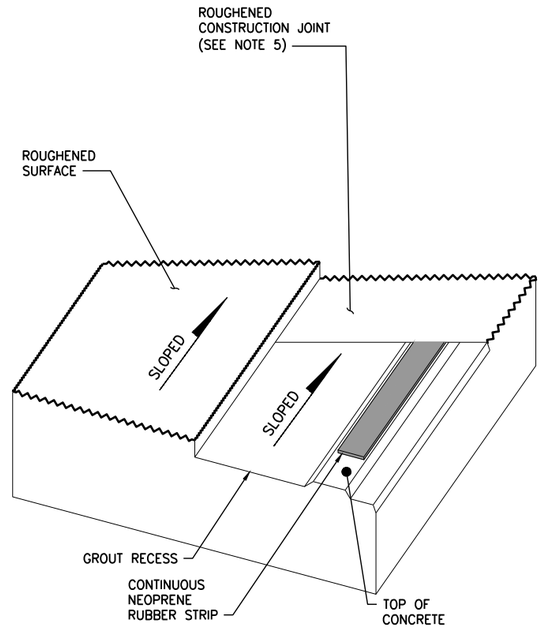
PREPARATION OF GIRDER INSTALLATION GRADE BEAM SECTION

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



SECOND CONCRETE PLACEMENT AFTER PCP INSTALLATION GRADE BEAM SECTION

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



ISOMETRIC VIEW FIRST CONCRETE PLACEMENT

SCALE: NTS

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 PRESTRESSED CONCRETE PANEL SUPPORT AND SEAL DETAIL FOR THE PREPARATION AND INSTALLATION OF THE PRECAST CONCRETE SLAB GIRDER AT THE FIRST CONCRETE PLACEMENT OF THE GRADE BEAM.
3. THE CONTRACTOR SHALL PROVIDE A SEAL BETWEEN GIRDERS BEFORE GROUTING UNDER THE GIRDERS AND PLACING THE SECOND CONCRETE PLACEMENT OF THE GRADE BEAM.
4. TOP OF CONCRETE ELEVATION AT THE CONTINUOUS RUBBER STRIP SHALL BE KEPT SMOOTH FOR THE ENTIRE LENGTH OF SLAB GIRDER SUPPORT. THE MAXIMUM GAP UNDER A 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 SLAB GIRDER OVER THE FULL CONTACT AREA OF THE GRADE BEAM AND PRESTRESSED CONCRETE SLAB GIRDER PRIOR TO PLACING THE REMAINING GRADE BEAM CONCRETE.

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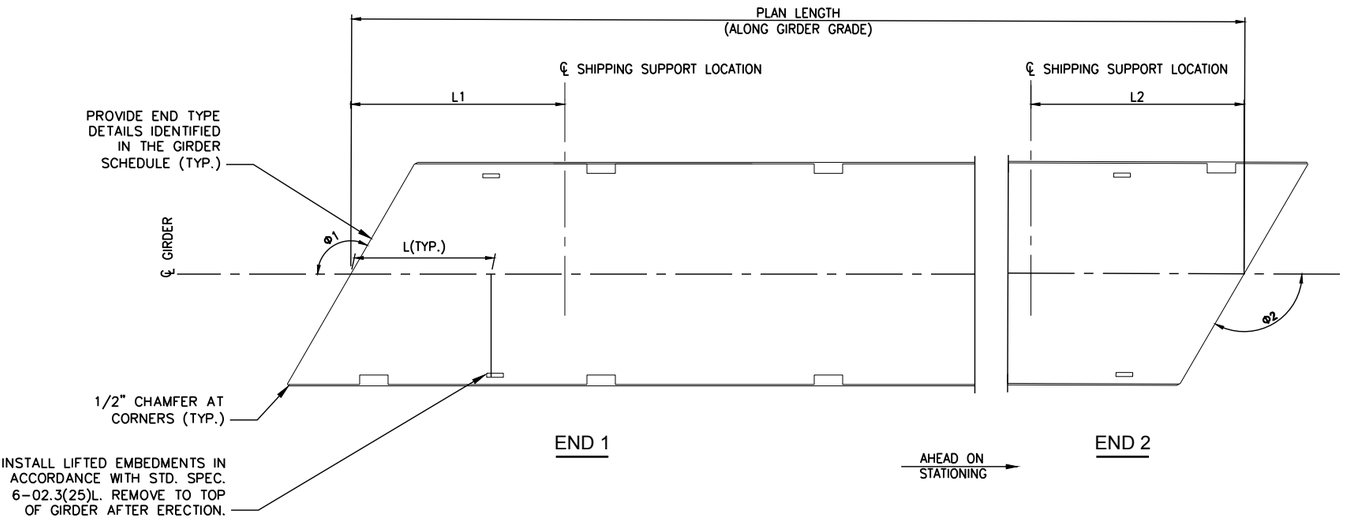
City of Bellevue UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY GIRDER FRAMING PLAN AND INSTALLATION

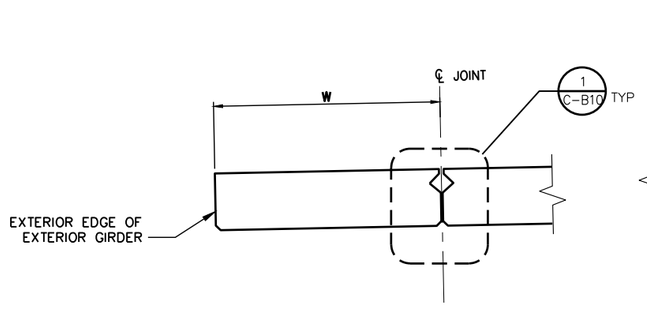
C-B8 | SHT 24 OF 58

PANEL SCHEDULE

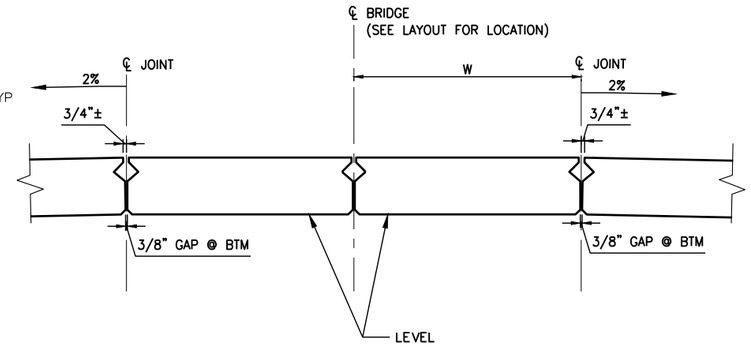
GIRDER	GIRDER HEIGHT H	GIRDER WIDTH W	VOIDS		END 1 TYPE	END 2 TYPE	"A" DIMENSIONS AT ℄ BEARINGS	L	L1	L2	ϕ1	ϕ2	GIRDER LENGTH (ALONG PANEL GRADE) (SEE GIRDER NOTE 1)	MIN CONC COMP STRENGTH		PRESTRESSING STRANDS (SEE PANEL NOTES 2–4)					MIDSPAN VERTICAL DISPLACEMENT		TRANSVERSE REINFORCEMENT									LONGITUDINAL REINFORCEMENT			
																ROW 1			TOP ROW				ZONE 1			ZONE 2			ZONE 3			P1		P2	
			NUMBER	DIAMETER										@ 28 DAYS f'C (KSI)	@ RELEASE f'C (KSI)	PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	TEMPORARY STRANDS	LOWER BOUND @ 40 DAYS	UPPER BOUND @ 120 DAYS	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	NO. OF BARS	BAR SIZE	NO. OF BARS
ALL	1'–0"	4'–0"	-	-	B	B	–	1'–9"	1'–0"	1'–0"	115°	115°	29'–9 1/2"	7.0	6.0	14	–	–	4	–	3/8"	1"	5	3"	1'–0"	5	5"	5'–0"	5	6" MAX	8'–9"	4	4	4	4



PLAN
SCALE: NTS



EXTERIOR EDGE DETAIL
SCALE: NTS



CROWN DETAIL
SCALE: NTS

GIRDER NOTES

1. PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.
2. ALL STRANDS SHALL BE 0.6"ø AASHTO M203 GRADE 270 LOW RELAXATION STRANDS, JACKED TO 202.5 KSI. STRANDS SHALL BE SYMMETRICAL ABOUT THE GIRDER CENTERLINE. EXTERIOR STRANDS IN EACH ROW SHALL BE FULLY BONDED.
3. STRUCTURAL STEEL SHAPES AND ASSEMBLIES SHALL BE ASTM A36, UNLESS NOTED OTHERWISE. THEY SHALL BE PAINTED WITH A PRIMER COAT IN ACCORDANCE WITH STD SPEC 6-07.3(8). WELD TIES SHALL BE PAINTED WITH A FIELD PRIMER COAT OF AN ORGANIC ZINC PAINT AFTER FILED WELDING. STAINLESS STEEL SHAPES AND ASSEMBLIES SHALL NOT BE PAINTED.
4. TRANSVERSE REINFORCEMENT ZONES ARE SYMMETRICAL ABOUT MID-SPAN AND MEASURED ALONG THE GIRDER CENTERLINE.
5. CUT ALL STANDS 1" BELOW CONCRETE SURFACE AND GROUT WITH AN APPROVED EPOXY GROUT.

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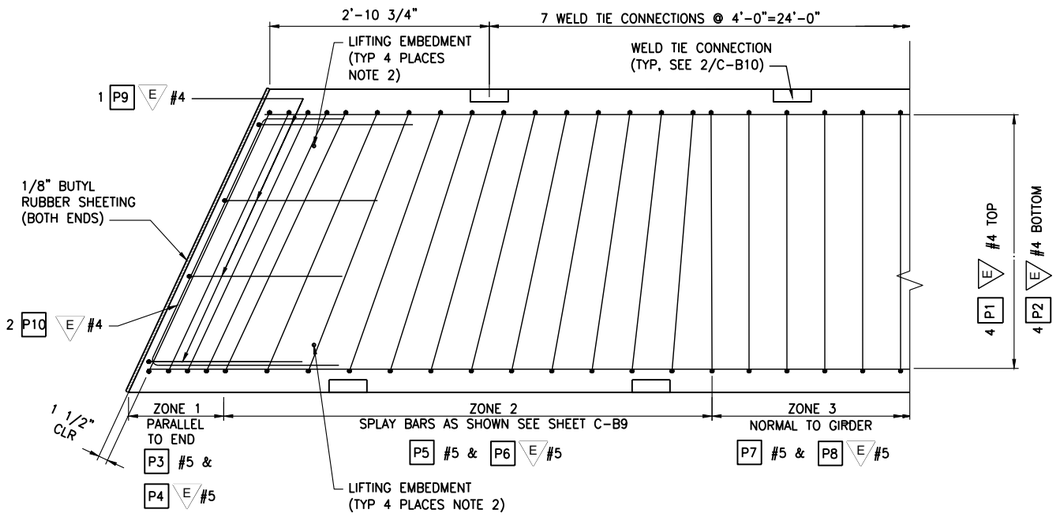
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY PS CONCRETE SLAB GIRDER SCHEDULE

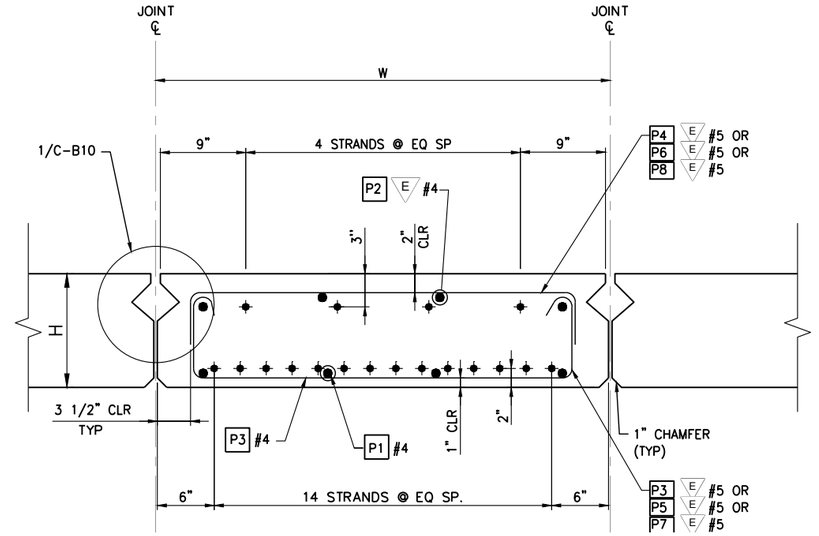
C-B9 | SHT 25 OF 58



PLAN (GIRDER G2 TO G11)

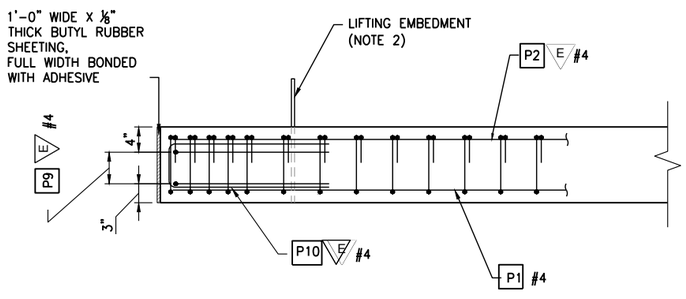
SCALE: 1" = 1'-0"

REINFORCEMENT IS SYMMETRICAL ABOUT MID-SPAN



TYPICAL SECTION

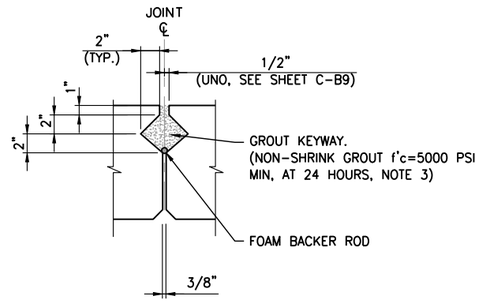
SCALE: 1-1/2" = 1'-0"



ELEVATION

SCALE: 1" = 1'-0"

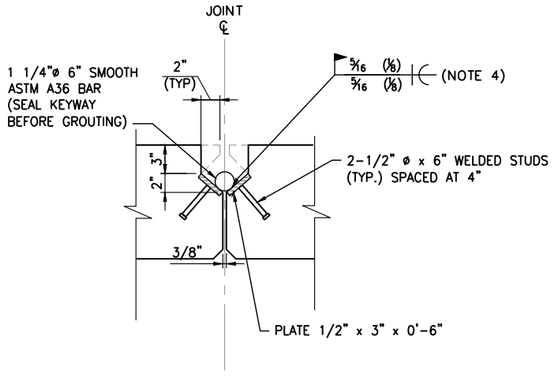
SEE PLAN FOR TRANSVERSE REINFORCEMENT BAR MARKS



KEYWAY DETAIL 1

NO SCALE

C-B9 C-B10 C-B11



WELD TIE CONNECTION DETAIL 2

NO SCALE

C-B10 C-B11

NOTES:

1. KEYWAY AND WELD TIE CONNECTIONS ARE NOT PROVIDED AT THE EXTERIOR SIDE OF THE EXTERIOR GIRDERS. SEE SHEET C-B11.
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 GIRDER AND FILL WITH APPROVED GROUP.
3. GROUT PRESTRESSED CONCRETE GIRDER CONNECTION AND KEYWAY PER CONTRACT SPECIFICATION 6-01.1(4)A. 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)

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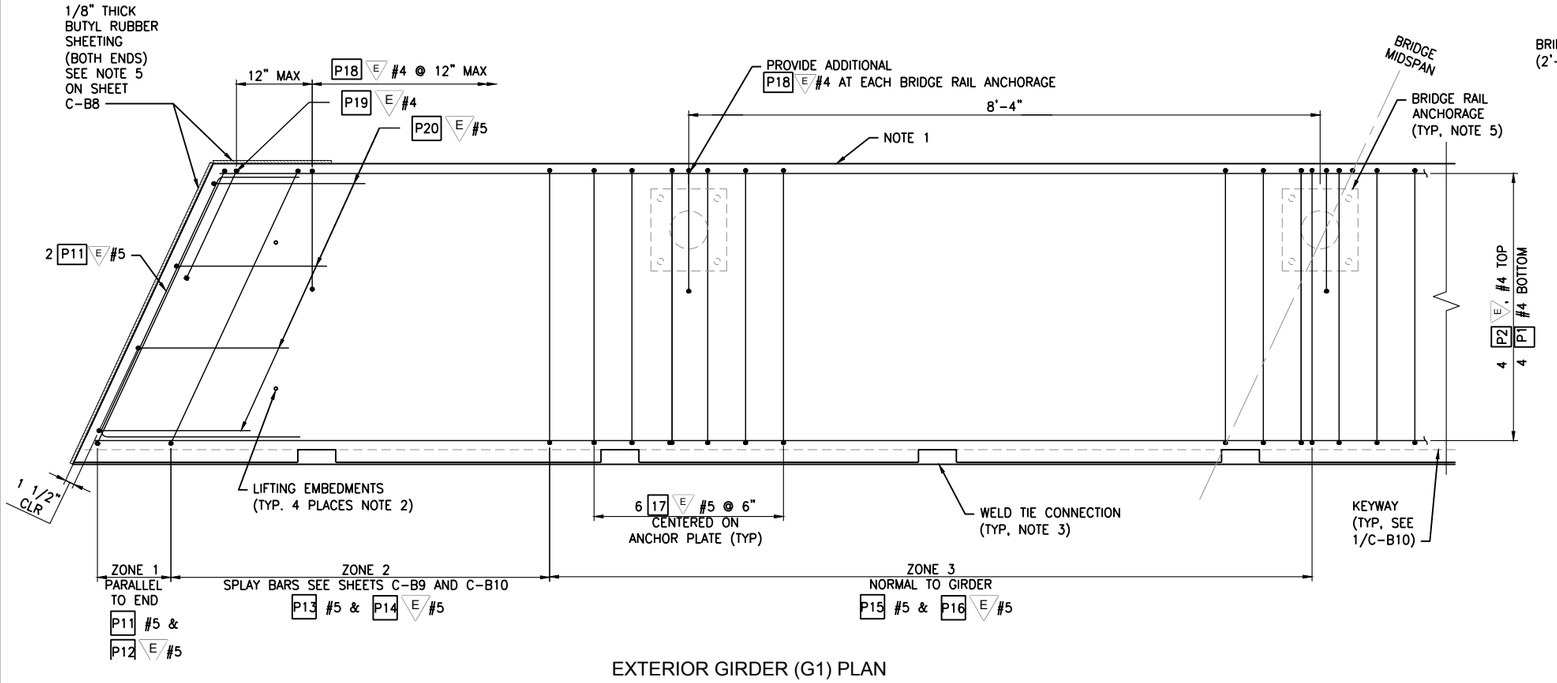
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY PS CONCRETE SLAB GIRDER DETAILS 1

C-B10

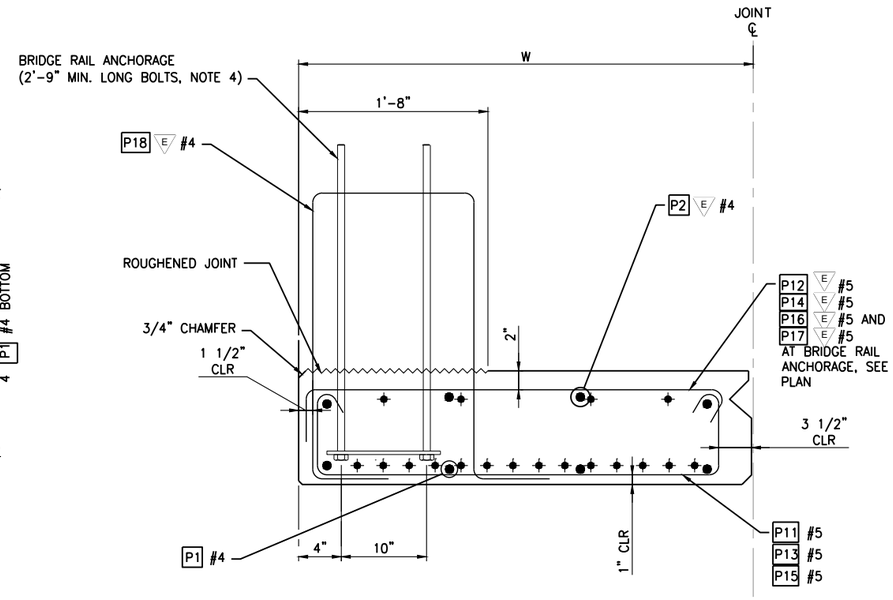
SHT 26 OF 58



EXTERIOR GIRDER (G1) PLAN

SCALE: 1" = 1'-0"
SEE NOTE 2

(G1 SHOWN G12 SIMILAR)



EXTERIOR GIRDER SECTION AT ANCHOR PLATE

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

FOR INFORMATION NOT SHOWN, SEE SHEET C-B10

NOTES:

1. KEYWAY AND WELD TIES ARE NOT PROVIDED AT THE EXTERIOR SIDE OF EXTERIOR GIRDERS G1 AND G12.
2. DETAILS FOR PANEL G1 SHOWN. DETAILS FOR GIRDER G12 ARE SIMILAR.
3. SEE SHEET C-B9 FOR LOCATIONS AND DETAILS OF LIFTING EMBEDMENTS AND WELD TIES.
4. SEE SHEET C-B13 FOR BRIDGE RAIL DETAILS.

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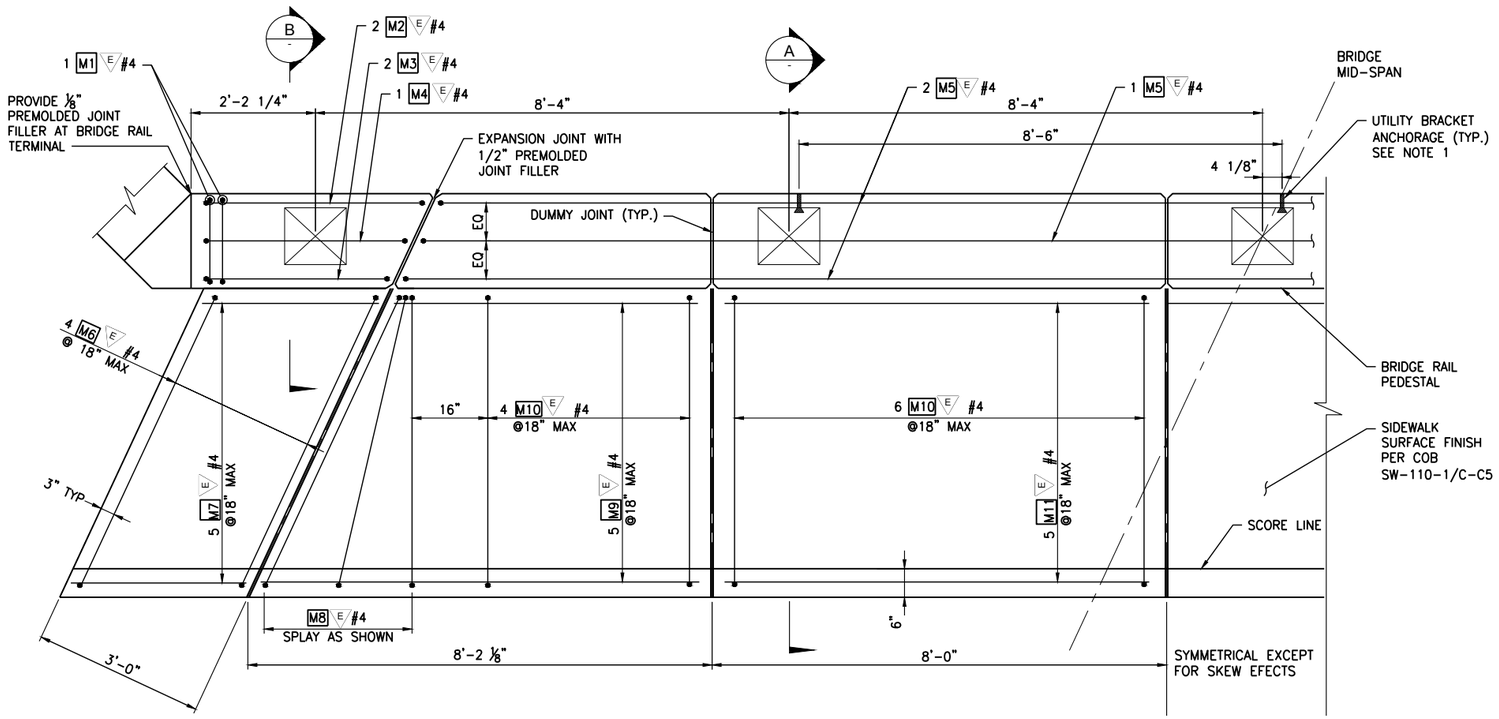
CASCADE KEY PS CONCRETE SLAB GIRDER DETAILS 2

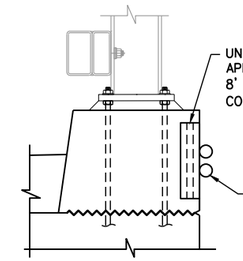
C-B11

SHT 27 OF 58



BRIDGE RAIL PEDESTAL AND SIDEWALK PLAN

SCALE: 3/4" = 1'-0"
SW CORNER SHOWN, OTHERS ARE SIMILAR
SIDEWALK AND BRIDGE RAILING PEDESTAL REINFORCEMENT IS SYMMETRICAL ABOUT THE ROAD CENTERLINE EXCEPT FOR SKEW EFFECTS
UTILITIES G13 E #4 & P18 E #4 NOT SHOWN



SECTION AT CONDUIT ANCHORAGE

SCALE: 1" = 1'-0"
UNISTRUT ON UPSTREAM AND DOWNSTREAM SIDE OF BRIDGE
ADJUST UNISTRUT SPACING TO MISS P18 E #4 AND UTILITY BRACKET ANCHORAGE (8" DI PIPE NOT SHOWN)

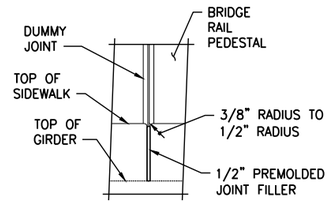
NOTES:

1. UTILITY BRACKET PROVIDED ON DOWNSTREAM SIDE OF BRIDGE. PROVIDE 13/16" DIA. HOLE FOR 3/4" DIA. BOLT 0'-11" DIRECTLY BELOW TOP HOLE PROVIDED IN UTILITY BRACKET. ANCHORS ARE HOT-DIP GALVANIZED FERRULE LOOP INSERTS WITH CLOSED-BACK FERRULE THREADED TO RECEIVE HOT-DIP GALVANIZED 3/4" DIAMETER BOLTS (ASTM A307).

   MINIMUM INSERT LENGTH = 6"
   MINIMUM SAFEWORKING LOAD IN TENSION = 4,000 POUNDS
   MINIMUM SAFEWORKING LOAD IN SHEAR = 3,000 POUNDS

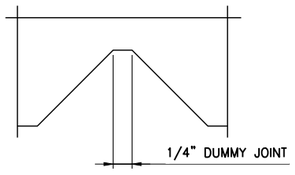
2. UNISTRUT PROVIDED ON UPSTREAM AND DOWNSTREAM SIDES OF BRIDGE TO SUPPORT FUTURE CONDUIT. SEE SHEETS C-C1 AND C-C3 FOR UTILITY AND CONDUIT INFORMATION.

3. BRIDGE RAIL TERMINAL AND WING WALL NOT SHOWN. SEE SHEET C-B14 AND C-B7 RESPECTIVELY.



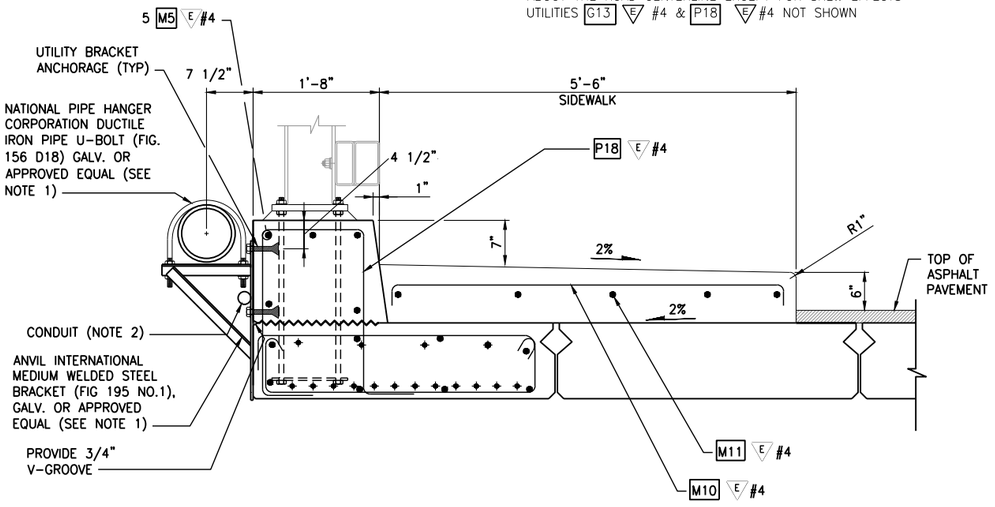
SIDEWALK JOINT DETAIL

SCALE: NTS
SIDEWALK REINFORCING STEEL NOT SHOWN FOR CLARITY



DUMMY JOINT DETAIL

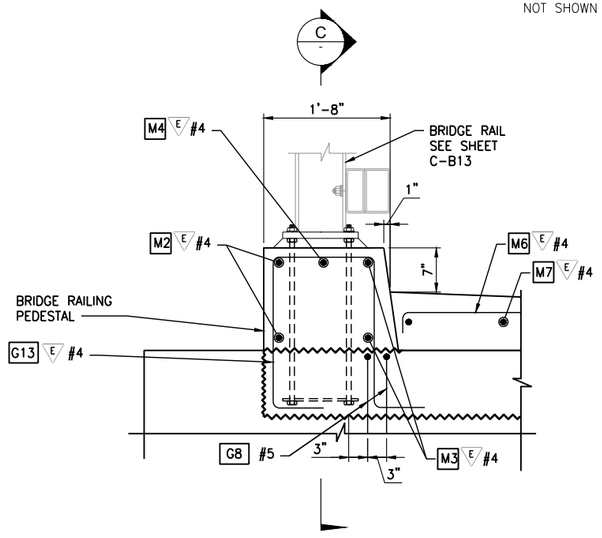
SCALE: NTS



SECTION

SCALE: 1" = 1'-0

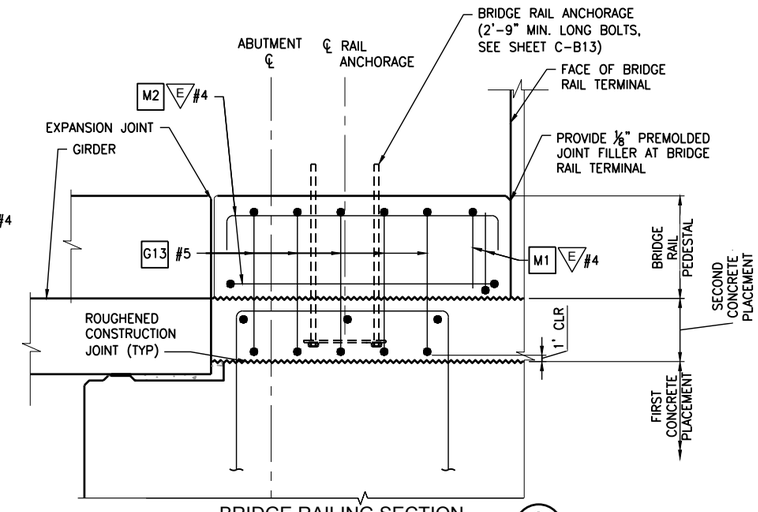
A



SECTION AT GRADE BEAM

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

B



BRIDGE RAILING SECTION

SCALE: 1" = 1'-0

C

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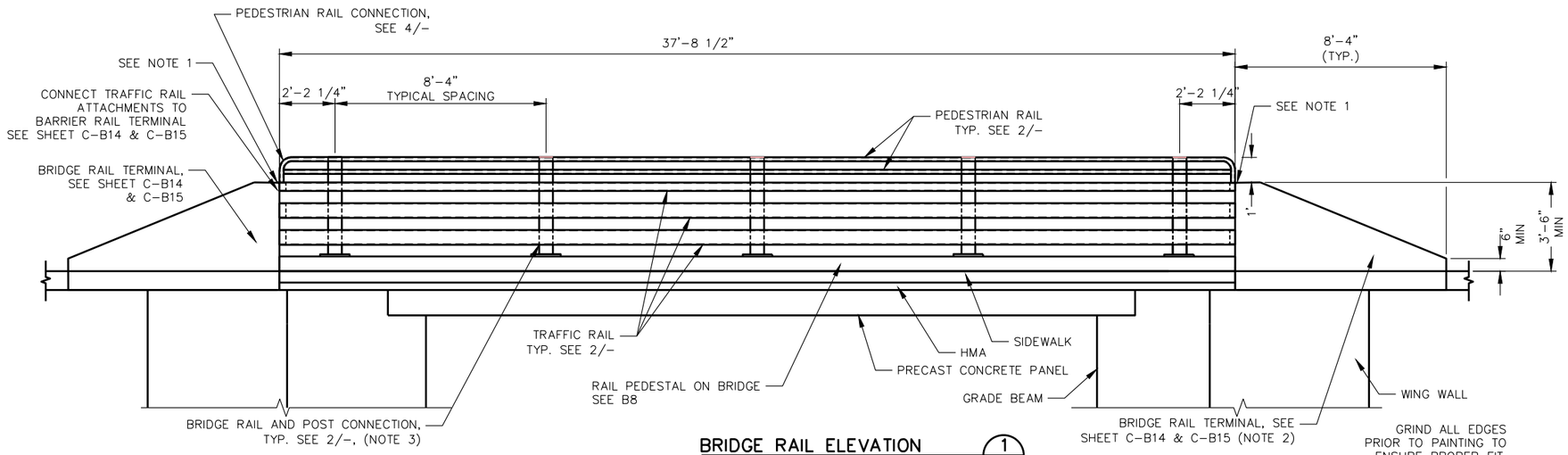
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY SIDEWALK PLAN AND SECTIONS DETAILS

C-B12 | SHT 28 OF 58



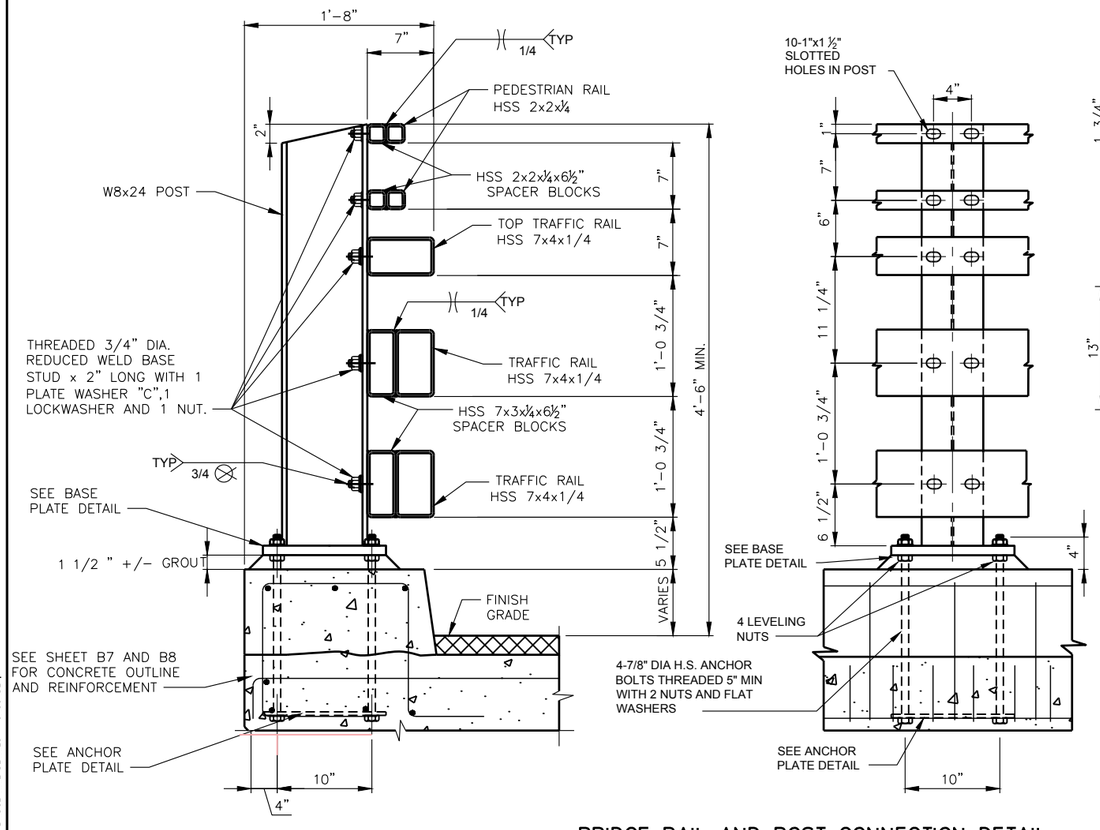
BRIDGE RAIL ELEVATION

SCALE: 3/8" = 1'-0"

1 / C-C1

GENERAL NOTES

1. ALIGN TOP OF CAST IN PLACE CONCRETE BRIDGE RAIL TERMINAL WITH TOP OF UPPER MOST TRAFFIC RAIL.
2. NOT USED.
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 M183 (ASTM A36).
5. PROVIDE HIGH STRENGTH ANCHOR BOLTS (GRADE 105) ACCORDING TO AASHTO M314 GRADE 105; ASTM F 1554, GRADE 105; OR ASTM A449 TYPE 1.
6. 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 / -

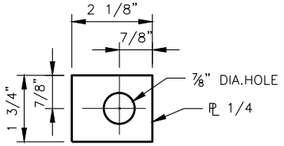
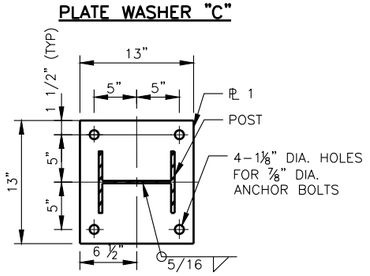
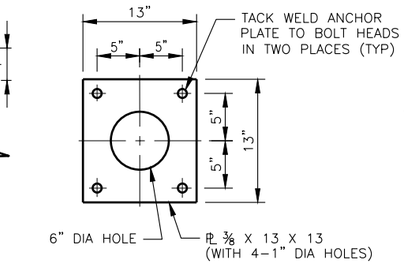


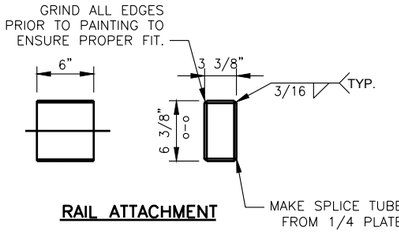
PLATE WASHER "C"



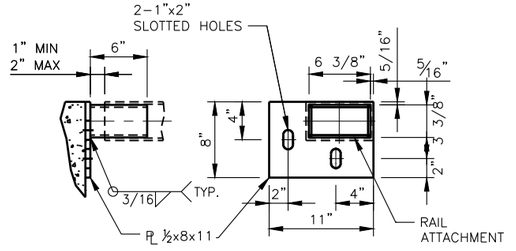
BASE PLATE DETAI



ANCHOR PLATE DETAIL

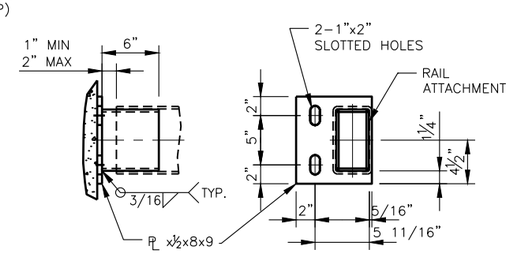


RAIL ATTACHMENT



NOTE
RAIL ATTACHMENT BRACKET SHOWN FOR RIGHT SIDE ABUTMENT 1 AND LEFT SIDE ABUTMENT 2. DETAILS FOR OTHER TERMINALS SIMILAR BUT MIRRORED AROUND LEFT EDGE OF PLATE

TOP TRAFFIC RAIL ATTACHMENT BRACKET

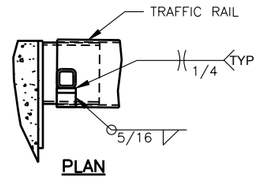


TRAFFIC RAIL ATTACHMENT BRACKET

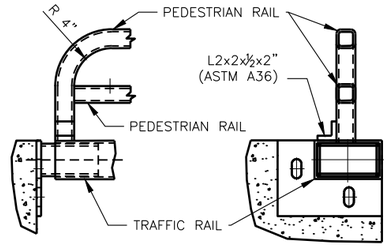
TRAFFIC RAIL ATTACHMENT BRACKET DETAIL

SCALE: NTS

3 / B10



PLAN



SECTION AT BARRIER RAIL

SECTION AT BARRIER TERMINAL FACE

PEDESTRIAN RAIL CONNECTION DETAIL

SCALE: NTS

4 / -

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FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY BRIDGE RAIL DETAILS

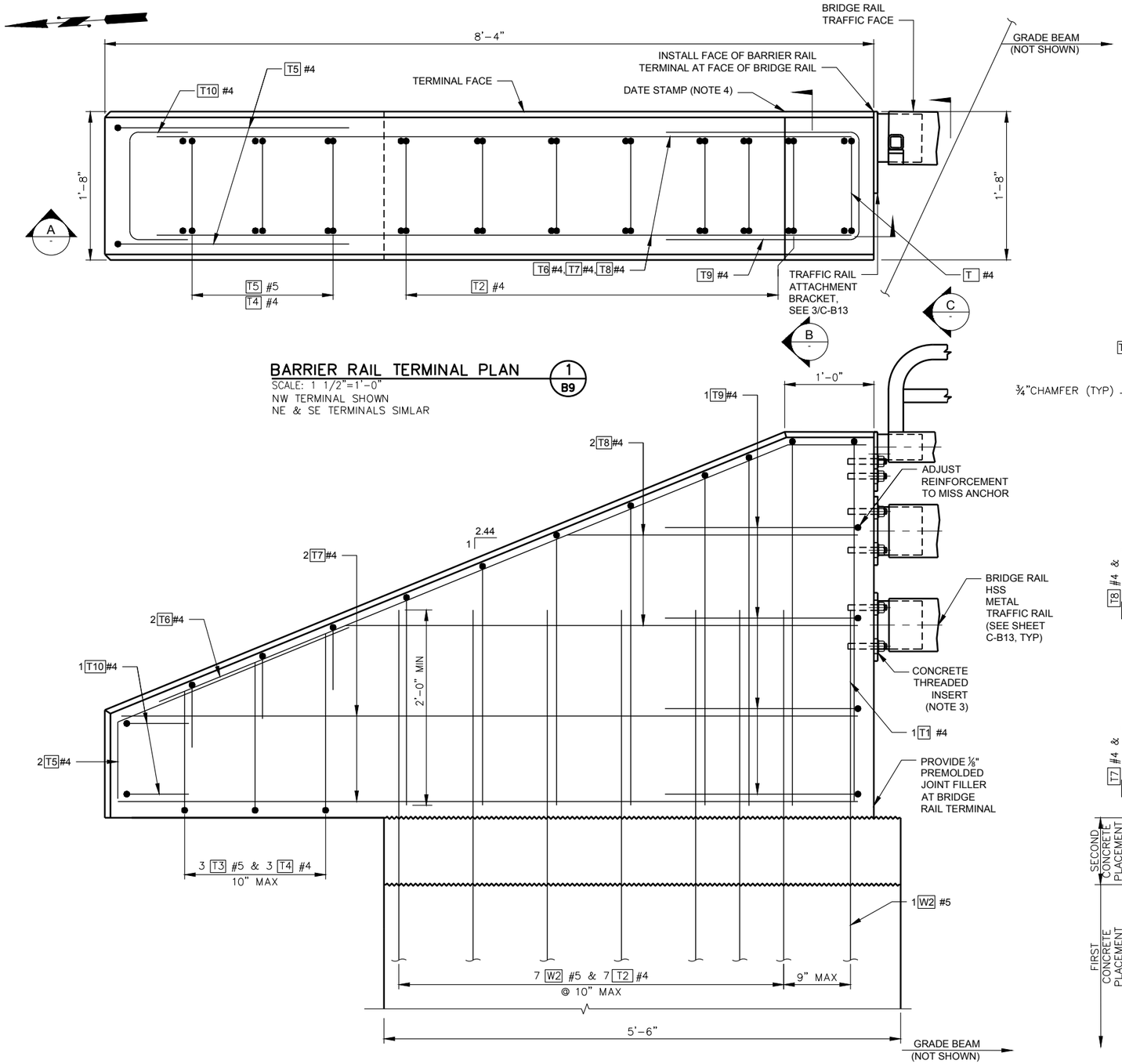
C-B13 | SHT 29 OF 58

GENERAL NOTES

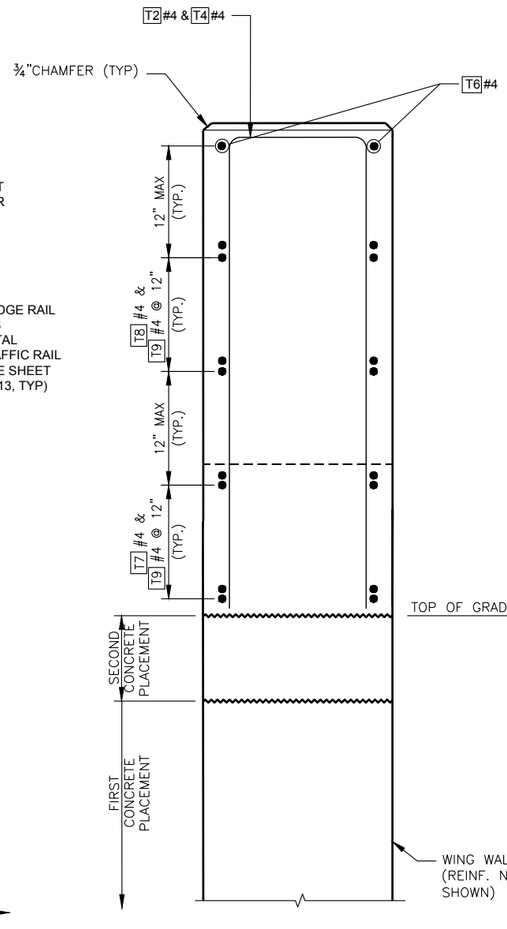
1. SEE NOTES ON C-B13 FOR HARDWARE REQUIREMENTS FOR BRIDGE RAILING.
2. ALL REINFORCEMENT SHALL CONFORM TO ASTM A706 OR AASHTO M31 (ASTM A615) GRADE 60.
3. CONCRETE INSERTS SHALL BE HOT-DIP GALVANIZED FERULE LOOP INSERTS WITH CLOSED-BACK FERULE THREADED TO RECEIVE GALVANIZED 3/4 INCH DIAMETER BOLTS (ASTM A307)
   MINIMUM EMBEDMENT LENGTH = 6"
   MINIMUM SAFE WORKING LOAD IN TENSION = 4000 POUNDS
   MINIMUM SAFE WORKING LOAD IN SHEAR = 4000 POUNDS
4. STAMP BRIDGE YEAR CONSTRUCTION NUMERAL "2018" 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.
5. SOUTH EAST TERMINAL SHOWN. DETAILS FOR NORTH TERMINALS ARE SIMILAR BUT MIRRORED ABOUT THE CENTERLINE AND MIDSPAN OF THE BRIDGE.
6. SEE SHEET C-B15 FOR SOUTH WEST TERMINAL.

BARRIER RAIL TERMINAL PLAN (1 / B9)

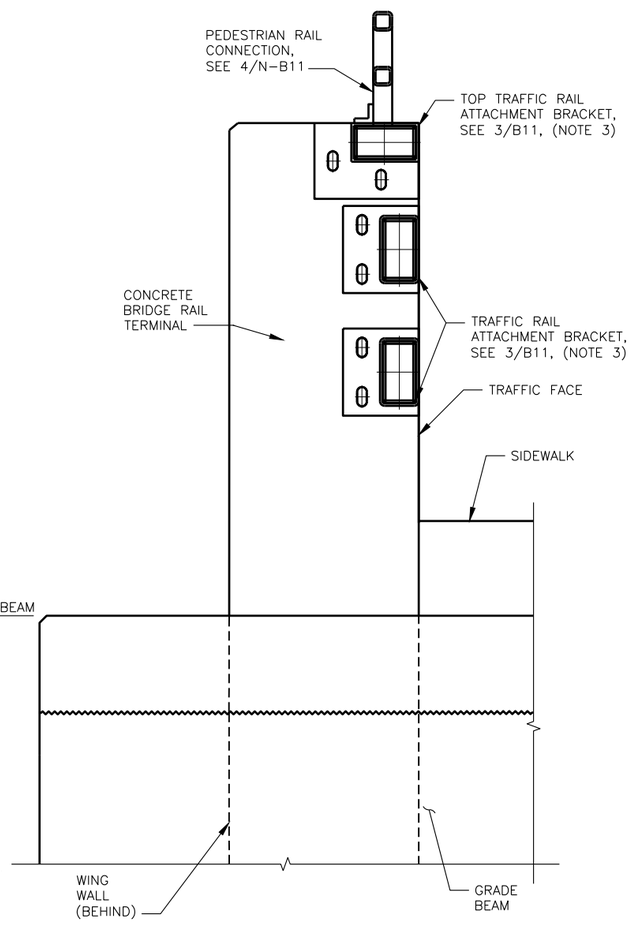
SCALE: 1 1/2"=1'-0"
NW TERMINAL SHOWN
NE & SE TERMINALS SIMLAR



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



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



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

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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Approved By

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PROJECT MANAGER DATE

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

City of Bellevue
UTILITIES

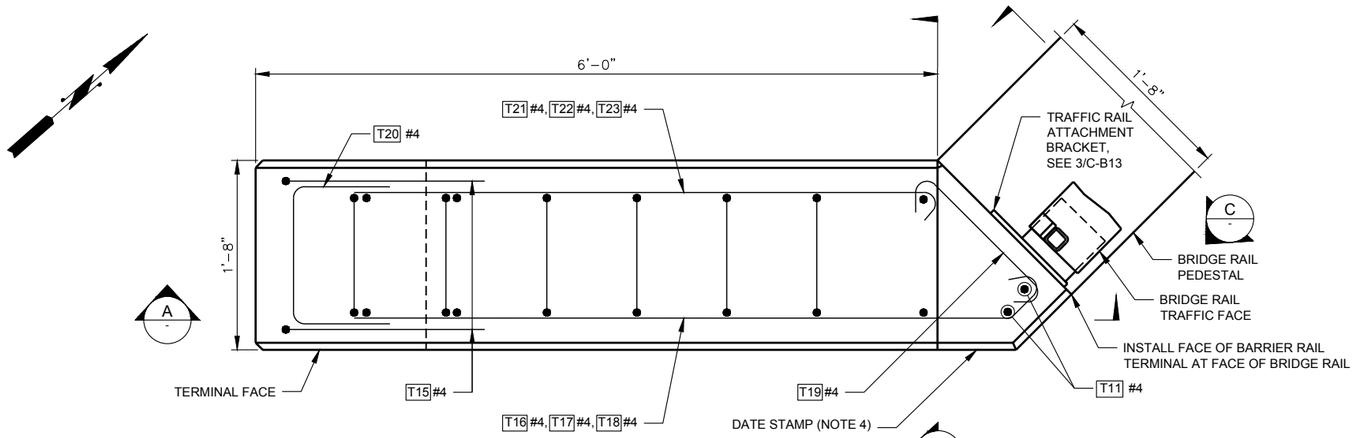
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY BRIDGE RAIL TERMINAL DETAILS 1

C-B14

SHT 30 OF 58

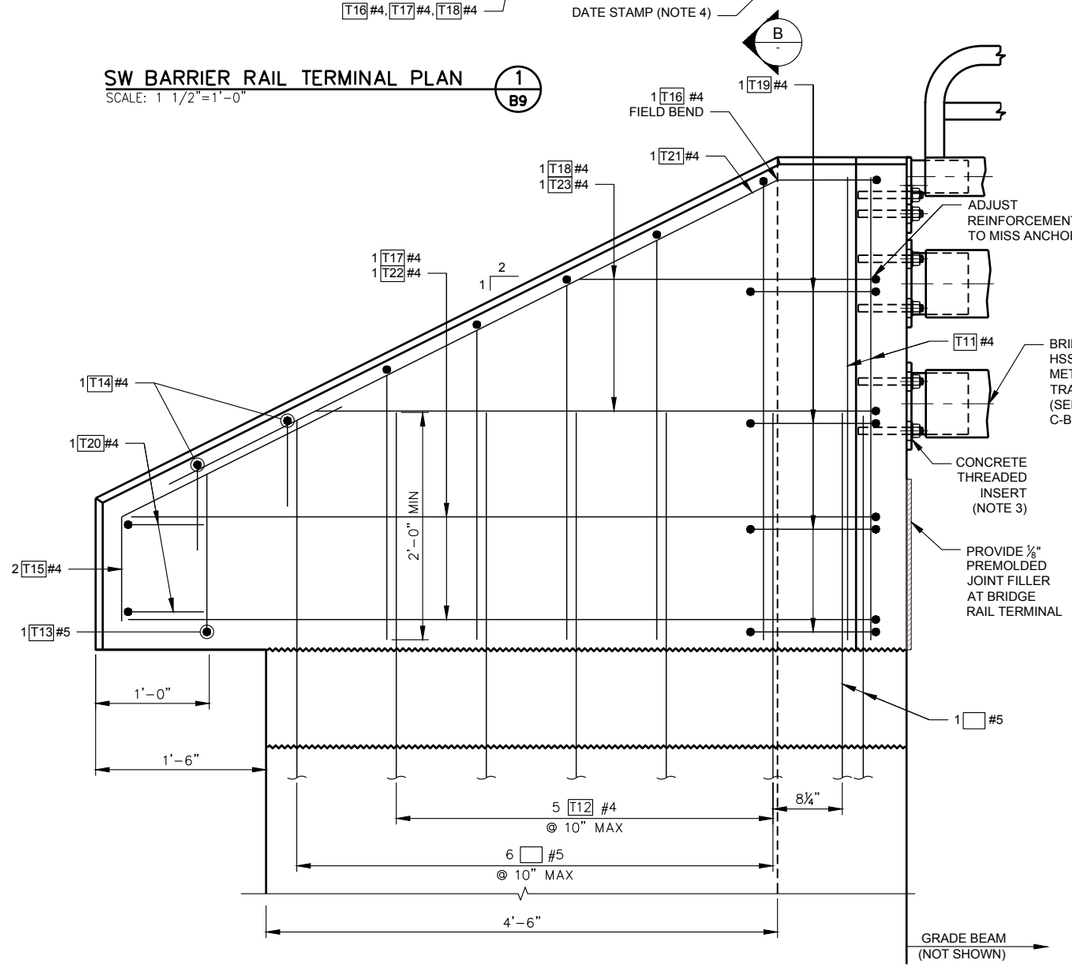
GENERAL NOTES

1. SEE NOTES ON C-B13 FOR HARDWARE REQUIREMENTS FOR BRIDGE RAILING.
2. ALL REINFORCEMENT SHALL CONFORM TO ASTM A706 OR AASHTO M31 (ASTM A615) GRADE 60.
3. CONCRETE INSERTS SHALL BE HOT-DIP GALVANIZED FERULE LOOP 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
4. STAMP BRIDGE YEAR CONSTRUCTION NUMERAL "2018" 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.

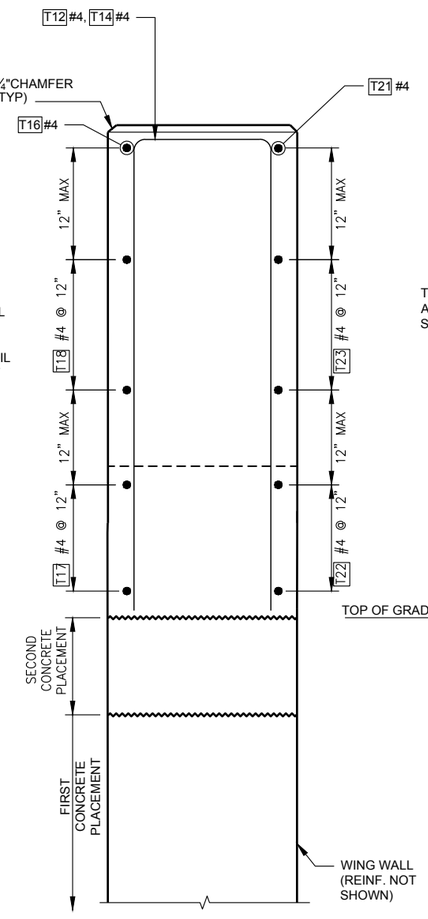


SW BARRIER RAIL TERMINAL PLAN (1/B9)

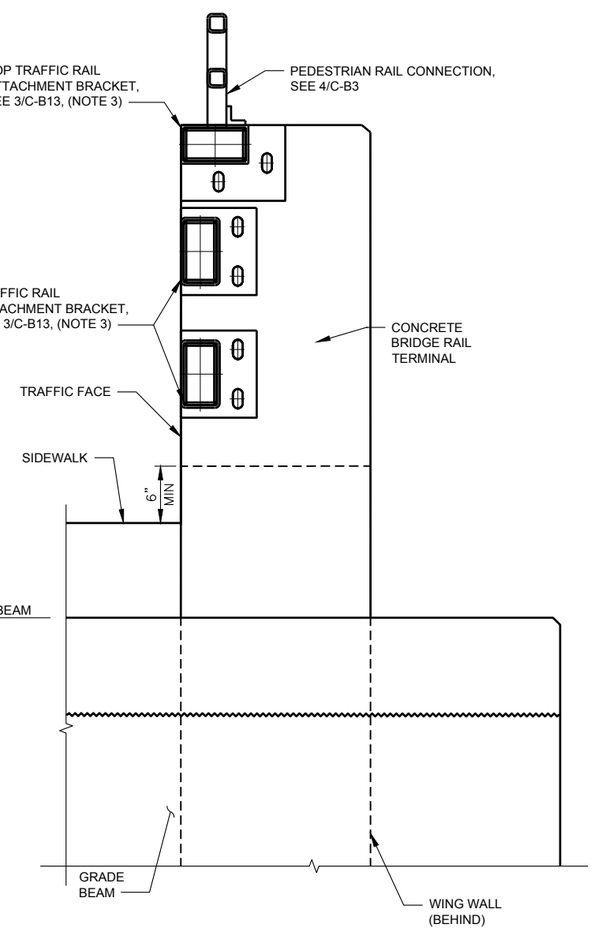
SCALE: 1 1/2"=1'-0"



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



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



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

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FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY BRIDGE RAIL TERMINAL DETAILS 2

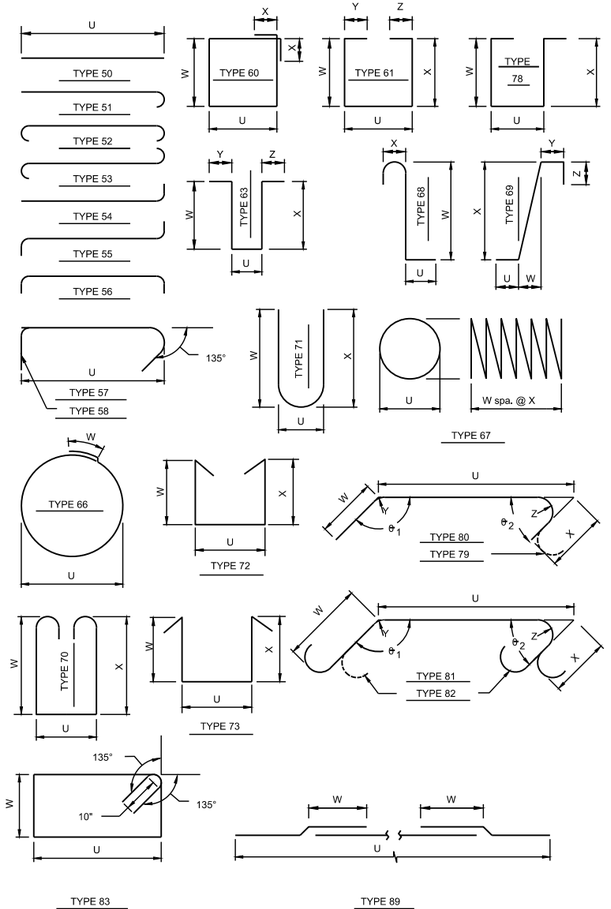
C-B15

SHT 31 OF 58

S = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES
L - LUMP SUM QUANTITY
T OR S - FOR TIE & STIRRUP RADIUS
E - FOR EARTHQUAKETAIL 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 REQ'D	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	FT	IN	FT	IN	FT	IN	FT	IN	DEG	DEG	FT	IN	LBS

BENDING DIAGRAMS



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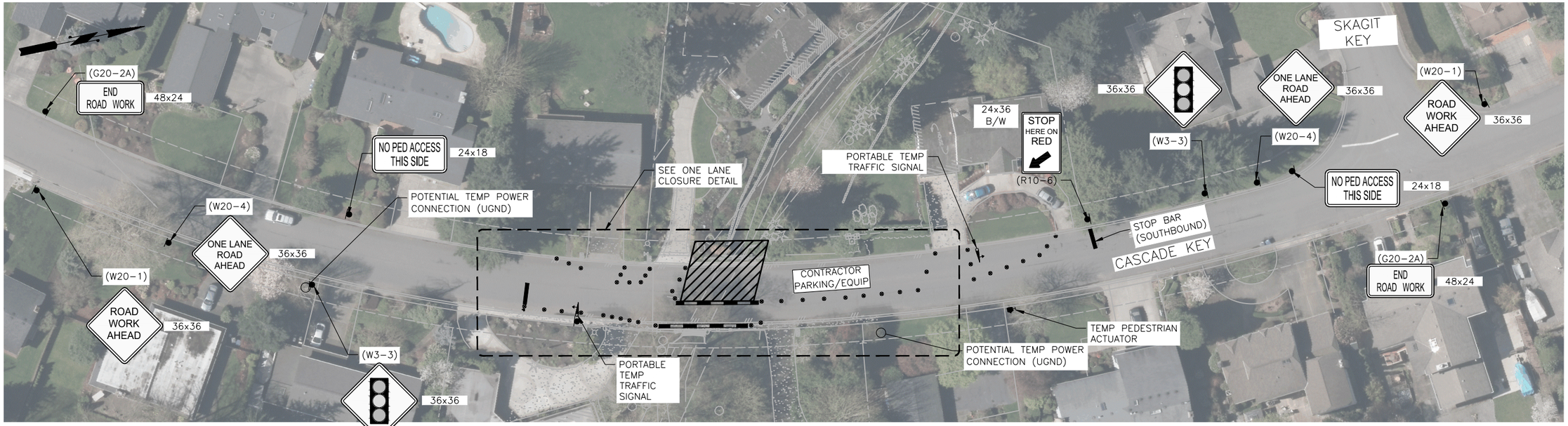
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY BAR LIST

C-B16

SHT 32 OF 58



SHORT TERM CLOSURE NOTE:

1. SHORT TERM FULL ROAD CLOSURES WILL BE ALLOWED ACCORDING TO THE LIMITATIONS OUTLINED IN SECTION 1-07.16 OF THE CONTRACT SPECIFICATIONS.

TEMPORARY POWER NOTE:

1. CONTRACTOR SHALL PROVIDE TEMPORARY CONTINUOUS POWER (SOLAR OR AC) TO PORTABLE TEMPORARY TRAFFIC SIGNALS. POTENTIAL TEMPORARY POWER LOCATIONS SHOWN. IF USED, ACTUAL TEMPORARY SERVICE LOCATIONS SHALL BE PER PSE TEMPORARY SERVICE APPLICATION, SUBMITTED BY CONTRACTOR.

TRAFFIC CONTROL PLAN

0 15 30 45 60

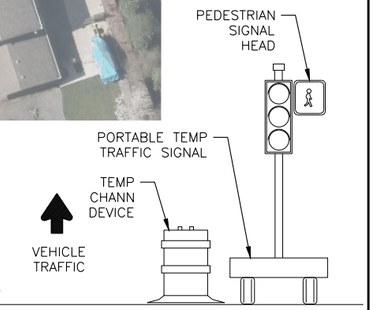
SCALE IN FEET

CONTRACTOR VEHICLE PARKING AND MATERIAL STORAGE:

1. SPACE FOR CONTRACTOR VEHICLE PARKING AND MATERIAL STORAGE IS LIMITED. CONTRACTOR SHALL NOT BLOCK DRIVEWAYS OR IMPEDE TRAFFIC CONTROL AREAS.

TRAFFIC CONTROL PLAN SUBMITTAL:

1. CONTRACTOR SHALL SUBMIT FOR APPROVAL, PROJECT SPECIFIC TRAFFIC CONTROL PLAN REFLECTING THEIR WORK ACTIVITIES WHEN IT DIFFERS FROM THE TRAFFIC CONTROL SHOWN. SEE SECTION 1-10 OF THE CONTRACT SPECIFICATIONS.
2. CONTRACTOR SHALL SUBMIT FOR APPROVAL A SEPARATE TRAFFIC CONTROL PLAN FOR DRILLING OPERATIONS. SEE SECTION 1-10 OF THE CONTRACT SPECIFICATIONS.

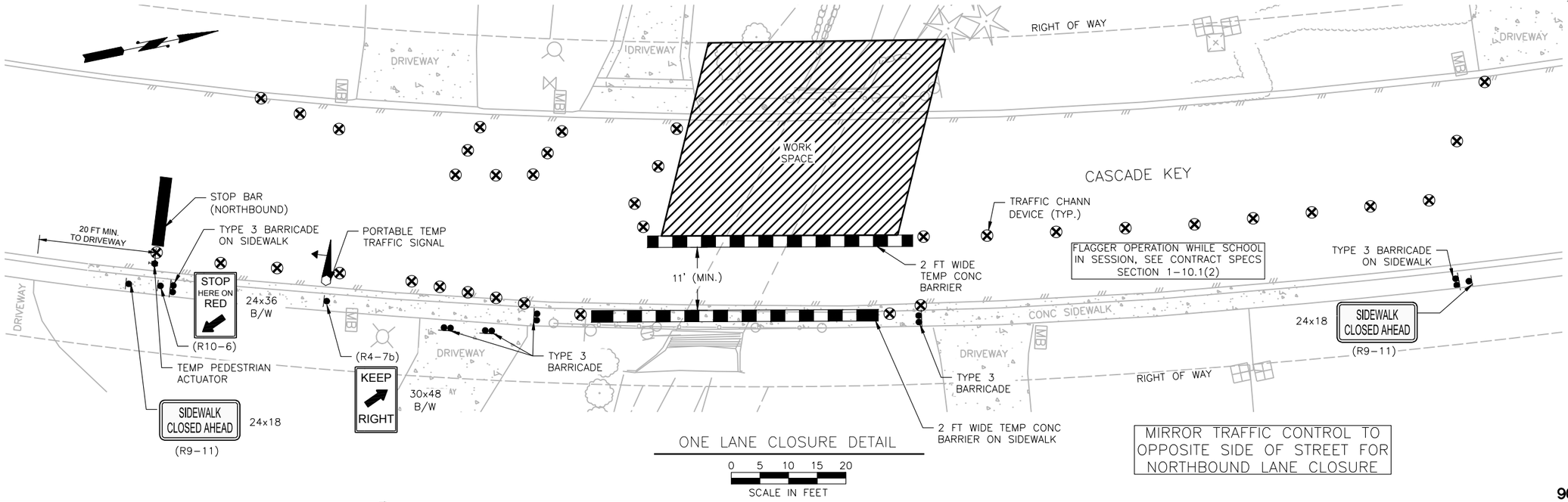


TEMP TRAFFIC SIGNAL

SCALE: NTS

TRAFFIC CONTROL 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. MAINTAIN DRIVEWAY ACCESS IN TRAFFIC CONTROL ZONE AT ALL TIMES. FLAGGER AS NEEDED TO ESCORT VEHICLES IN WORK ZONE.
4. CONTRACTOR TO INSTALL PROJECT NOTIFICATION SIGN, PROVIDED BY COB, PER COB STD PLAN W-53. SEE SHEET N-TC1 FOR LOCATION.
5. ALL SIGNS ARE BLACK AND ORANGE UNLESS OTHERWISE NOTED "B/W" (BLACK ON WHITE).



ONE LANE CLOSURE DETAIL

0 5 10 15 20

SCALE IN FEET

MIRROR TRAFFIC CONTROL TO OPPOSITE SIDE OF STREET FOR NORTHBOUND LANE CLOSURE

DATUM

NAVD 88

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ACF
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GG
CHECKED BY DATE

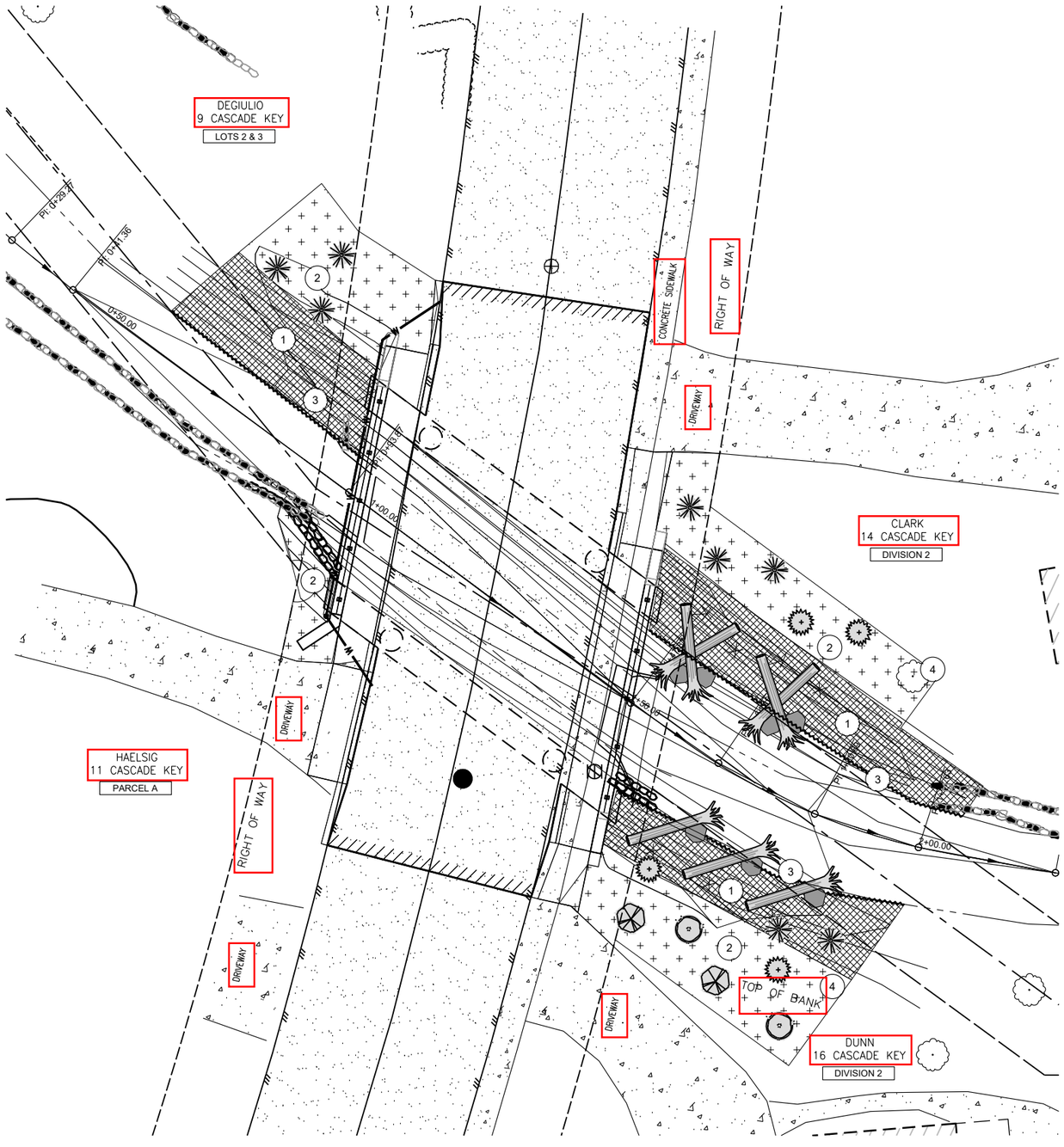
City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY TRAFFIC CONTROL

C-TC1

SHT 33 OF 58

Path: P:\174271 Lower Cool Creek Ph 2 Early Action\04 G2 Design\CAD\Sheetfiles\33 TC1_CASCADE KEY TRAFFIC CONTROL.dwg Plot date: Dec 11, 2017-01:15:13pm CAD User: Adam.Forcier.
Xref Filename: | C-XP-GIS-PARCEL | Group2-border | C-XP-SITE-CASCADE KEY | C-SP-CK STAGING | V-XE-SITE-02-OUTFALLS |



PLANTING LEGEND AND MATERIALS LIST:

	SCIENTIFIC NAME	COMMON NAME	QTY	MIN SIZE / CONDITION	SPACING	NOTES
	TREES					
	ACER CIRCINATUM	VINE MAPLE	2	3/4" CAL / #5 CONT	PER PLAN	SEE DETAIL 4/C-L2
	CORYLUS CORNUTA	BEAKED HAZELNUT	2	3/4" CAL / #5 CONT	PER PLAN	
	PSEUDOTSUGA MENZIESII	DOUGLAS-FIR	4	4' TALL / #5 CONT	PER PLAN	
	THUJA PLICATA	WESTERN RED CEDAR	8	4' TALL / #5 CONT	PER PLAN	
	ZONE 1 PLANTINGS					
	CORNUS SERICEA	RED OSIER DOGWOOD	240	30" x 1/2" / LIVESTAKE	18" OC	SEE DETAIL 1/C-L2
	SALIX HOOKERIANA	HOOKER'S WILLOW	240	30" x 1/2" / LIVESTAKE	18" OC	
	SALIX SITCHENSIS	SITKA WILLOW	240	30" x 1/2" / LIVESTAKE	18" OC	
	ZONE 2 PLANTINGS					
	CORNUS SERICEA	RED OSIER DOGWOOD	35	12" / #1 CONT	3' OC	SEE DETAIL 2/C-L2
	HOLODISCUS DISCOLOR	OCEANSPRAY	20	12" / #1 CONT	3' OC	
	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	20	12" / #1 CONT	3' OC	
	ROSA PISOCARPA	CLUSTERED WILD ROSE	35	12" / #1 CONT	3' OC	
	RUBUS SPECTABILIS	SALMONBERRY	35	12" / #1 CONT	3' OC	
	SYMPHORICARPOS ALBUS	SNOWBERRY	35	12" / #1 CONT	3' OC	
	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	25	12" / #1 CONT	3' OC	
	COIR LOG PLANTINGS					
	SALIX SITCHENSIS	SITKA WILLOW	49	30" x 1/2" / LIVESTAKE	1' OC	SEE DETAIL 3/C-L2
	CORNUS SERICEA	RED OSIER DOGWOOD	49	30" x 1/2" / LIVESTAKE	1' OC	
	SALIX HOOKERIANA	HOOKER'S WILLOW	49	30" x 1/2" / LIVESTAKE	1' OC	

DATUM
NAVD 88

0 5 10 15 20
SCALE IN FEET

CONSTRUCTION NOTES:

1. ZONE 1 RIPARIAN RESTORATION, SEE DETAIL 1/C-L2
2. ZONE 2 RIPARIAN RESTORATION, SEE DETAIL 2/C-L2
3. COIR LOG PLANTING, SEE DETAIL 3/C-L2
4. ADJUST PLANT INSTALLATION AROUND RETAINED TREES.

GENERAL NOTES

1. LOCATE AND PROTECT EXISTING LANDSCAPE IRRIGATION. REPAIR OR REPLACE IF DAMAGED.

NO	DATE	BY	APPR	REVISIONS

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Approved By

DESIGN MANAGER	DATE
PROJECT MANAGER	DATE

JC	12/11/17
DESIGNED BY	DATE
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BB	12/11/17
CHECKED BY	DATE

City of Bellevue
UTILITIES

90% SUBMITTAL

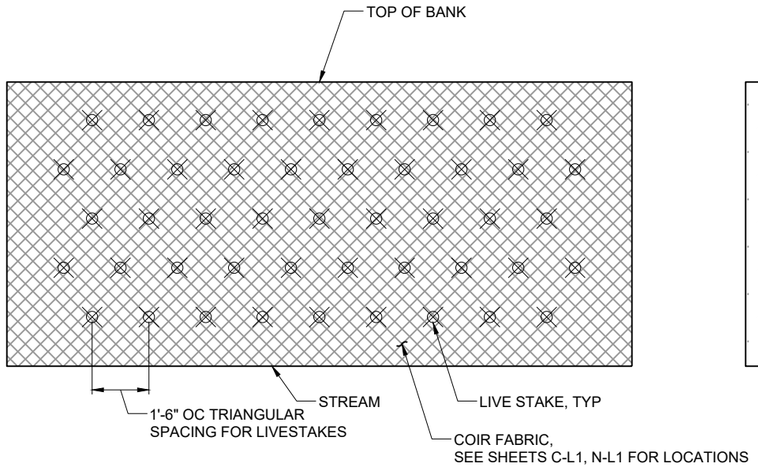
FLOOD HAZARD REDUCTION PROJECT
CASCADE KEY RIPARIAN RESTORATION PLAN

C-L1

SHT 34 OF 58

NOTE:

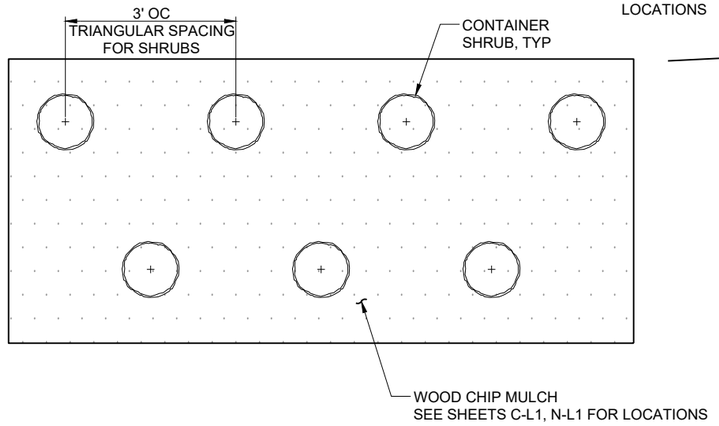
1. INSTALL LIVESTAKES THROUGH COIR FABRIC
2. DISTRIBUTE STAKES RANDOMLY BY SPECIES



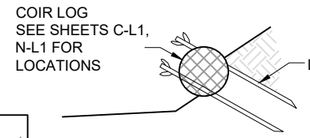
ZONE 1 PLANTING
SCALE: 3/4"=1'-0"
1 | N-L1 | C-L1

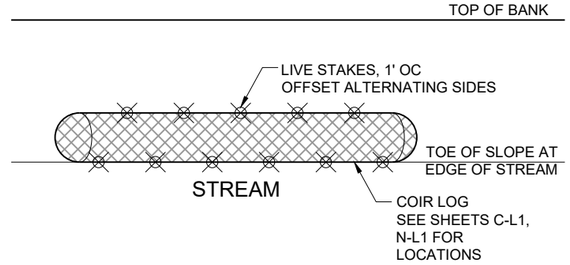
NOTE:

1. PLANT SHRUBS IN SINGLE SPECIES GROUPS OF 3 TO 5 PLANTS
2. INSTALL SHRUBS THROUGH COIR FABRIC, IF PRESENT. SEE DETAIL 5/-

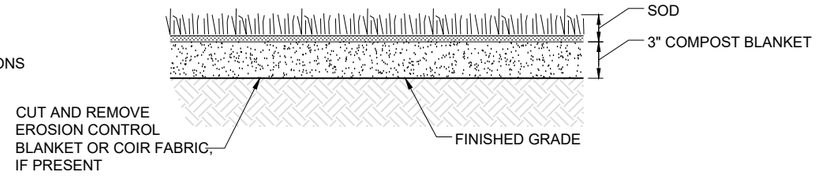


ZONE 2 PLANTING
SCALE: 3/4"=1'-0"
2 | N-L1 | C-L1

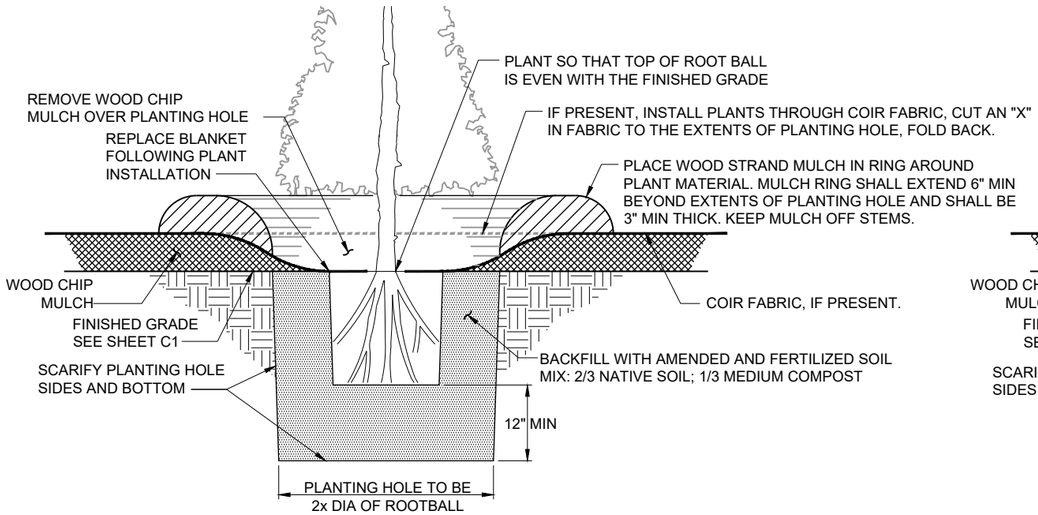




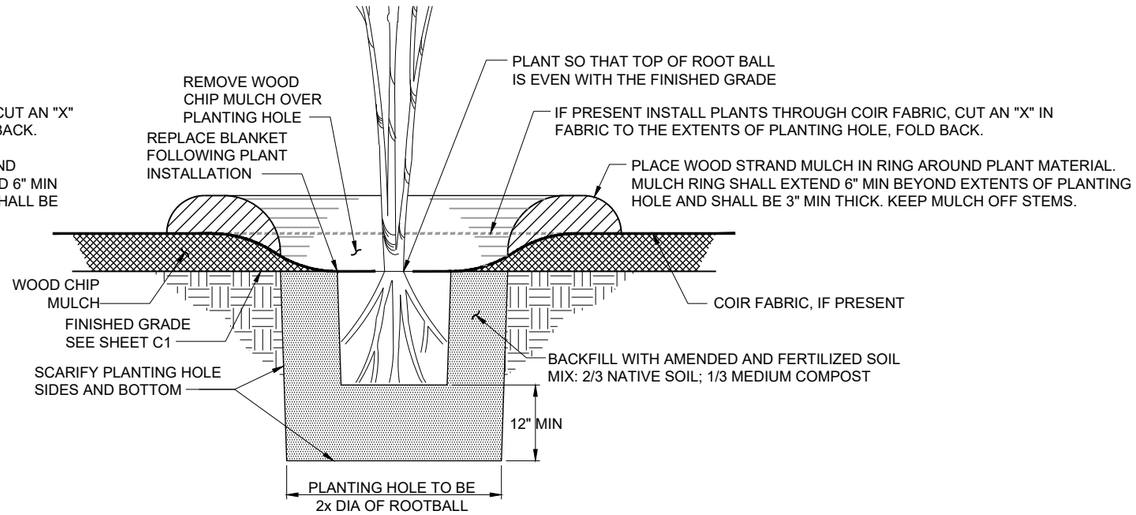
COIR LOG PLANTING
SCALE: 3/4"=1'-0"
3 | N-L1 | C-L1



LAWN RESTORATION
NO SCALE
6 | N-C1 | N-L1



TREE PLANTING
NO SCALE
4 | N-L1 | C-L1



SHRUB PLANTING
NO SCALE
5 | N-L1 | C-L1

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FLOOD HAZARD REDUCTION PROJECT
LANDSCAPE RESTORATION DETAILS

C-L2

SHT 35 OF 58

BEGIN CREEK ALIGNMENT
CREEK STA 0+24.31
N 211657.19
E 1306066.35

APPLESTONE
47 ORCAS KEY
LOT 18

29.23'

CREEK PI
CREEK STA 0+66.21
N 211621.35
E 1306088.04

TEMPORARY CONSTRUCTION EASEMENT

END ROAD ALIGNMENT
STA 33+50.00
N 211642.83
E 1306266.76

PROJECT LIMITS (TYP)

50' EXIST DRAIN ESMT

TOP OF BANK

RIGHT OF WAY

NEWPORT KEY

STA 32+37.12 PC

SDCB TYPE I
CTR LID = 25.57'
IE 18" CONC (W)=20.8'
IE 8" CONC (NW)=21.2"
IE 18" CONC (E)=20.8'
IE BOTTOM=19.4'

IE 4" CPEP (OUT FALL FROM DOWNSPOUT)=27.2'

27.88'

6" WOOD FENCE

IE 4" CPEP (OUT FALL FROM DOWNSPOUT)=28.5'

CREEK PI
CREEK STA 0+94.00
N 211597.06
E 1306101.54

13.4' WIDE CURVED CORRUGATED METAL CULVERT. INSIDE TOP OF CULVERT IS 4.7' ABOVE STREAM BOTTOM. THALWEG=20.8'

27.62'

HOUSE

HU
46 NEWPORT KEY
LOT 19

CREEK STA 1+18.56=
ROAD STA 31+81.58

CREEK PI
CREEK STA 1+42.56
N 211553.98
E 1306123.98

ZHAO
45 ORCAS KEY
LOT 16

29.05'

HOUSE

SDCB TYPE II 48"
CTR LID=27.84'
TOP OF WATER ELEV=23.1'
TOP OF PIPE=19.7'
NO INVERTS FOUND, PIPE APPEARS TO GO THROUGH STRUCTURE
SUMP=18.6'

N62° 27' 19"E

PROJECT LIMITS (TYP)

5FT PSE EASEMENT

BEGIN ROAD ALIGNMENT
STA 31+00.00
N 211537.55
E 1306040.56

CONCRETE SIDEWALK

ROLLED CURB

MONITOR WELL B-2B
LID=27.98'
TOP 2" PVC=27.66'

EXIST WOOD FENCE

13.5' WIDE CURVED CORRUGATED METAL CULVERT. INSIDE TOP OF CULVERT IS 5.6' ABOVE STREAM BOTTOM. THALWEG=20.2'

HSIAO
60 SKAGIT KEY
LOT 15

7" VERTICAL PVC PIPE (1" DIA.) NEXT TO OHW FLAG

39.43'

5FT PSE EASEMENT

POOL

HOUSE

CONCRETE PATIO

YARD LIGHT (TYP)

TEMPORARY CONSTRUCTION EASEMENT

COAL CREEK

FLOW

30.07'

29.69'

END CREEK ALIGNMENT
CREEK STA 2+16.74
N 211488.60
E 1306159.03

50' EXIST DRAIN ESMT

TOP OF BANK

CITY OF BELLEVUE CONTROL POINTS

ID	DESCRIPTION	NORTHING	EASTING	ELEVATION
H2631/V619 (NOT SHOWN)	4"X4" CONC MON W/ ½" DIA. BRASS ROD W/ PUNCH MK IN CASE. INTERSECTION NEWPORT KEY & ORCAS KEY	211643.78	1306270.09	25.55
H2632 (NOT SHOWN)	2" DIA. COB BRASS CAP STAMPED "2632". IN ROLLED CURB FLOWLINE, WEST SIDE INTERSECTION NEWPORT KEY & SKAGIT KEY @ RESIDENCE #57 SKAGIT KEY	211493.19	1305931.34	–

ROAD CURVE DATA TABLE

CURVE NO.	PI STATION	DELTA Δ	RADIUS	TANGENT	LENGTH
C1	32+95.50	11°48'35"	564.42'	58.38	116.34'

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.

DATUM
NAVD 88

0 5 10 15 20
SCALE IN FEET

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY EXISTING CONDITIONS AND SURVEY CONTROL

N-EC1

SHT 36 OF 58

CONSTRUCTION NOTES:

1. CATCH BASIN INLET PROTECTION INSERT PER COB BMP C220. INSTALL ON ALL CB WITHIN 200 FT DOWNSTREAM OF PROJECT
2. HIGH VISIBILITY FENCE PER WSDOT STANDARD PLAN I-10.10-01, APPROX 504 LF
3. COIR LOG PLACEMENT, SEE DETAIL 1/C-E2, APPROX 230 LF.
4. TREE PROTECTION PER COB BMP T101, EXCEPT WEED CONTROL.
5. TEMPORARY GRAVEL BAG BERM
6. TEMPORARY STREAM BYPASS PIPELINE. MINIMUM 42" DIA SMOOTH BORE AND 62 CFS CAPACITY, APPROX 180 LF
7. PROTECT BRIDGE WING WALLS AFTER CONSTRUCTION DURING SITE ACCESS
8. 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 STORM FLOW IN THE NORTHEAST SD IS ABOUT 1.7 CFS.
9. ESTABLISH TURBIDITY MONITORING LOCATION WITHIN 50 FT DOWNSTREAM OF STREAM BYPASS END.
10. SUGGESTED BAKER TANK LOCATION. FINAL LOCATION BY CONTRACTOR.

DATUM
NAVD 88

0 5 10 15 20
SCALE IN FEET

EROSION & SEDIMENTATION CONTROL NOTES:

1. SEE G2 FOR ABBREVIATIONS AND SYMBOLS.
2. SEE SHEET C-E2 FOR FOR COB STANDARD EROSION CONTROL NOTES AND EROSION & SEDIMENT CONTROL NOTES.
3. SEE SHEETS N-L1 & C-L2 FOR PERMANENT VEGETATION RESTORATION (NURSERY PLANTINGS). NOTE LOCATES TO RECEIVE TOPSOIL.
4. SEE SHEET N-EC1 FOR ROAD AND CREEK ALIGNMENTS.

STREAM BYPASS NOTES:

1. SEE SHEET C-E2 FOR STREAM BYPASS NOTES.

LEGEND:

BIODEGRADABLE EROSION CONTROL BLANKET PER COB BMP C122. NO WOOD CHIP MULCH. LANDSCAPE PER SHEET N-L1.

HIGH VISIBILITY FENCE

COIR LOG

90% SUBMITTAL

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City of Bellevue
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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY STREAM BYPASS AND ESC PLAN

N-E1 | SHT 37 OF 58

Path: P:\TM271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\37 N-E1_NEWPORT KEY STREAM BYPASS AND ESC PLANS.dwg Plot date: Dec 11, 2017-01:16:13pm CAD User: Adam.Forcier
Xref Filename: | Group2-border | C-SP-ALGN-PROF | C-SP-OHW | C-SP-FEMA | V-XE-SITE-G2-OUTFALLS | C-SP-PROJ-LIMTS_G2 | C-SP-SITE-NEWPORT KEY | C-SP-CONTOURS-NEWPORT KEY |

WITH PUNCH I
COB #2631

SITE PREPARATION NOTES:

1. REMOVE EXISTING CMP CULVERT, CONCRETE WINGWALLS AND GUARDRAIL.
2. REMOVE EXISTING 8" CI SEWER FORCE MAIN.
3. REMOVE EXISTING TREE.
4. SAWCUT EXISTING ROAD, SIDEWALK, AND ROLLED CURB & GUTTER.
5. REMOVE EXISTING 8" CI WATER MAIN.
6. REMOVE ABANDONED AND DECOMMISSIONED GEOTECHNICAL WELL CASING AND SURFACE MONUMENT TO DEPTH NEEDED FOR CONSTRUCTION.
7. RELOCATE STREET SIGN, SEE SHEET N-C1 FOR LOCATION.
8. RELOCATE GAS MAIN, BY OTHERS (PSE).
9. RELOCATE STREET LIGHT, BY OTHERS (PSE).
10. RELOCATE UNDERGROUND POWER, BY OTHERS (PSE).
11. RELOCATE UNDERGROUND CABLE, BY OTHERS (COMCAST).
12. REMOVE GEOTCHNICAL BOREHOLE CONCRETE CAP.
13. REMOVE EXISTING SEWER MANHOLE AND 8" CI GRAVITY SEWER PIPE. SEE SHEET N-C1.
14. REMOVE EXISTING STORM DRAIN CATCH BASIN AND PIPE.
15. REMOVE EXISTING FENCE, APPROX 61 LF
16. REMOVE EXISTING TREE. RETAIN ROOTBALL AND GRIND STUMP
17. SAWCUT EXISTING ROAD FOR STORM PIPE REMOVAL AND STORM PIPE CONSTRUCTION. TRENCH WIDTH PER COB STD DETAIL D-25. SEE SHEET N-C1 FOR NEW STORM PIPE.
18. REMOVE EXISTING 8" AC GRAVITY SEWER PIPE FOR NEW SEWER MANHOLE INSTALLATION.
19. SALVAGE EXIST STREAM GAUGE ENCLOSURE AND STREAM GAUGE. SEE N-C1 FOR REPLACEMENT.
20. ABANDON EXISTING PIPE IN PLACE. PLUG ENDS AND FILL WITH CDF STA 32+18± RT TO 33+15± RT.

GENERAL NOTES:

1. SEE SHEET G2 FOR GENERAL NOTES.
2. SEE SHEET G3 FOR STORM DRAINAGE GENERAL NOTES, SANITARY SEWER GENERAL NOTES, AND TRANSPORTATION DEPARTMENT CONSTRUCTION NOTES.

LEGEND

- STORM DRAIN/WATER/SEWER PIPE REMOVAL
- CONCRETE DRIVEWAY/SIDEWALK/ROLLED CURB REMOVAL
- TRENCH EXCAVATION

TEMPORARY SEWER FM BYPASS SUBMITTAL:

1. SEE SECTION 9-01 OF CONTRACT SPECIFICATIONS FOR TEMPORARY SEWER FM BYPASS REQUIREMENTS.

NAVD 88

0 5 10 15 20
SCALE IN FEET

90% SUBMITTAL

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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY
SITE PREPARATION PLAN

N-SP1 | SHT 38 OF 58

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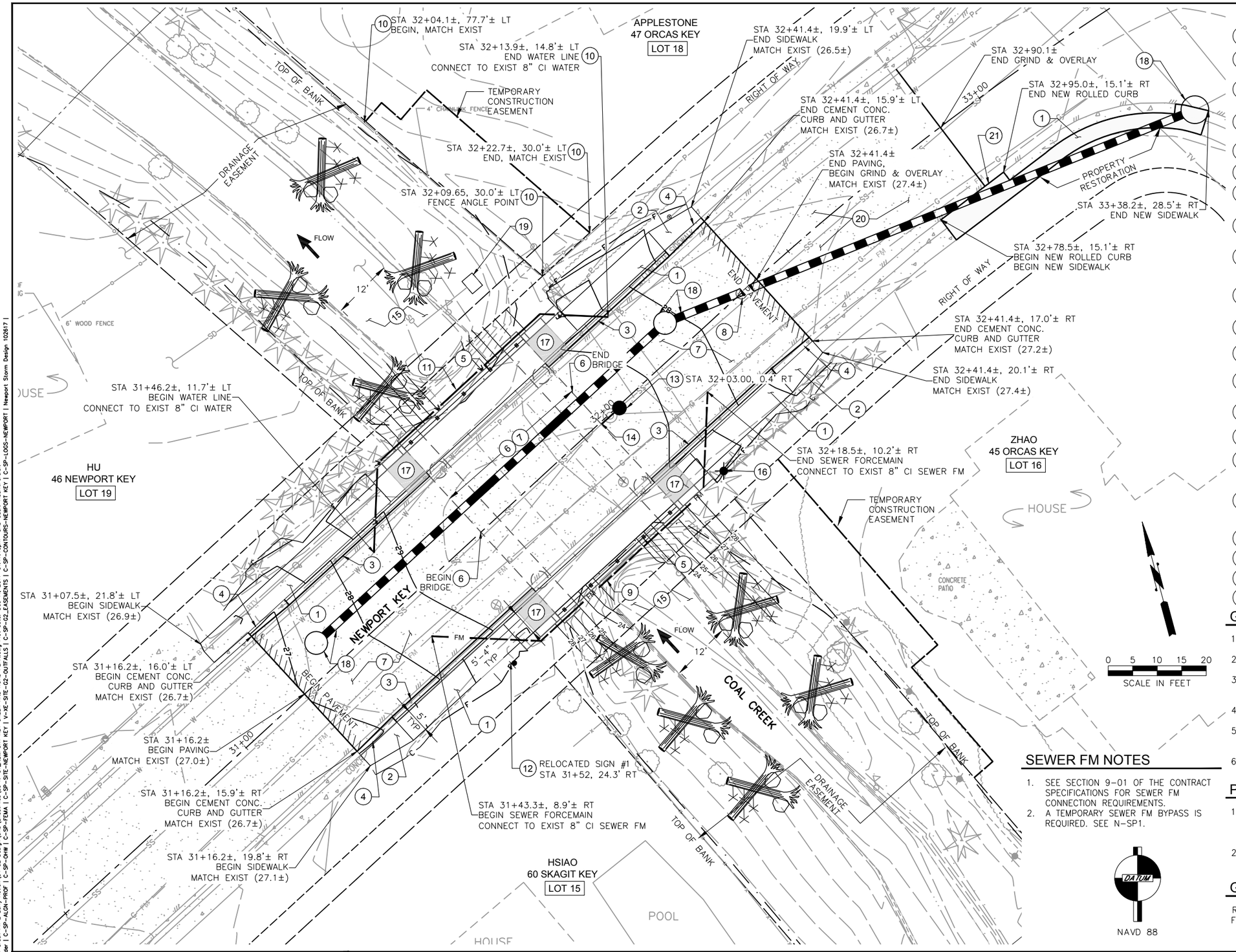

CONSTRUCTION NOTES:

1. CEMENT CONCRETE SIDEWALK, SEE COB STD DETAIL SW-110-1/C-C5.
2. TAPER CEMENT CONCRETE SIDEWALK TO MATCH EXISTING. TAPER LENGTH = 10 FT
3. CEMENT CONCRETE TRAFFIC CURB AND GUTTER, SEE COB STD DETAIL SW-100-1/C-C5.
4. TRANSITION ROLLED CURB TO CEMENT CONCRETE TRAFFIC CURB AND GUTTER, SEE 2/C-C4.
5. BRIDGE RAIL WITH MIN TL-1 RATING, SEE SHEET N-B11.
6. BRIDGE, SEE SHEETS N-B1 TO N-B13. STA 31+65.06 TO STA 31+98.06.
7. SEE TYPICAL ROADWAY APPROACH AND BRIDGE SECTION FOR PAVING 1/C-C4 AND 3/C-C4.
8. SURVEY MONUMENT REMOVAL AND REPLACEMENT, SEE COB STD DETAIL RC-260-1/C-C5.
9. ATTACH SEWER FORCEMAIN TO BRIDGE. SEE SHEET N-C3 FOR SEWER FORCEMAIN PROFILE. SEE A/N-B12 FOR SEWER FORCEMAIN SUPPORTS ON BRIDGE.
10. CHAINLINK FENCE. MATCH EXISTING HEIGHT (APPROX. 4FT) AND MATERIAL. LINE POSTS AND CORNER POST SIZE AND MATERIAL SHALL MATCH EXISTING..
11. ATTACH WATER MAIN TO BRIDGE. SEE SHEET N-C3 FOR WATER MAIN PROFILE. SEE A/N-B12 FOR WATER MAIN SUPPORTS ON BRIDGE.
12. RELOCATED SIGN, INSTALL SIGN PER COB STD DETAIL SG-100-1/C-C5.
13. SANITARY SEWER MANHOLE TYPE 1, 48" DIA. SEE COB STD DETAIL S-1. INSTALL ON EXIST 8" AC SEWER PER COB STD DETAIL S-7.
14. 8" DI SEWER PIPE. 5 LF, SLOPE TO MATCH EXISTING. CONNECT TO EXIST 8" CI SEWER PIPE. STA 31+98.2±, 0.4'± RT.
15. SEE SHEET N-H1 FOR CHANNEL GRADING AND HABITAT STRUCTURES.
16. LIGHT POLE RELOCATION BY FRANCHISE UTILITY (PSE). FINAL LOCATION TO BE COORDINATED WITH PSE. SEE CONTRACT SPECS SECTION 1-07.3 FOR COORDINATION REQUIREMENTS. APPROX. STA 32+10.00 RT
17. PLACE ENGINEERED FILL PER CONTRACT SPECS UNDER SIDEWALK, AND TYPE A TRAFFIC CURB AND GUTTER. DEPTH OF ENGINEERED FILL 6'-6" BELOW TOP OF SIDEWALK.
18. SEE ROAD PROFILE, N-C2, FOR STORM DRAIN. SEE ALSO GENERAL NOTE 6.
19. RELINSTALL SALVAGED STREAM GAUGE AND ENCLOSURE.
20. GRIND 2" AND OVERLAY WITH HMA CL 1/2 IN. PG 64-22
21. NEW ROLLED CURB. MATCH EXISTING.

GENERAL NOTES

1. SEE SHEET G3 FOR GENERAL WATER AND STORM DRAINAGE NOTES.
2. SEE SHEET N-EC1 FOR ROAD ALIGNMENT.
3. SEE WATER MAIN PROFILE AND SEWER FM PROFILE, SHEET N-C3 FOR JOINT RESTRAINTS AND HORIZONTAL THRUST BLOCKS.
4. CONTRACTOR TO RELOCATE WATER LINE AND SEWER FORCEMAIN.
5. RELOCATION OF TELEPHONE (CENTURYLINK), UNDERGROUND POWER (PSE), CABLE (COMCAST), AND GAS (PSE) BY OTHERS.
6. TRENCHING FOR STORM DRAIN PER COB STD DETAIL D-25.

SEWER FM NOTES

1. SEE SECTION 9-01 OF THE CONTRACT SPECIFICATIONS FOR SEWER FM CONNECTION REQUIREMENTS.
2. A TEMPORARY SEWER FM BYPASS IS REQUIRED. SEE N-SP1.

PAVING NOTES

1. GRIND AND OVERLAY LIMITS FOR FRANCHISE UTILITY TRENCHING MAY BE ADJUSTED BY THE TRANSPORTATION INSPECTOR BASED ON FIELD CONDITIONS AND FINAL LOCATIONS OF STREET CUTS FOR FRANCHISE UTILITIES.
2. ANY DAMAGE TO THE ROADWAY CAUSED DURING CONSTRUCTION MUST BE RESTORED AT THE DIRECTION OF THE TRANSPORTATION INSPECTOR.

GRADING NOTE

ROADWAY GRADING LIMITS SHOWN BY CUT OR FILL LINE. SEE SHEET N-C2 FOR ROAD PROFILE. SEE SHEET N-H1 FOR STREAM GRADING.

DATUM
NAVD 88

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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY ROAD PLAN

N-C1

SHT 39 OF 58

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VERTICAL CURVE DATA TABLE							
CURVE #	LENGTH	PVI STA	PVI ELEV	BEGIN VC STA	BEGIN VC ELEV	END VC STA	END VC ELEV
VC1	20.00'	31+26.20	27.34	31+16.20	27.04	31+36.20	28.14
VC2	20.00'	31+55.00	29.65	31+45.00	28.85	31+65.00	29.60
VC3	20.00'	32+08.10	29.38	31+98.10	29.43	32+18.10	28.58
VC4	20.00'	32+31.40	27.52	32+21.40	28.32	32+41.40	27.37

STATION/OFFSET NOTE:

1. ALL STATIONS ARE ROAD ALIGNMENT STATIONS UNLESS OTHERWISE NOTED.
2. STATIONS AND OFFSETS ARE SHOWN TO CENTER OF STRUCTURE, EXCEPT WHERE OTHERWISE NOTED.

CONSTRUCTION NOTES:

(1) 2' THICK, 4'' QUARRY SPALLS WRAPPED IN GEOTEXTILE FABRIC, TOPPED WITH CSBC LEVELING COURSE.

(2) DEWATERING WILL BE REQUIRED FOR SIPHON AND ASSOCIATED STRUCTURE INSTALLATION. CONTRACTOR TO COORDINATE SIPHON CONSTRUCTION WITH BRIDGE AND STREAM BYPASS WORK. CONTRACTOR SHALL SUBMIT AN EXCAVATION SUPPORT AND DEWATERING PLAN PER SECTION 209 OF THE SPECIFICATIONS.

(3) SEE N-B1 TO N-B13 FOR BRIDGE.

(4) SEE H/N-H2 FOR CREEK SECTION UNDER BRIDGE.

(5) SEWER MANHOLE TYPE 1, 48" DIA. PER COB STD DETAIL S-1.

(6) CONNECT TO EXISTING 8" AC SEWER

(7) 18" DIA. HDPE DIPS DR32.5 PE4710 STORM DRAIN SIPHON WITH 45° BENDS.

(8) SEE SHEET N-SP1 FOR SEWER MANHOLE REMOVAL

(9) REPLACE EXISTING CB WITH 54" DIA. TYPE-2 CATCH BASIN WITH SPILL CONTROL (SC) SEPARATOR TYPE-2, PER COB STD DETAIL D-43, WITH RECTANGULAR BI-DIRECTIONAL VANED GRATE PER WSDOT STD. DETAIL B-30.40-02, AND CONNECT TO EXISTING STORMDRAIN LINES. CAP TOP OF SPILL CONTROL TEE SECTION AND PERFORATE WITH 1" DIA. HOLE.

(10) TYPE-2 CATCH BASINS PER COB STD DETAIL D-4 WITH 24" MANHOLE RING AND COVER PER COB STD DETAIL D-21.

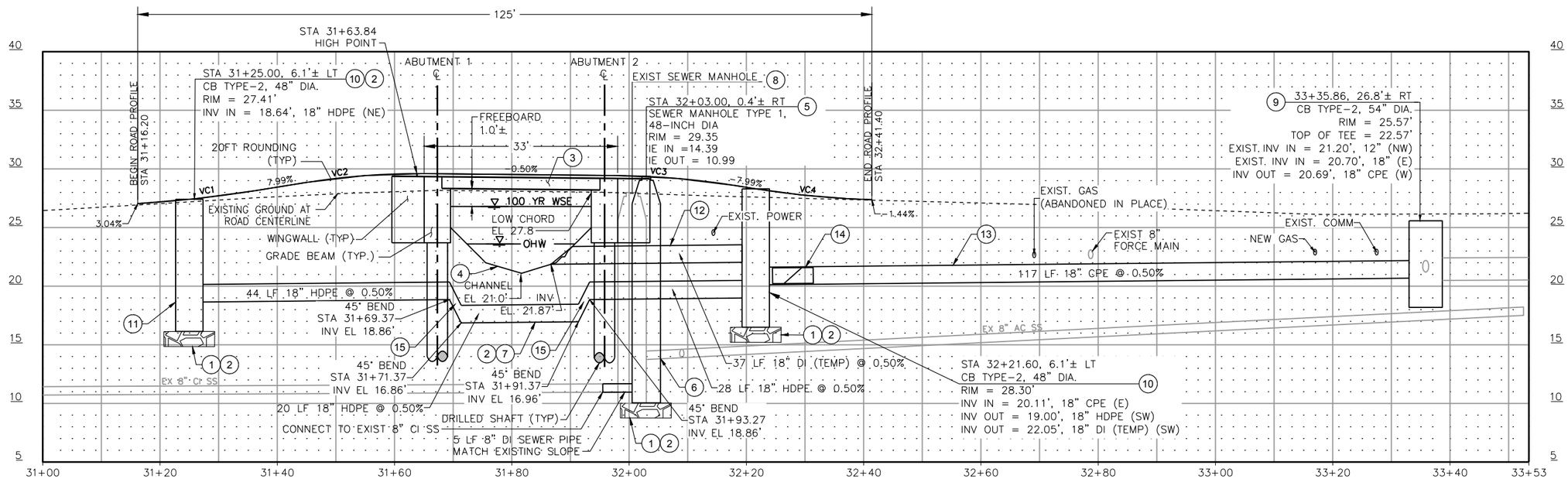
(11) PROVIDE KNOCKOUT ON OPPOSITE WALL OF CB FROM INLET PIPE AT SAME EL 18.64' FOR FUTURE CONNECTION.

(12) VERIFY POSITIVE SLOPE TO CREEK (0.5% MIN.) PRIOR TO TEMPORARY OUTLET PIPE INSTALLATION. BEVEL END OF OUTLET PIPE TO MATCH CREEK SIDE SLOPE. PER COB STD DETAIL D-34.

(13) THE CONTRACTOR SHALL RELOCATE ANY SANITARY OR WATER SERVICE CONNECTION CROSSINGS IF IN CONFLICT WITH THE PROPOSED STORM SYSTEM.

(14) 18" DIA. "CHECKMATE" AS MANUFACTURED BY TIDEFLEX OR APPROVED EQUAL. INSTALL PER MANUFACTURERS' RECOMMENDATIONS, SEE CONTRACT SPECIFICATION SECTION 7-11.

(15) 2LF 18" HDPE @ 100.00%



ROAD PROFILE – NEWPORT KEY
SCALE: HORIZ: 1"= 10' VERT: 1"=5'

DATUM
NAVD 88

0 5 10 15 20
SCALE IN FEET

90% SUBMITTAL

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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY ROAD PROFILE

N-C2

SHT 40 OF 58

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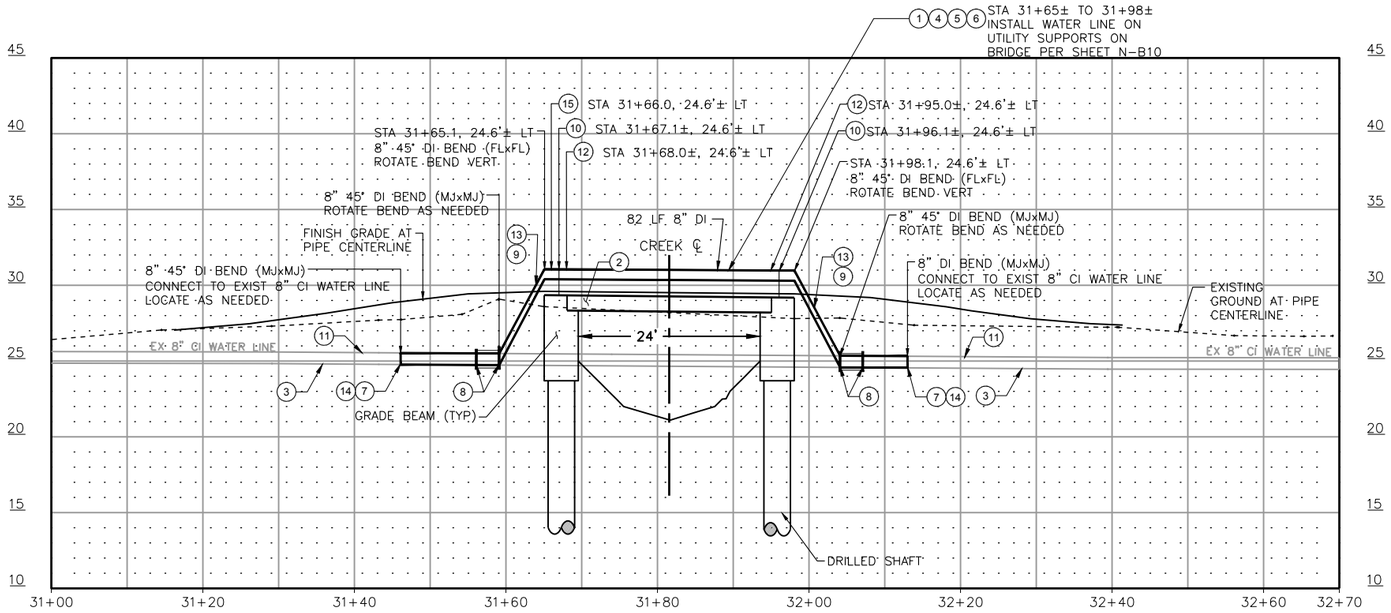
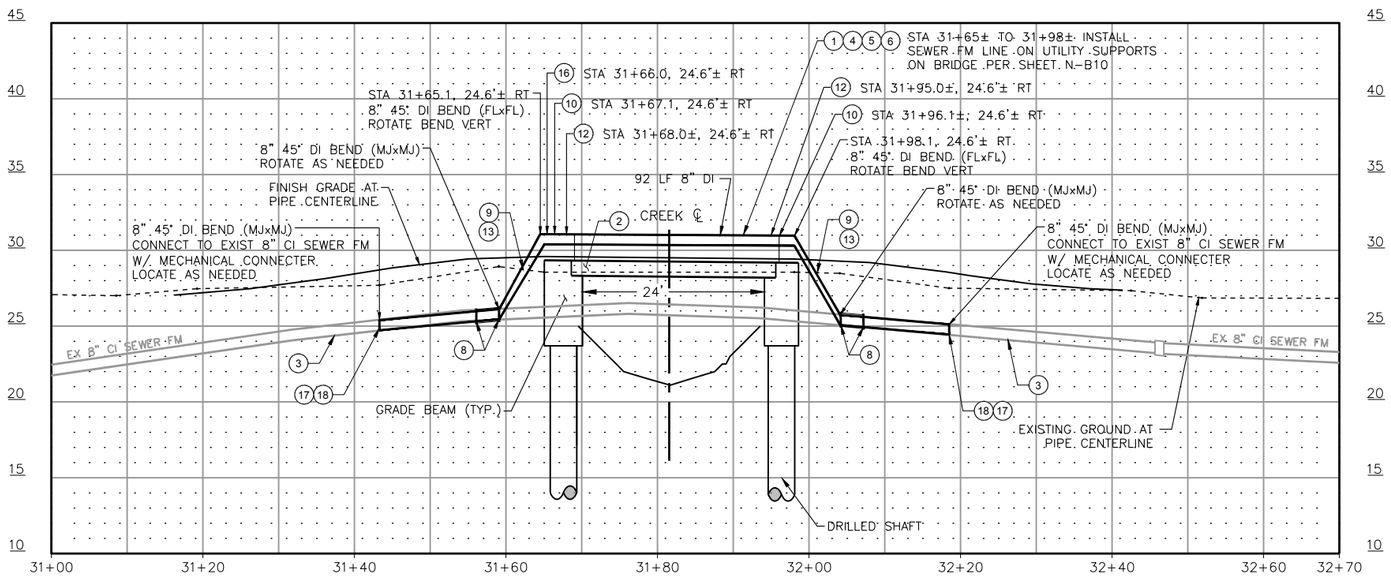


WATER PROFILE – NEWPORT KEY
SCALE: HORIZ: 1"= 10' VERT: 1"=5'

STATION/OFFSET NOTE:

1. ALL STATIONS ARE ROAD ALIGNMENT STATION UNLESS OTHERWISE NOTED.



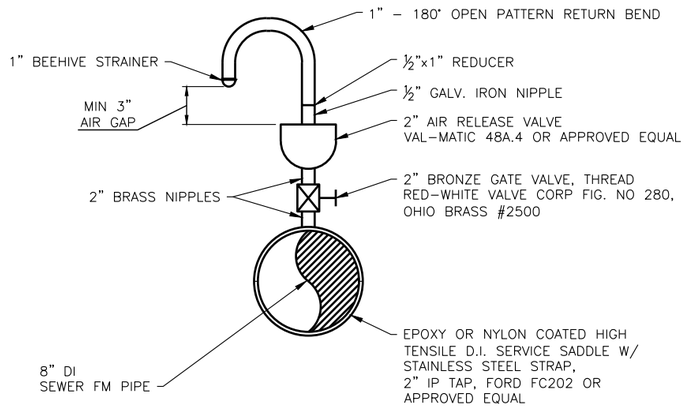
SEWER FM PROFILE – NEWPORT KEY
SCALE: HORIZ: 1"= 10' VERT: 1"=5'

CONSTRUCTION NOTES:

1. PROVIDE RESTRAINED JOINTS ON NEW WATER AND NEW SEWER FM PIPE & FITTINGS.
2. SEE N-B1 TO N-B13 FOR BRIDGE.
3. LOCATION AND DEPTH SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL POTHOLE TO DETERMINE EXACT LOCATION AND DEPTH PRIOR TO CONSTRUCTION.
4. PROVIDE PIPE INSULATION W/ ALUMINUM JACKETING ON EXPOSED WATER LINE AND SEWER FORCE MAIN STA 31+63 TO 32+00. ATTACH INSULATION WITH METAL BANDING. INSTALL INSULATION BETWEEN UTILITY SUPPORTS. SEE CONTRACT SPECS SECTION 10-01.
5. INSTALL EPDM WEAR PAD, 1/4" THICK, UNDER PIPE AT ALL UTILITY SUPPORTS. ADVANTEK FRP BY ADVANTAGE INDUSTRIAL SOLUTIONS OR APPROVED EQUAL.
6. PLACE PIPE BELL JOINT IN MIDDLE OF BRIDGE.
7. HORIZONTAL THRUST BLOCK AT CONNECTION TO EXISTING MAIN, SEE COB STD DETAIL W-1. PROVIDE MIN. 7SF BEARING AREA AGAINST UNDISTURBED SOILS.
8. INSTALL PIPE RESTRAINT GLAND (ROMAC 611 OR EQUAL) ON PIPE. INSTALL (2) EYE BOLTS AT BEND MJ FITTING, ON OPPOSITE SIDES OF THE PIPE. CONNECT PIPE GLAND AND EYE BOLTS WITH (2) 316SS ALL-THREAD, 36" LONG. MATERIALS SHALL BE COMPATIBLE WITH JOINT RESTRAINT SYSTEM.
9. INSTALL FLEX-TEND SERIES 4408F20B, FORCE BALANCED FLEXIBLE EXPANSION JOINT, OR APPROVED EQUAL.
   WATER – STA 31+62± LT (CENTER OF JOINT)
   WATER – STA 32+01± LT (CENTER OF JOINT)
   SEWER – STA 31+62± RT (CENTER OF JOINT)
   SEWER – STA 32+01± RT (CENTER OF JOINT)
10. INSTALL SADDLE PIPE SUPPORT, STANDON MODEL C92, OR APPROVED EQUAL. ATTACH PIPE SUPPORT BASEPLATE (4"X6") TO TOP OF BRIDGE ENDCAP USING ½" DAYTON SUPERIOR F64 FERRULE LOOP INSERTS, WITH NC THREADED BOLTS. CONTRACTOR SHALL PROVIDE 2" SCH 40 STEEL EXTENSION PIPE, LENGTH AS REQUIRED, PER MANUFACTURER'S PIPE SUPPORT INSTALLATION GUIDE. WELD EXTENSION PIPE TO BASE AND COLLAR AFTER INSTALLATION, AS NOTED IN THE MANUFACTURER'S PIPE SUPPORT INSTALLATION GUIDE.
11. CUT AND CAP EXISTING WATER MAIN AT BOTH ENDS BEFORE STARTING DEMOLITION OF THE EXISTING CMP CULVERT. INSTALL TEMPORARY 2-INCH BLOW-OFF VALVE PER COB STD DETAIL W-15 NEAR THE NEW CAP ON THE EXISTING WATER MAIN, BOTH SIDES.
12. 8" DI SLEEVE (MJxMJ), LONG PATTERN.
13. PROVIDE MIN 7 FT LENGTH BETWEEN PIPE BENDS FOR INSTALLATION OF FLEX-TEND EXPANSION JOINTS.
14. EXPOSE EXISTING PIPE TO NEXT PIPE JOINT BEYOND CONNECTION INSTALL JOINT RESTRAINT AT EXISTING PIPE JOINT. NEXT EXISTING JOINT MAY BE FARTHER THAN MINIMUM RESTRAINT LENGTH (12FT). JOINT RESTRAINT GLANDS SHALL BE ROMAC 611 OR EQUAL.
15. AIR RELEASE VALVE (WATER), SEE 1/C-C3
16. AIR RELEASE VALVE (SEWER), SEE 1/-.
17. EXPOSE EXISTING PIPE TO NEXT PIPE JOINT BEYOND CONNECTION. INSTALL JOINT RESTRAINT AT EXISTING PIPE JOINT. NEXT EXISTING JOINT MAY B E FARTHER THAN MINIMUM RESTRAINT LENGTH (10FT). JOINT RESTRAINT GLANDS SHALL BE ROMAC 611 OR EQUAL.
18. HORIZONTAL THRUST BLOCK AT CONNECTION TO EXISTING MAIN, SEE COB STD DETAIL W-1. PROVIDE MIN. 3SF BEARING AREA AGAINST UNDISTURBED SOILS.

PIPE SUPPORT ON BRIDGE ENDCAP NOTES:

1. SEE SHEET C-B4 FOR BRIDGE ENDCAP REBAR.
2. INSERTS SHALL BE DAYTON SUPERIOR F64 FERRULE LOOP OR APPROVED EQUAL WITH 4" MIN. EMBEDMENT DEPTH AND MIN. SAFE WORKING LOAD OF 3,000 LBS IN TENSION AND 1,800 LBS IN SHEAR.



VALVE NOTE:
ORIENT VALVE HANDLE PARALLEL WITH BRIDGE

INSULATION FOR AIR RELEASE VALVE:
REMOVABLE INSULATION JACKET BY THERMAXX (WEST HAVEN, CT) OR APPROVED EQUAL. INSULATION THICKNESS AS REQUIRED TO PROTECT TO –10°F (–23°C).
WWW.THERMAXXJACKETS.COM

DATUM
NAVD 88

SEWER FM NOTES

1. SEE SECTION 9-01 OF THE CONTRACT SPECIFICATIONS FOR SEWER FM CONNECTION REQUIREMENTS.
2. A TEMPORARY SEWER FM BYPASS IS REQUIRED. SEE N-SP1.

1/– AIR RELEASE VALVE (SEWER)
SCALE: NTS

0 5 10 15 20
SCALE IN FEET

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY WATER AND FORCE MAIN PROFILE

N-C3 | SHT 41 OF 58

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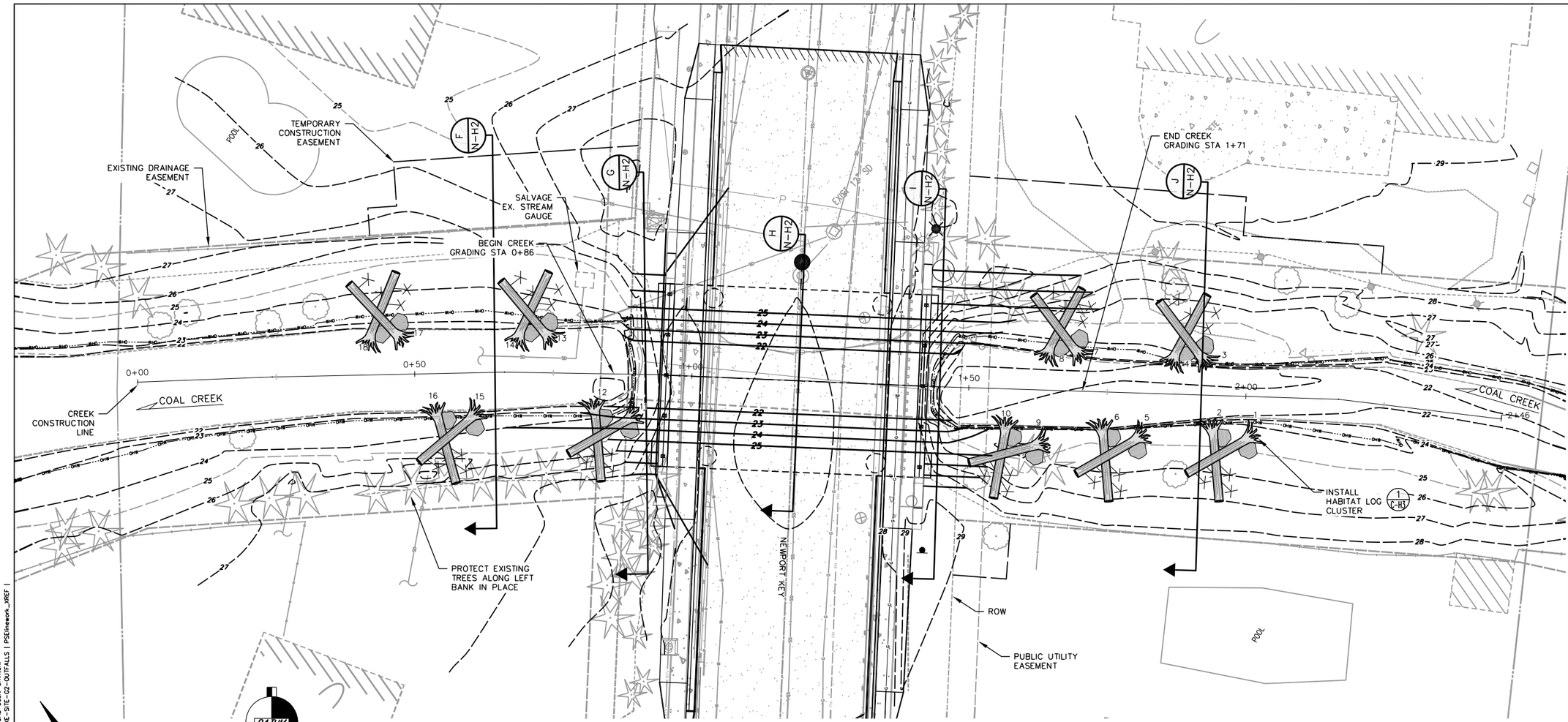
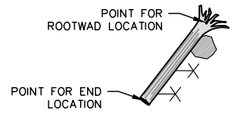
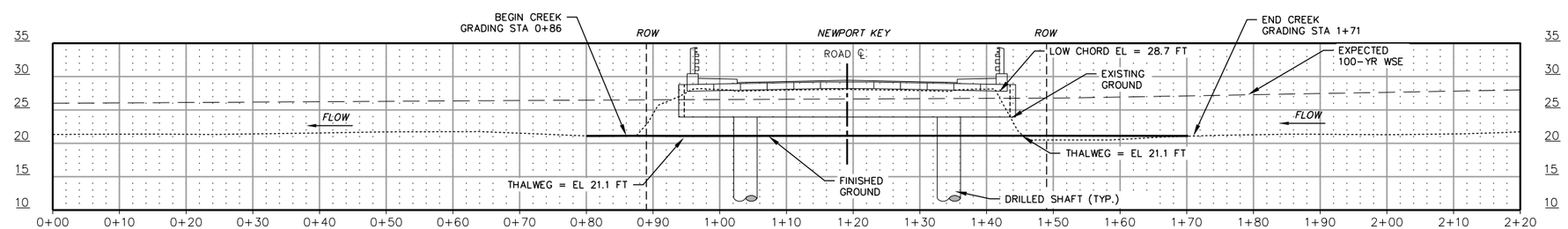




HABITAT LOG PLACEMENT TABLE					
	LOG	STATION	NORTHING	EASTING	POINT PLACEMENT
	1	1+76.2'	211505.7	1306133.8	END
	1	1+76.2'	211499.1	1306145.2	ROOTWAD
	2	1+69.8'	211498.1	1306132.4	END
	2	1+69.8'	211505.7	1306143.1	ROOTWAD
	3	1+66.8'	211525.3	1306158.1	END
	3	1+66.8'	211513.3	1306153.1	ROOTWAD
	4	1+61.0'	211518.5	1306163.4	END
	4	1+61.0'	211518.0	1306150.3	ROOTWAD
	5	1+58.2'	211522.9	1306123.9	END
	5	1+58.2'	211516.4	1306135.2	ROOTWAD
	6	1+50.5'	211515.4	1306122.5	END
	6	1+50.5'	211523.0	1306133.1	ROOTWAD
	7	1+44.5'	211545.5	1306147.8	END
	7	1+44.5'	211533.5	1306142.8	ROOTWAD
	8	1+37.8'	211538.6	1306153.1	END
	8	1+37.8'	211538.2	1306140.0	ROOTWAD
	9	1+37.0'	211540.6	1306115.9	END
	9	1+37.0'	211531.3	1306125.1	ROOTWAD
	10	1+30.3'	211533.6	1306112.6	END
	10	1+30.3'	211538.3	1306124.8	ROOTWAD
	11	0+62.4'	211630.0	1306102.0	END
	11	0+62.4'	211617.7	1306097.6	ROOTWAD
	12	0+55.3'	211623.4	1306107.6	END
	12	0+55.3'	211622.3	1306094.6	ROOTWAD
	13	0+53.0'	211604.0	1306081.2	END
	13	0+53.0'	211597.5	1306092.5	ROOTWAD
	14	0+45.3'	211596.4	1306079.8	END
	14	0+45.3'	211604.1	1306090.4	ROOTWAD
	15	0+35.0'	211653.4	1306087.8	END
	15	0+35.0'	211641.0	1306084.1	ROOTWAD
	16	0+29.2'	211647.2	1306093.8	END
	16	0+29.2'	211645.4	1306080.8	ROOTWAD
	17	0+25.0'	211626.6	1306066.4	END
	17	0+25.0'	211622.2	1306078.8	ROOTWAD
	18	0+18.0'	211619.0	1306066.4	END
	18	0+18.0'	211628.4	1306075.5	ROOTWAD



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Seattle, WA 98168
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Approved By

DESIGN MANAGER DATE

PROJECT MANAGER DATE

D. HINTON DESIGNED BY DATE
M. OHRT DRAWN BY DATE
D. HINTON CHECKED BY DATE

City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT

NEWPORT KEY HABITAT FEATURES & CREEK GRADING

N-H1 | SHT 42 OF 58

Path: G:\2002953_LowerCoalCreek_Group2\AC_2002953\dwg\2002953_LCC_Group2_Design_xR.dwg Plot date: Dec 11, 2017-07:44:30am CAD User: dhinton
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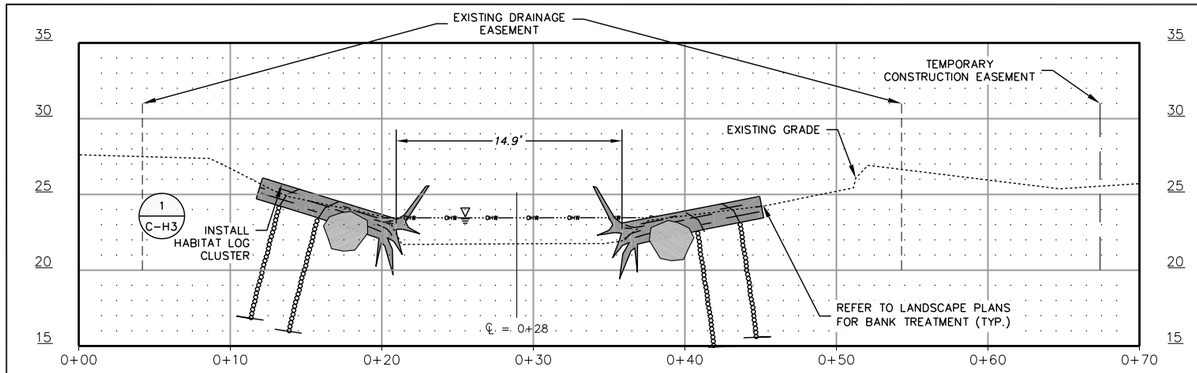
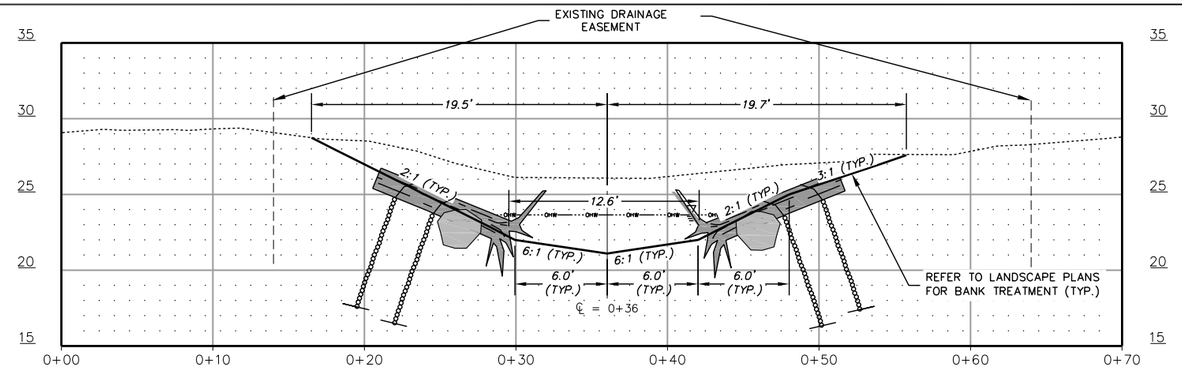


SECTION STA. 0+64

1" = 5' (HORIZ.) 1" = 5' (VERT.)

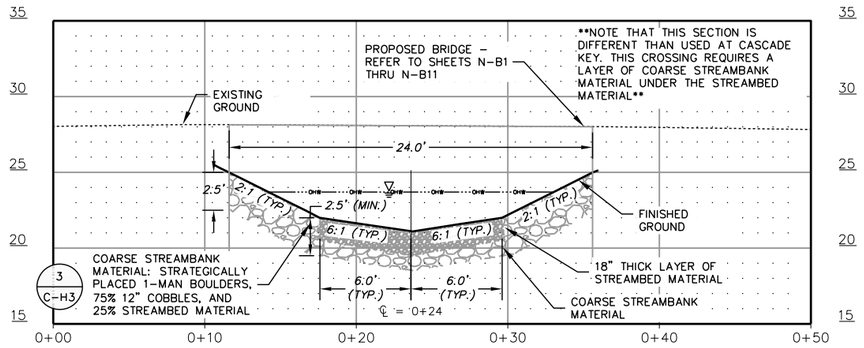
F
N-H1



SECTION STA. 0+92

1" = 5' (HORIZ.) 1" = 5' (VERT.)

G
N-H1



SECTION STA. 1+19

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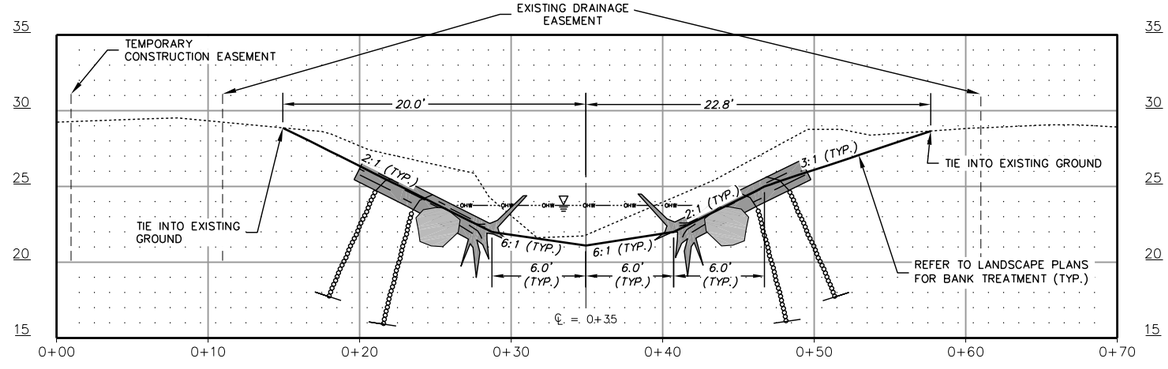
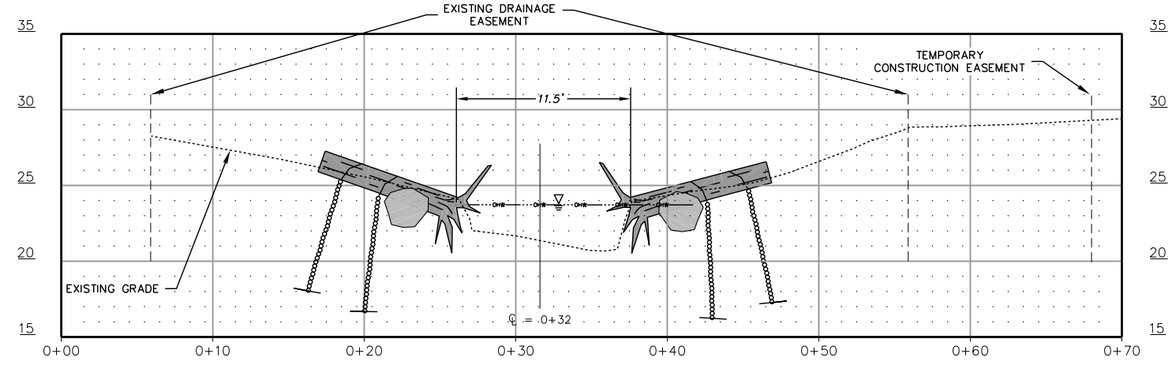
H
N-H1



SECTION STA. 1+45

1" = 5' (HORIZ.) 1" = 5' (VERT.)

I
N-H1



SECTION 1+92

1" = 5' (HORIZ.) 1" = 5' (VERT.)

J
N-H1

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0 5 10 20
SCALE IN FEET

DATUM
NAVD 88

NOTE:
SECTIONS RELATE TO THE FOLLOWING STATIONS
- SECTION F: LOG JAM PLACEMENT
- SECTION G: STA. 0+86 TO 0+94
- SECTION H: STA. 0+94 TO 1+43 (ENTIRE BRIDGE CROSSING)
- SECTION I: STA. 1+43 TO 1+48
- SECTION J: LOG JAM PLACEMENT

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D. HINTON CHECKED BY DATE

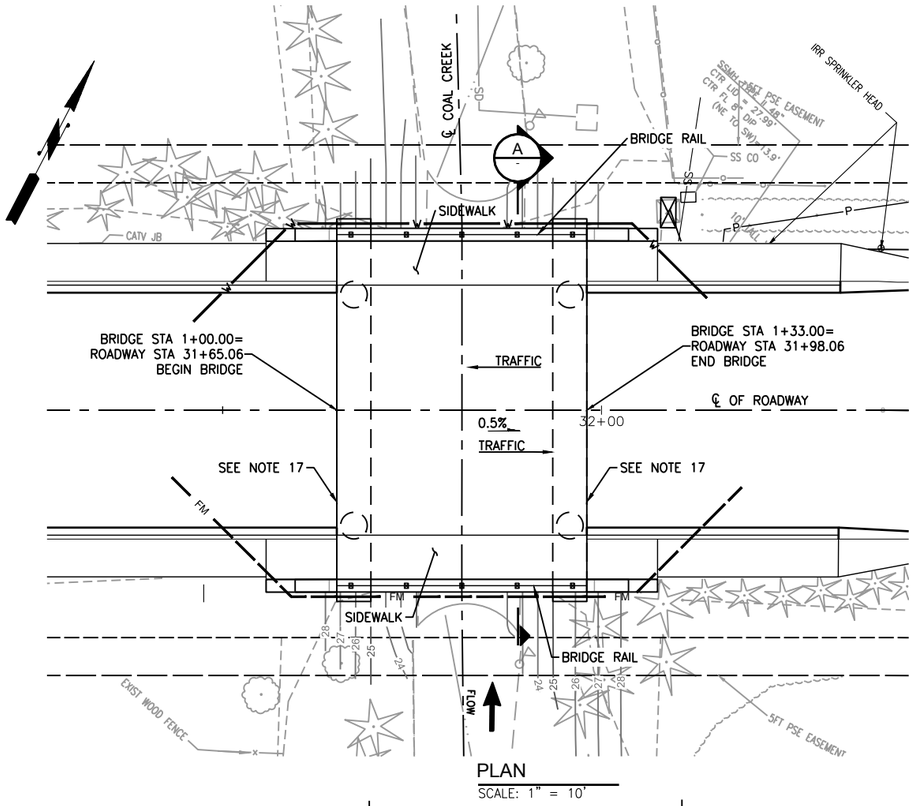
City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT

NEWPORT KEY HABITAT SECTION VIEWS

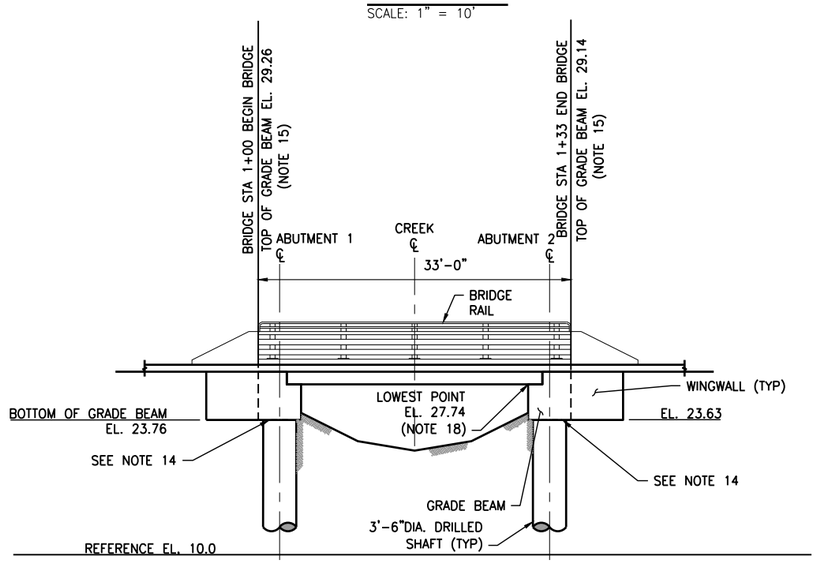
N-H2

SHT 43 OF 58



PLAN

SCALE: 1" = 10'

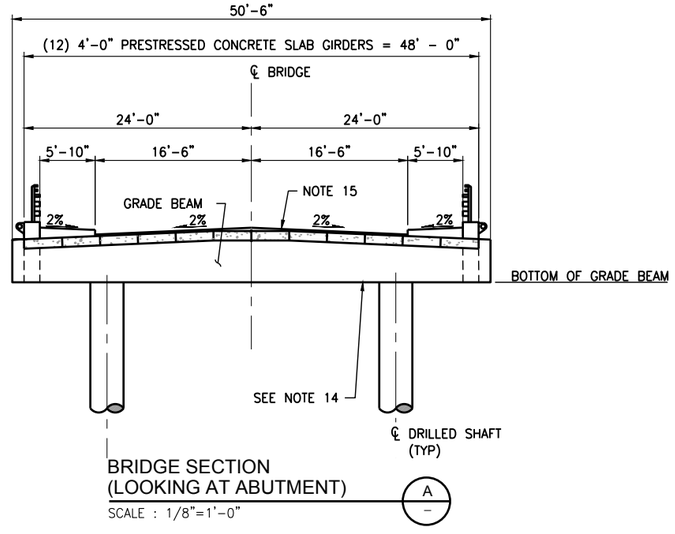


DATUM

NAVD 88

ELEVATION

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



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)=0.91
(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 COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:

   DRILLED SHAFT.....CLASS 5,000P
   ALL CAST-IN-PLACE.....CLASS 4000
   PRE-STRESSED CONCRETE SLAB GIRDER.....7000 PSI AT 28 DAYS
   .....6000 PSI AT PRE-STRESSED RELEASED
   GROUT.....5000 PSI AT 24 HOURS

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	1-½ INCHES
CONCRETE CAST AGAINST EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER	
PRIMARY REINFORCEMENT	2 INCHES
SECONDARY REINFORCEMENT (TIES OR STIRRUPS)	1-½ INCHES

8. UNLESS OTHERWISE SHOWN ON THE PLANS, ALL EXTERIOR CORNERS AND EDGES SHALL HAVE ¾" CHAMFER.
9. THE UTILITY CENTERLINES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THESE PLANS WITH RELEVANT UTILITY INFORMATION SHOWN ON SHEETS N-C2 AND N-C3.
10. A PIGMENT SEALER SHALL BE APPLIED TO THE EXTERIOR SURFACE OF THE GRADE BEAM, WING WALL, EXTERIOR PRESTRESSED CONCRETE SLAB GIRDERS 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. EXCAVATE 6" BELOW GRADE BEAM AND WINGWALL BOTTOM ELEVATION. PLACE 6" CSBC FULL WIDTH AND LENGTH OF GRADE BEAM AND WINGWALL.
15. PROVIDED ELEVATION IS TO TOP OF CONCRETE AT THE CENTERLINE OF BRIDGE. FOR ROADWAY PROFILE SEE SHEET N-C2. SEE SHEET C-C4 FOR TYPICAL CROSS SECTIONS.
16. BRIDGE IS SYMMETRICAL ABOUT BRIDGE CENTERLINE. SEE SHEET N-EC1 FOR ROADWAY ALIGNMENT DATA.
17. PLACE STRUCTURAL BACKFILL 12" LATERALLY FROM GRADE BEAM PER CONTRACT SPECS.
18. LOWEST POINT APPLIES TO GIRDERS 1 & 12.

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DESIGN MANAGER DATE

PROJECT MANAGER DATE

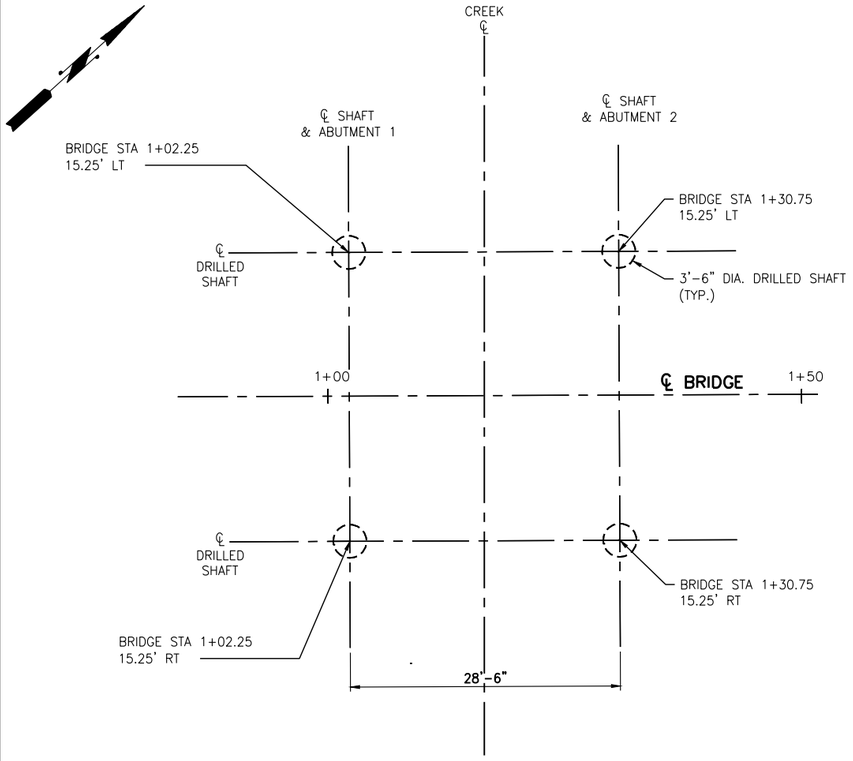
KA DESIGNED BY DATE
ACF DRAWN BY DATE
GG CHECKED BY DATE

City of Bellevue
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY BRIDGE LAYOUT
AND GENERAL NOTES

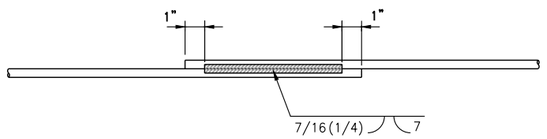
N-B1 | SHT 44 OF 58

Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 G2 Design\CAD\SheetFiles\V44 N-B1_NEWPORT KEY BRIDGE LAYOUT.dwg Plot date: Dec 11, 2017-02:01:20pm CAD User: Adam.Forcier.
Xref Filename: | Group2-border | V-XE-SITE-G2-OUTFALLS | C-SP-SITE-NEWPORT KEY | C-SP-BRIDGE DETAILS-NEWPORT | C-SP-ALGN-PROF | C-SP-CONTOURS-NEWPORT KEY |



FOUNDATION PLAN

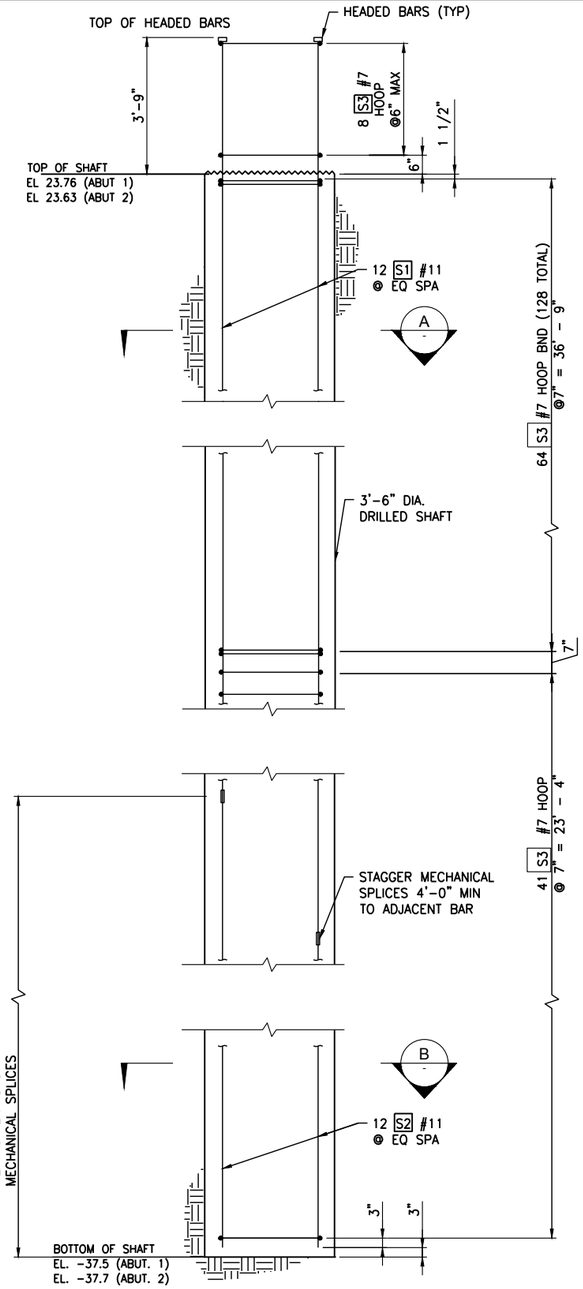
SCALE: 1/8" = 1'-0"



HOOP WELD SPLICE DETAIL

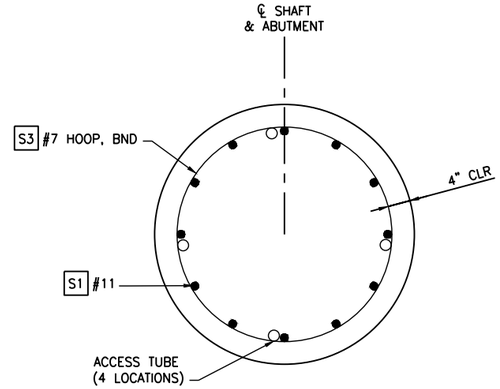
SCALE: NTS

WELDING SHALL MEET THE REQUIREMENTS OF STD SPEC. 6-02.3(24)E



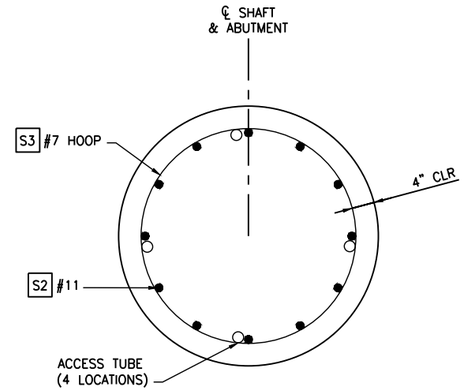
DRILLED SHAFT ELEVATION

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



SECTION A

SCALE: 1" = 1'-0"



SECTION B

SCALE: 1" = 1'-0"

DRILLED SHAFT NOTES:

1. 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.

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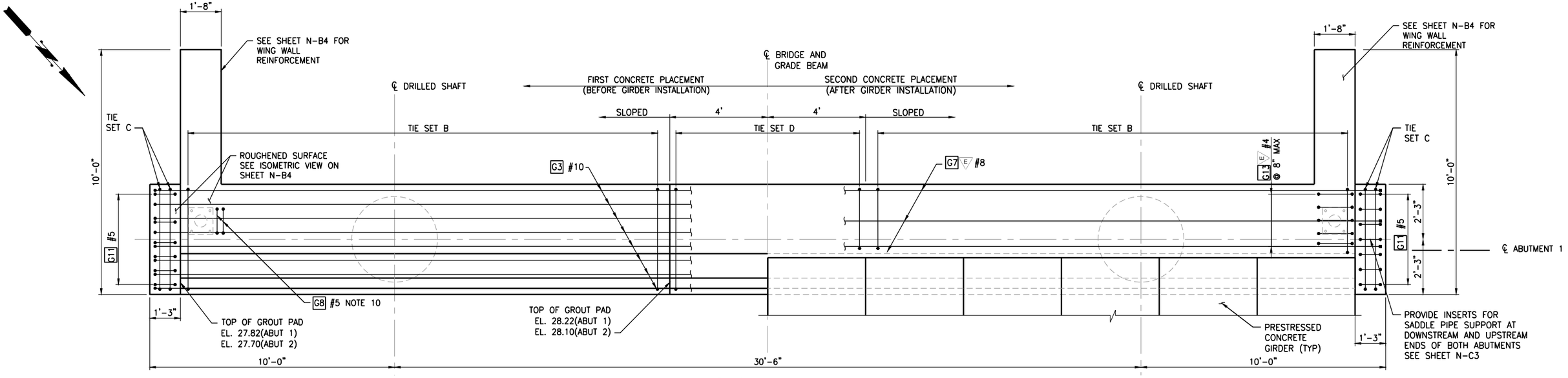
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY FOUNDATION PLAN AND DETAILS

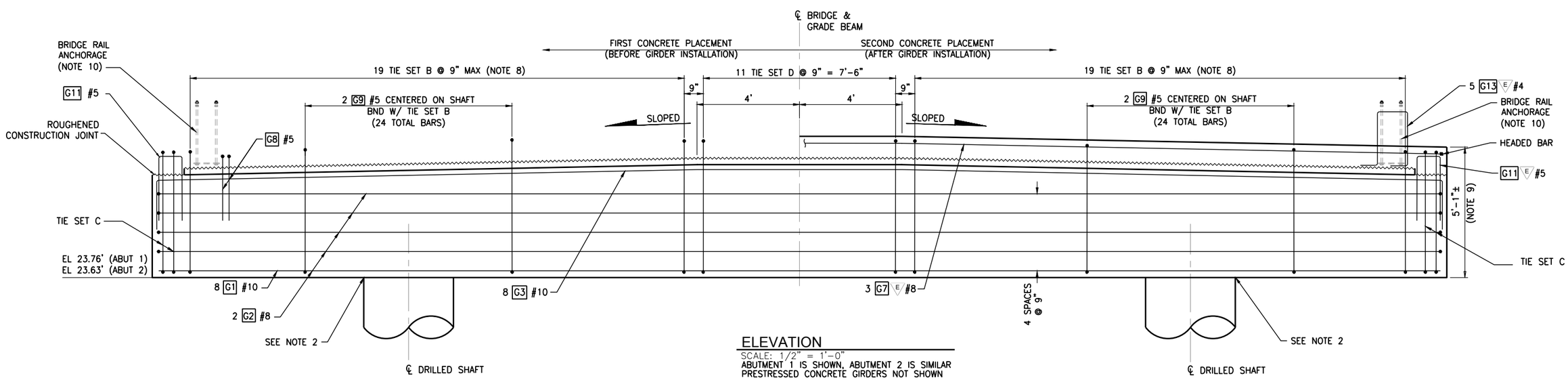
N-B2

SHT 45 OF 58



PLAN

SCALE: 1/2" = 1'-0"
ABUTMENT 1 IS SHOWN, ABUTMENT 2 IS SIMILAR
BRIDGE RAIL ANCHORAGE NOT SHOWN
FOR ADDITIONAL DETAILS, SEE N-B4



ELEVATION

SCALE: 1/2" = 1'-0"
ABUTMENT 1 IS SHOWN, ABUTMENT 2 IS SIMILAR
PRESTRESSED CONCRETE GIRDERS NOT SHOWN

NOTES:

1. TOP OF GROUT PAD AND GRADE BEAM 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 N-B4.
3. EACH TIE SET B CONSIST OF 1 G4 #5, 3 G5 #5, 2 G9 #5 & 1 G6 E #5.
4. EACH TIE SET C CONSIST OF 1 G4 #5, 3 G5 #5, 2 G9 #5, & 1 G12 E #5.
5. EACH TIE SET D CONSIST OF 1 G14 #5, 3 G15 #5, 2 G16 #5, & 1 G17 E #5.
6. SEE SHEET N-B5 FOR SECOND CONCRETE PLACEMENT.
7. BRIDGE RAIL PEDESTAL AND SIDEWALK NOT SHOWN. SEE SHEET N-B10.
8. ADJUST REINFORCEMENT SPACING TO CLEAR SHAFT REINFORCING.
9. HEIGHT OF GRADE BEAM IS DEPENDENT ON DEFLECTION OF NEOPRENE RUBBER STRIP DUE TO WEIGHT OF GIRDERS.
10. SEE SHEET N-B10 AND N-B11 FOR ADDITIONAL INFORMATION.

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PROJECT MANAGER DATE

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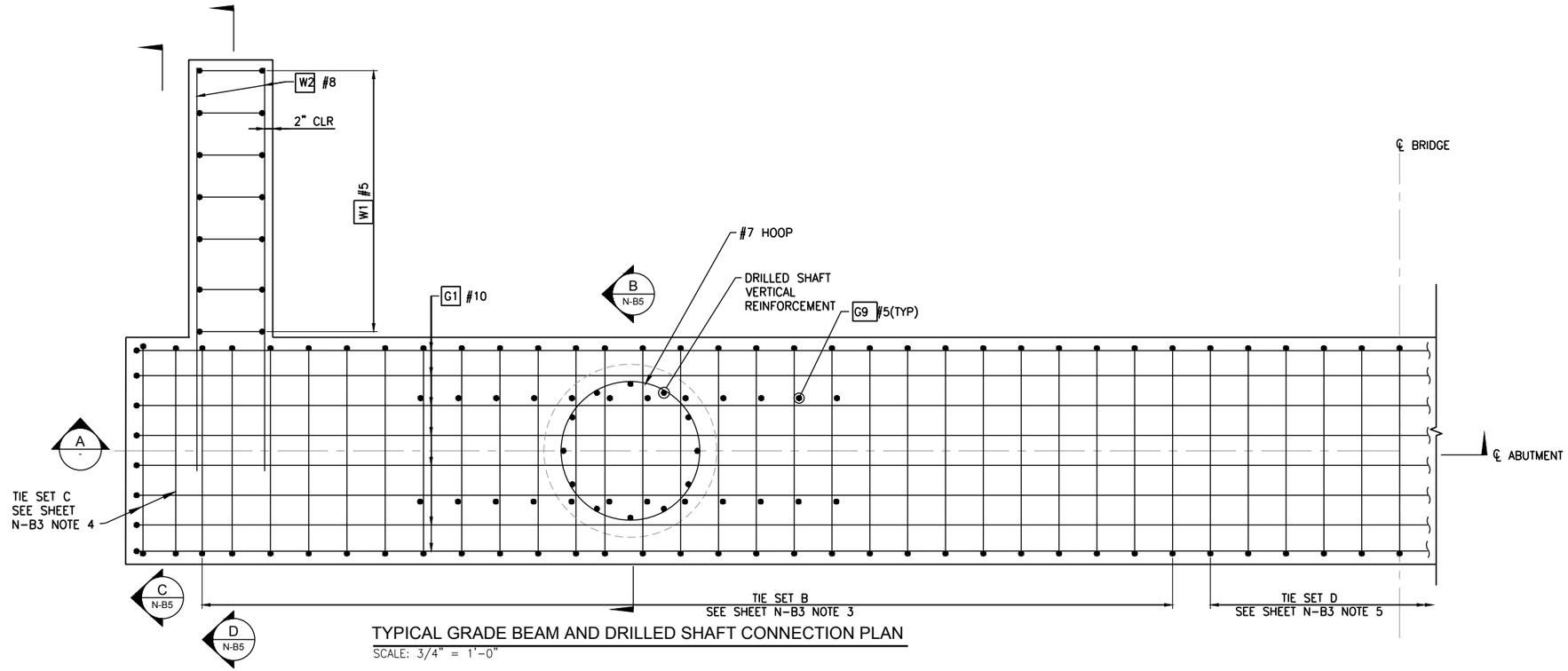
City of Bellevue UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY ABUTMENT PLAN AND ELEVATION

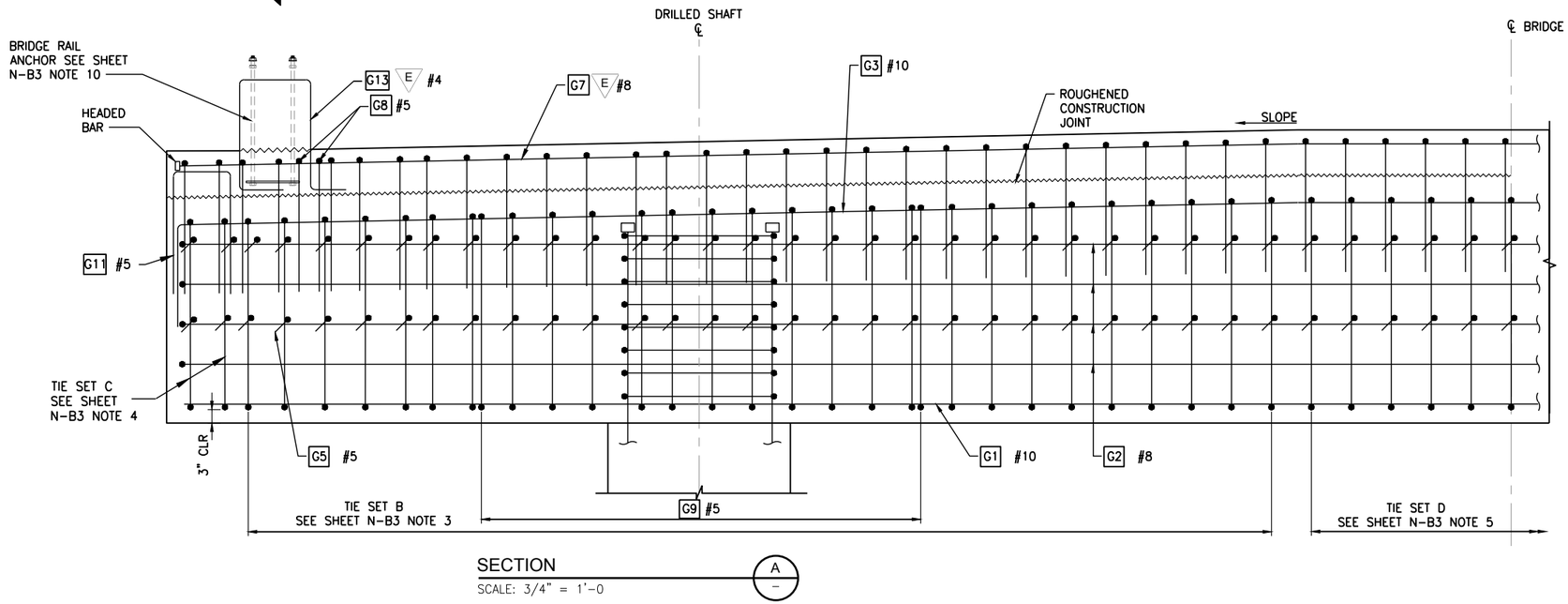
N-B3

SHT 46 OF 58



TYPICAL GRADE BEAM AND DRILLED SHAFT CONNECTION PLAN

SCALE: 3/4" = 1'-0"



SECTION A

SCALE: 3/4" = 1'-0

NOTES:

1. FIRST AND SECOND CONCRETE PLACEMENT SHOWN. SEE N-B10 FOR SIDEWALK AND BRIDGE RAIL PEDESTAL REINFORCEMENT.
2. ALTERNATE HOOKS OF HORIZONTAL TIES ALONG LENGTH OF GRADE BEAM.
3. PLACE CONCRETE ON COMPACTED BACKFILL.

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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY ABUTMENT
DETAILS 1

N-B4 | SHT 47 OF 58

Path: P:\174271 Lower Cool Creek Ph 2 Early Action\04 G2 Design\CAD\SheetFiles\47 N-B4_ABUTMENT DETAILS.dwg Plot date: Dec 11, 2017-02:02:56pm CAD User: Adam.Forcier.
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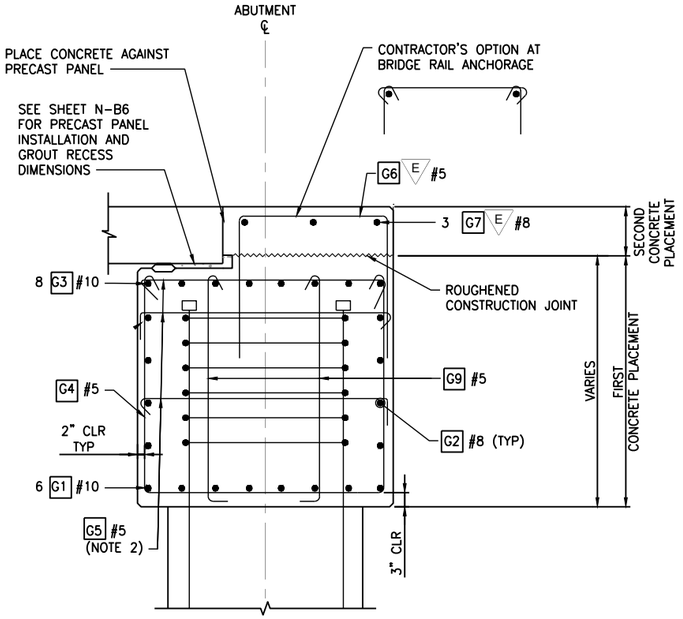
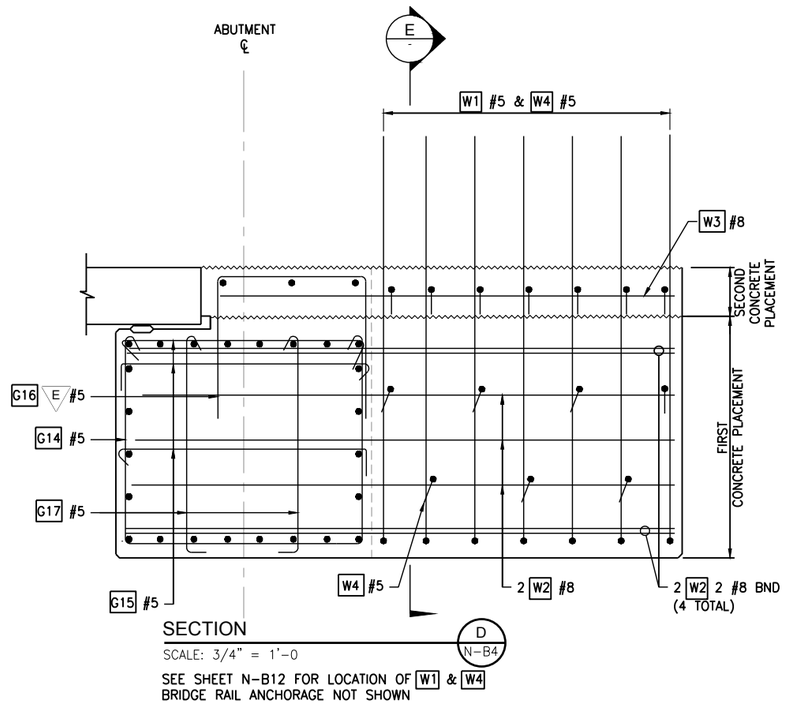


SECTION

SCALE: 3/4" = 1'-0

B
N-B4

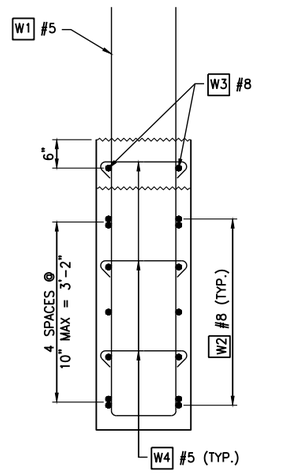


SECTION

SCALE: 3/4" = 1'-0

D
N-B4

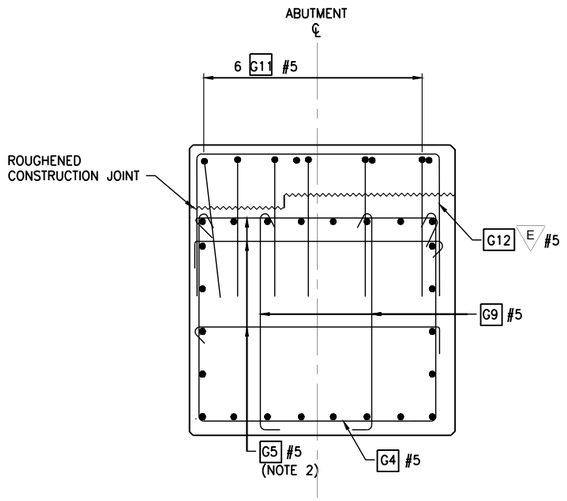
SEE SHEET N-B12 FOR LOCATION OF W1 & W4 BRIDGE RAIL ANCHORAGE NOT SHOWN



SECTION

SCALE: 3/4" = 1'-0

E
-



SECTION

SCALE: 3/4" = 1'-0

C
N-B4

NOTES:

1. FIRST AND SECOND CONCRETE PLACEMENT SHOWN. SEE N-B10 FOR SIDEWALK AND BRIDGE RAIL PEDESTAL REINFORCEMENT.
2. ALTERNATE HOOKS OF HORIZONTAL TIES ALONG LENGTH OF GRADE BEAM.
3. ADJUST TO MISS GRADE BEAM REINFORCEMENT.
4. PLACE CONCRETE ON COMPACTED BACKFILL.

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AA CHECKED BY DATE

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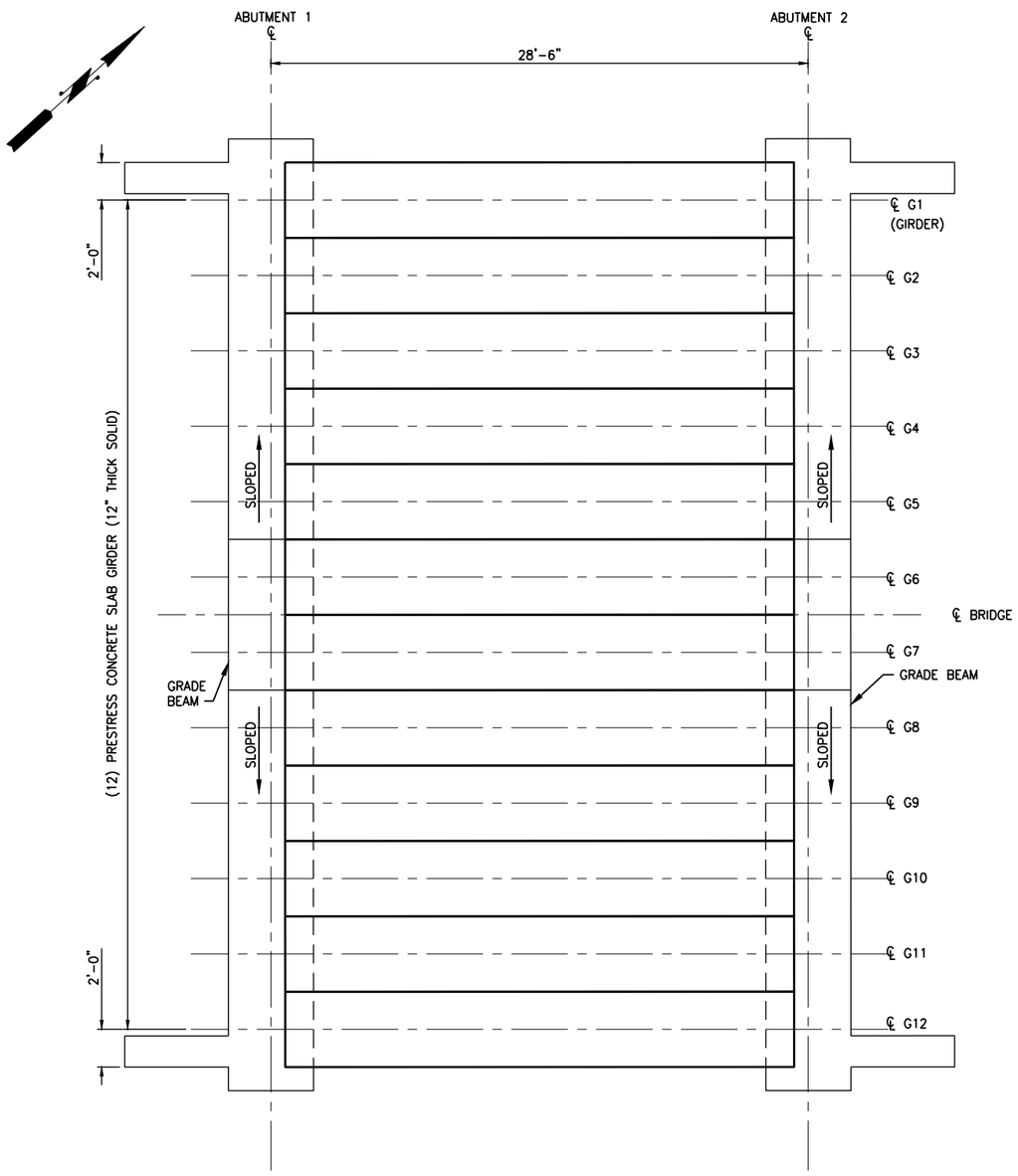
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY ABUTMENT
DETAILS 2

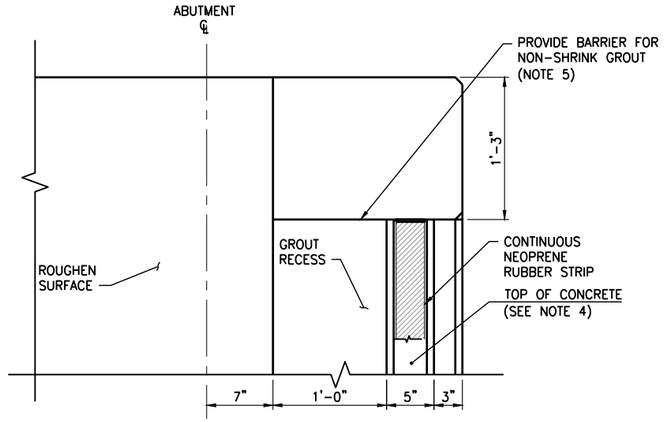
N-B5

SHT 48 OF 58

Path: P:\TA271 Lower Coal Creek Ph 2 Early Action\04 G2 Design\CAD\SheetFiles\48 N-B5_WINGWALL AND TERMINAL SUPPORT DETAILS.dwg Plot date: Dec 11, 2017-02:03:08pm CAD User: Adam.Forcier.
Xref Filename: | Group2-border | C-SP-BRIDGE DETAILS |



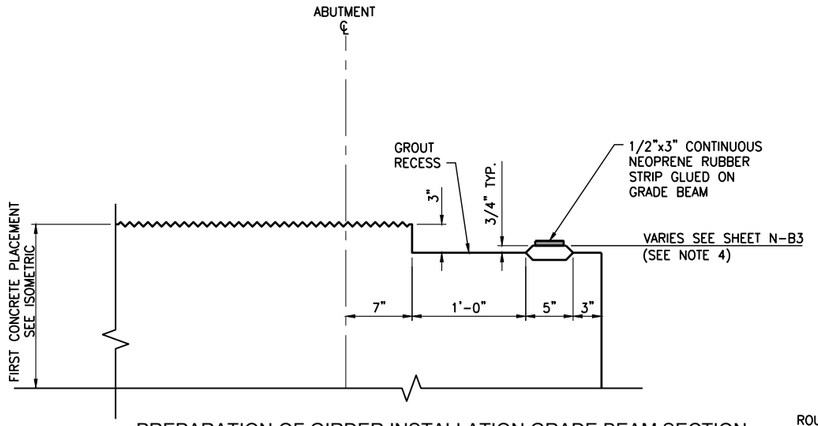
FRAMING PLAN
SCALE: 1/4" = 1'-0"



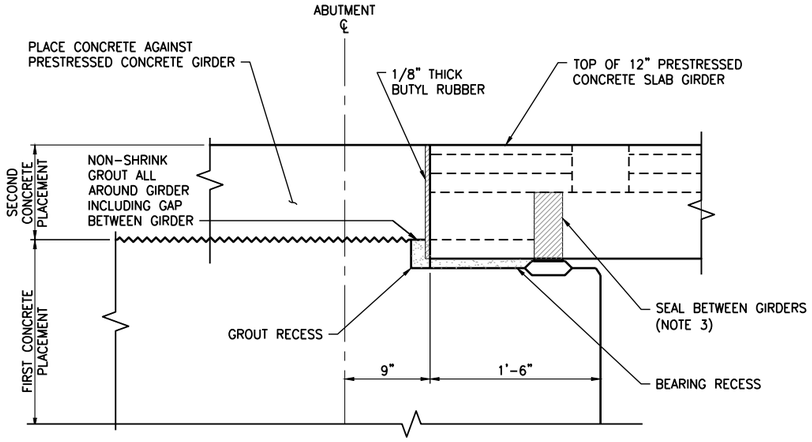
PLAN AT GRADE BEAM END FIRST CONCRETE PLACEMENT
SCALE: 1 1/2" = 1'-0"

NOTES:

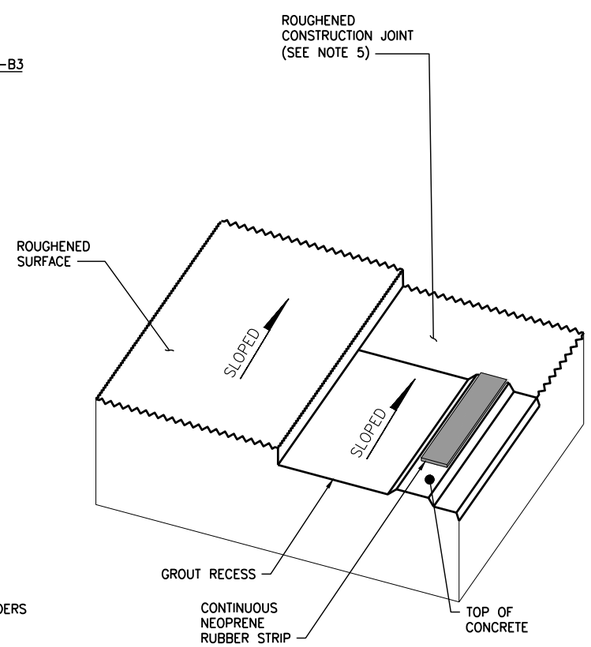
1. GRADE BEAM REINFORCING BARS ARE NOT SHOWN FOR CLARITY.
2. GRADE BEAM PLAN AND SECTION SHOWN ARE TYPICAL GRADE BEAM DETAILS FOR THE BLOCKOUT AT THE PRESTRESSED CONCRETE GIRDER SUPPORT AND SEAL DETAIL FOR THE PREPARATION AND INSTALLATION OF THE PRECAST CONCRETE SLAB GIRDER AT THE FIRST CONCRETE PLACEMENT OF THE GRADE BEAM.
3. THE CONTRACTOR SHALL PROVIDE A SEAL BETWEEN GIRDERS BEFORE GROUTING UNDER THE GIRDERS AND PLACING THE SECOND CONCRETE PLACEMENT OF THE GRADE BEAM.
4. TOP OF CONCRETE AT THE CONTINUOUS RUBBER STRIP SHALL BE KEPT SMOOTH FOR THE ENTIRE LENGTH OF SLAB GIRDER SUPPORT. THE MAXIMUM GAP UNDER A 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 SLAB GIRDER OVER THE FULL CONTACT AREA OF THE GRADE BEAM AND PRESTRESSED CONCRETE SLAB GIRDER PRIOR TO PLACING THE REMAINING GRADE BEAM CONCRETE.



PREPARATION OF GIRDER INSTALLATION GRADE BEAM SECTION
SCALE: 1 1/2" = 1'-0"



SECOND CONCRETE PLACEMENT AFTER GIRDER INSTALLATION GRADE BEAM SECTION
SCALE: 1 1/2" = 1'-0"



ISOMETRIC VIEW
FIRST CONCRETE PLACEMENT
SCALE: NTS

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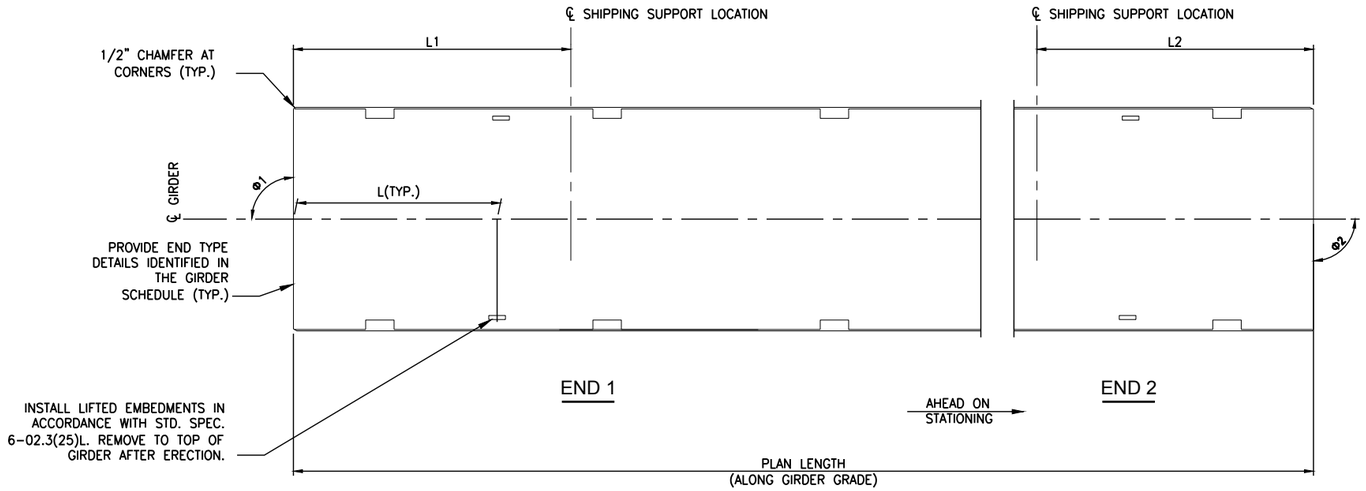
FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY BRIDGE
FRAMING PLAN AND GIRDER INSTALLATION

N-B6

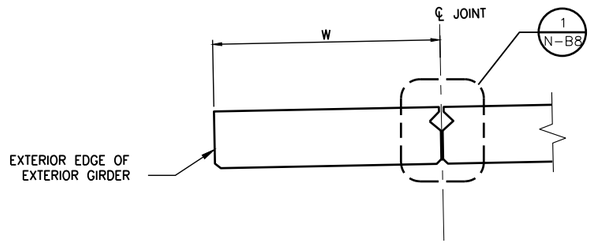
SHT 49 OF 58

PANEL SCHEDULE

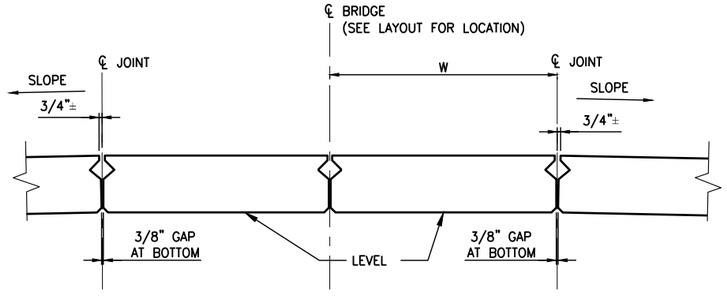
GIRDER	GIRDER HEIGHT H	GIRDER WIDTH W	VOIDS		END 1 TYPE	END 2 TYPE	"A" DIMENSIONS AT ℄ BEARINGS	L	L1	L2	Ø1	Ø2	GIRDER LENGTH (ALONG PANEL GRADE) (SEE GIRDER NOTE 1)	MIN CONC COMP STRENGTH		PRESTRESSING STRANDS (SEE PANEL NOTES 2-4)					MIDSPAN VERTICAL DEFLECTION		TRANSVERSE REINFORCEMENT									LONGITUDINAL REINFORCEMENT			
																ROW 1			TOP ROW				ZONE 1			ZONE 2			ZONE 3			P1		P2	
			NUMBER	DIAMETER										@ 28 DAYS F'C (KSI)	@ RELEASE F'C (KSI)	PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	TEMPORARY STRANDS	LOWER BOUND @ 40 DAYS	UPPER BOUND @ 120 DAYS	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	NO. OF BARS	BAR SIZE	NO. OF BARS
ALL	1'-0"	4'-0"	-	-	B	B	-	1'-9"	1'-0"	1'-0"	90°	90°	27'-0"	7.0	6.0	12	-	-	4	-	1/4"	3/4"	5	3"	1'-0"	5	5"	5'-0"	5	6" MAX.	7'-4 1/4"	4	4	4	4



PLAN
SCALE: NTS



EXTERIOR EDGE DETAIL
SCALE: NTS



CROWN DETAIL
SCALE: NTS

GIRDER NOTES

1. PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.
2. ALL STRANDS SHALL BE 0.6"ø AASHTO M203 GRADE 270 LOW RELAXATION STRANDS, JACKED TO 202.5 KSI. STRANDS SHALL BE SYMMETRICAL ABOUT THE GIRDER CENTERLINE. EXTERIOR STRANDS IN EACH ROW SHALL BE FULLY BONDED.
3. STRUCTURAL STEEL SHAPES AND ASSEMBLIES SHALL BE ASTM A36, UNLESS NOTED OTHERWISE. THEY SHALL BE PAINTED WITH A PRIMER COAT IN ACCORDANCE WITH STD SPEC 6-07.3(8). WELD TIES SHALL BE PAINTED WITH A FIELD PRIMER COAT OF AN ORGANIC ZINC PAINT AFTER FILED WELDING. STAINLESS STEEL SHAPES AND ASSEMBLIES SHALL NOT BE PAINTED.
4. TRANSVERSE REINFORCEMENT ZONES ARE SYMMETRICAL ABOUT MID-SPAN.
5. CUT ALL STANDS 1" BELOW CONCRETE SURFACE AND GROUT WITH AN APPROVED EPOXY GROUT.

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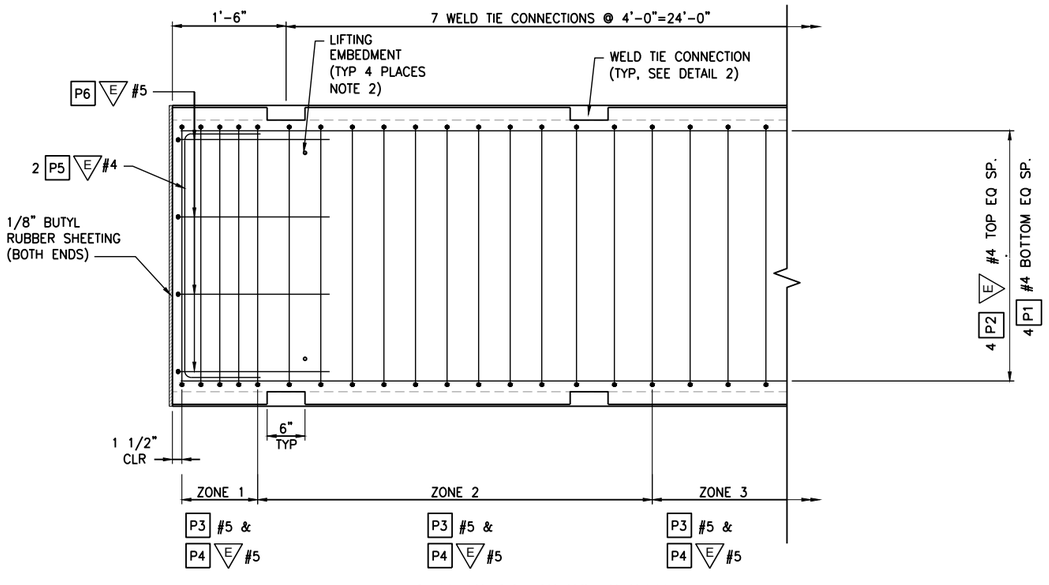
FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY PS CONCRETE SLAB GIRDER SCHEDULE

N-B7

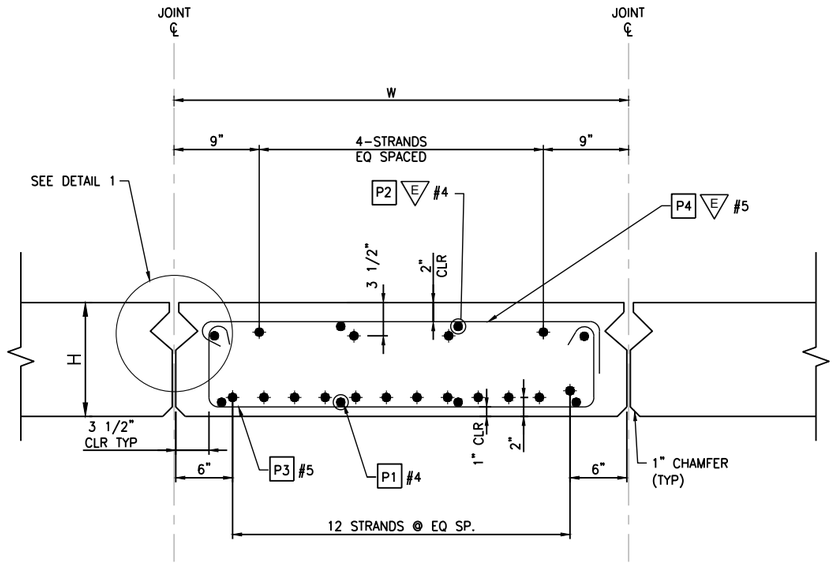
SHT 50 OF 58



PLAN (GIRDERS G2 TO G11)

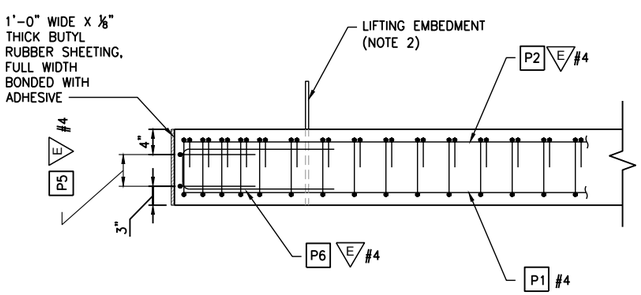
SCALE: 1" = 1'-0"

REINFORCEMENT IS SYMMETRICAL ABOUT MID-SPAN



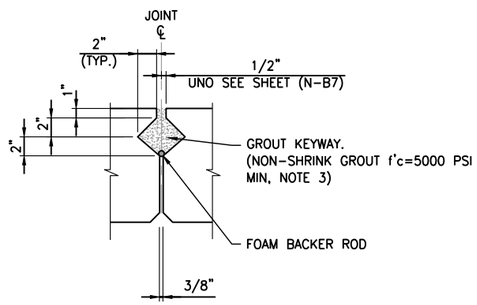
TYPICAL SECTION

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



ELEVATION

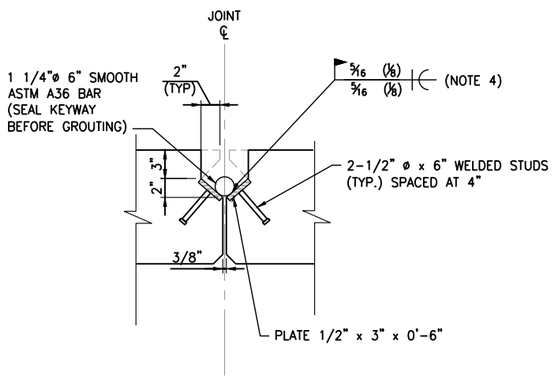
SCALE: 1" = 1'-0"



KEYWAY DETAIL

NO SCALE

1 / N-B7



WELD TIE CONNECTION DETAIL

NO SCALE

2 / –

NOTES:

1. KEYWAY AND WELD TIE CONNECTION ARE NOT PROVIDED AT THE EXTERIOR SIDE OF THE EXTERIOR PANELS G1 & G12. SEE SHEET N-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 GIRDER AND FILL WITH APPROVED GROUP.
3. GROUT PRECAST CONCRETE GIRDER 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)

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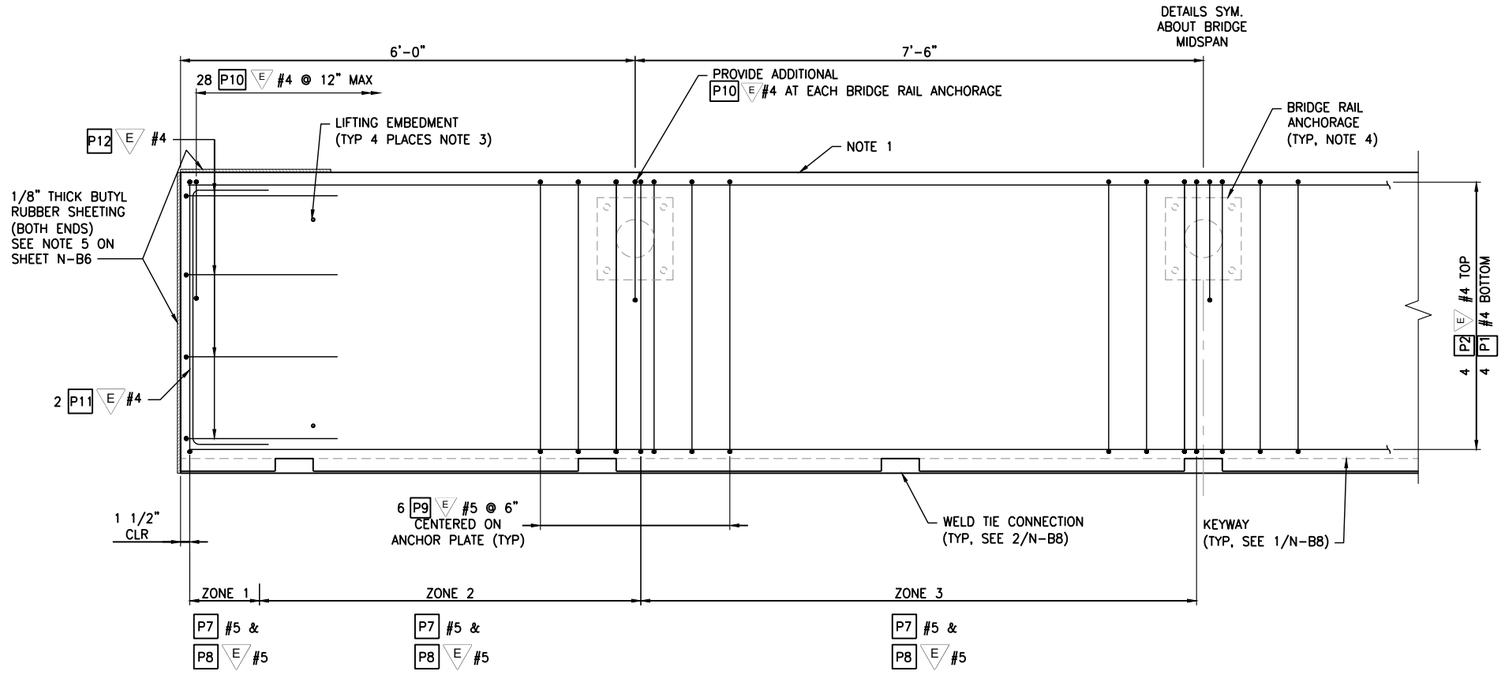
FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY BRIDGE
PRESTRESSED CONCRETE SLAB DETAILS 1

N-B8 | SHT 51 OF 58

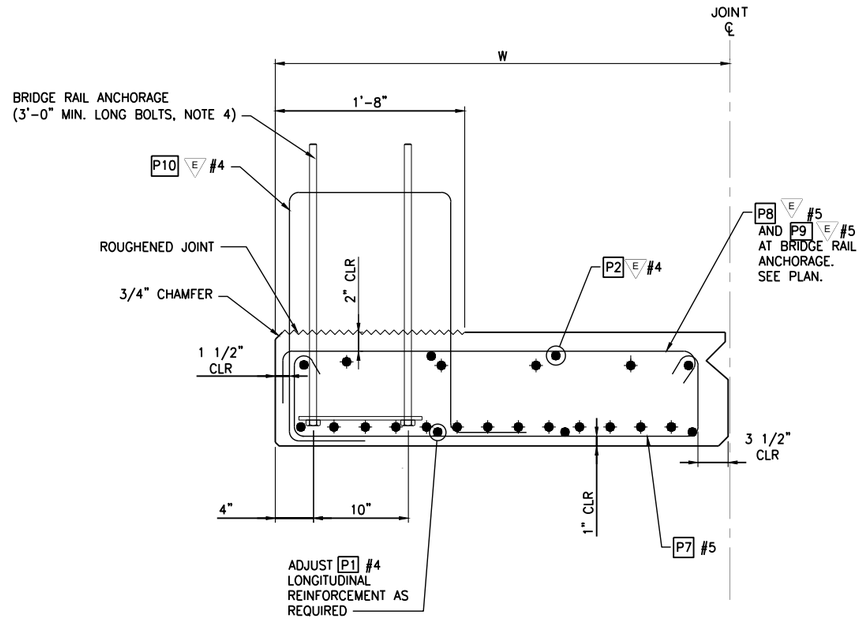
Path: P:\134271 Lower Coal Creek Ph 2 Early Action\04 G2 Design\CAD\SheetFiles\51 N-B8_PRECAST CONCRETE PANEL DETAILS 2.dwg Plot date: Dec 11, 2017-02:03:55pm CAD User: Adam.Forcier.
Xref Filename: | border-60R | C-SP-BRIDGE DETAILS |



EXTERIOR GIRDER PLAN

SCALE: 1" = 1'-0"
SEE NOTE 2

(G1 SHOWN G12 SIMILAR)



EXTERIOR GIRDER SECTION AT ANCHOR PLATE

SCALE: 1-1/2" = 1'-0"
SEE SHEET N-B8 FOR INFORMATION NOT SHOWN

NOTES:

1. KEYWAY AND WELD TIES ARE NOT PROVIDED AT THE EXTERIOR SIDE OF EXTERIOR GIRDERS.
2. DETAILS FOR GIRDER G1 SHOWN. DETAILS FOR GIRDER G12 ARE SIMILAR.
3. SEE SHEET N-B8 FOR LOCATIONS AND DETAILS OF LIFTING EMBEDMENTS AND WELD TIES.
4. SEE SHEET N-B11 FOR BRIDGE RAIL DETAILS.

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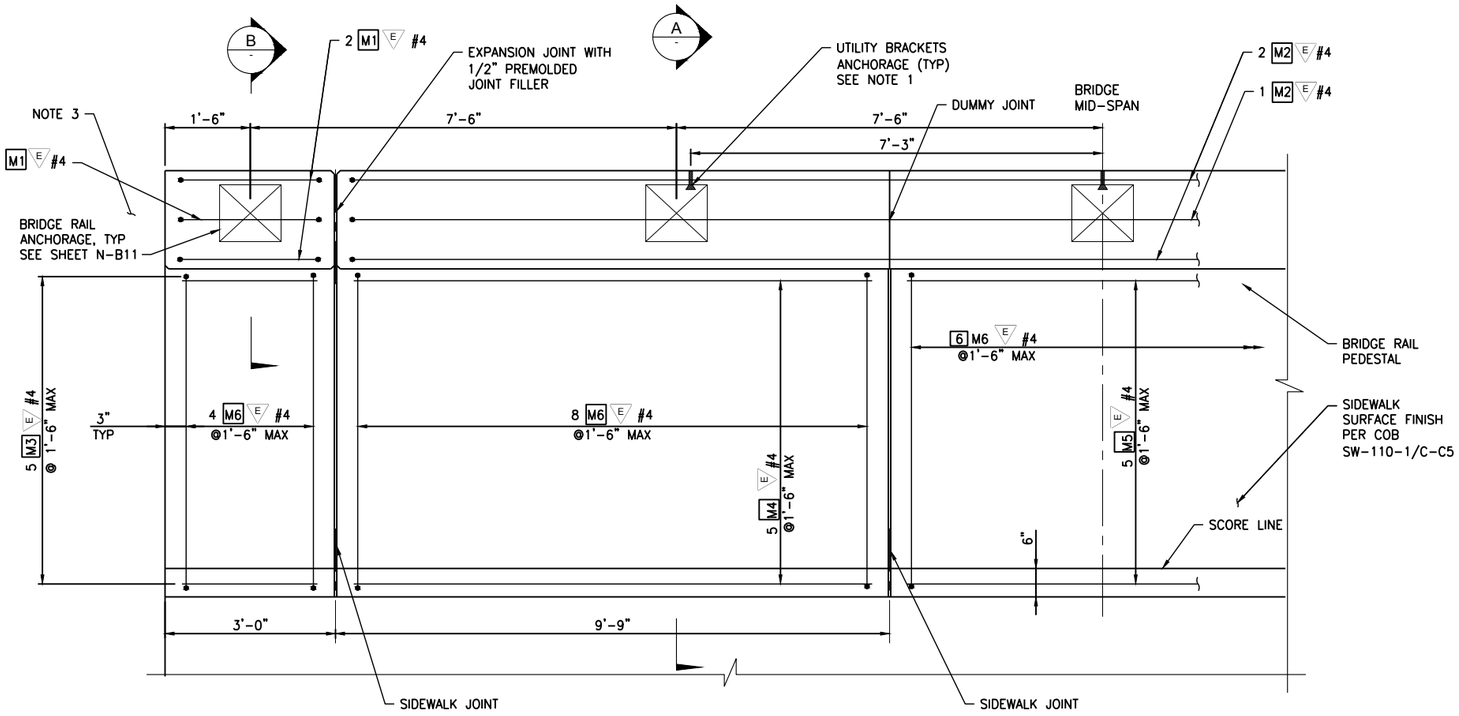
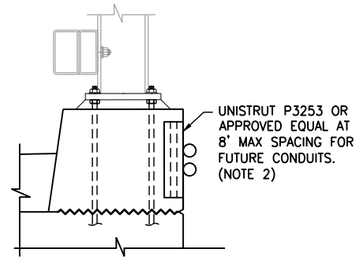
FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY PS CONCRETE SLAB GIRDER DETAILS 2

N-B9 | SHT 52 OF 58



BRIDGE RAIL PEDESTAL AND SIDEWALK PLAN

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



SECTION AT CONDUIT ANCHORAGE

SCALE: 1" = 1'-0"
UNISTRUT ON UPSTREAM AND DOWNSTREAM SIDE OF BRIDGE
ADJUST UNISTRUT SPACING TO MISS P10 #4 AND UTILITY BRACKET ANCHORAGE
8" DI PIPE NOT SHOWN

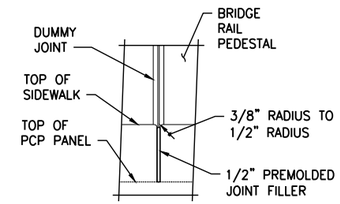
NOTES:

1. UTILITY BRACKET PROVIDED ON FERRULE LOOP UPSTREAM AND DOWNSTREAM SIDES OF BRIDGE. PROVIDE 13/16" DIA. HOLE FOR 3/4" DIA. BOLT 0'-11" DIRECTLY BELOW TOP HOLE PROVIDED IN UTILITY BRACKET. ANCHORS ARE HOT-DIP GALVANIZED FERRULE LOOP INSERTS WITH CLOSED-BACK FERRULE THREADED TO RECEIVE HOT-DIP GALVANIZED 3/4" DIAMETER BOLTS (ASTM A307).

   MINIMUM INSERT LENGTH = 6"
   MINIMUM SAFEWORKING LOAD IN TENSION = 4,000 POUNDS
   MINIMUM SAFEWORKING LOAD IN SHEAR = 3,000 POUNDS

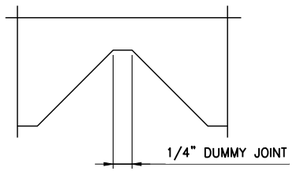
2. UNISTRUT PROVIDED ON UPSTREAM AND DOWNSTREAM SIDES OF BRIDGE TO SUPPORT FUTURE CONDUIT (BY OTHERS). SEE SHEETS N-C1 AND N-C3 FOR UTILITY AND CONDUIT INFORMATION.

3. BRIDGE RAIL TERMINAL AND WING WALL NOT SHOWN. SEE SHEET N-B12 AND N-B4 RESPECTIVELY.



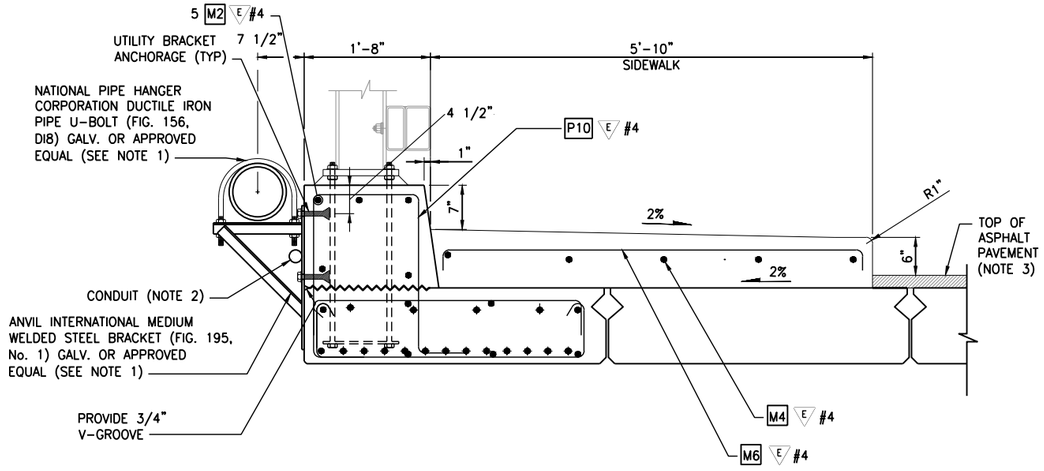
SIDEWALK JOINT DETAIL

SCALE: NTS
SIDEWALK REINFORCING STEEL NOT SHOWN FOR CLARITY



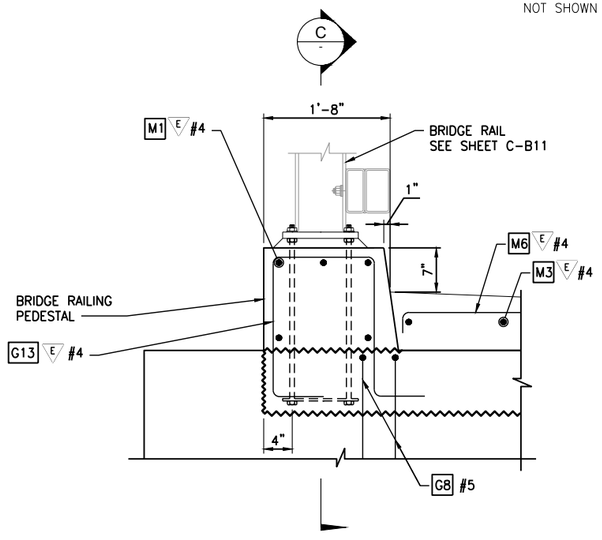
DUMMY JOINT DETAIL

SCALE: NTS



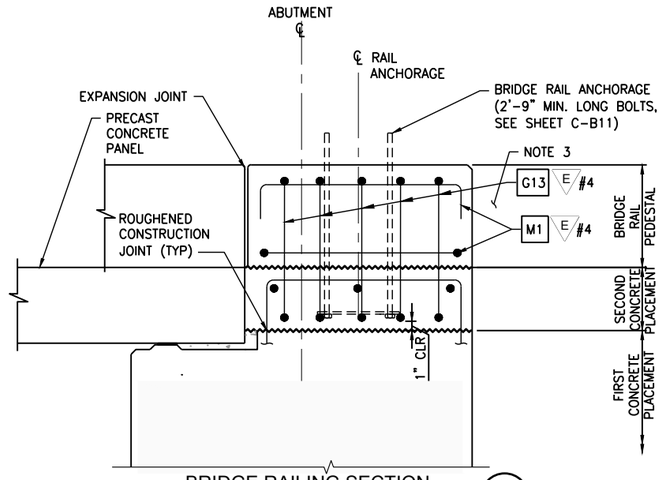
SECTION

SCALE: 1" = 1'-0
A



SECTION AT GRADE BEAM

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



BRIDGE RAILING SECTION

SCALE: 1" = 1'-0
C

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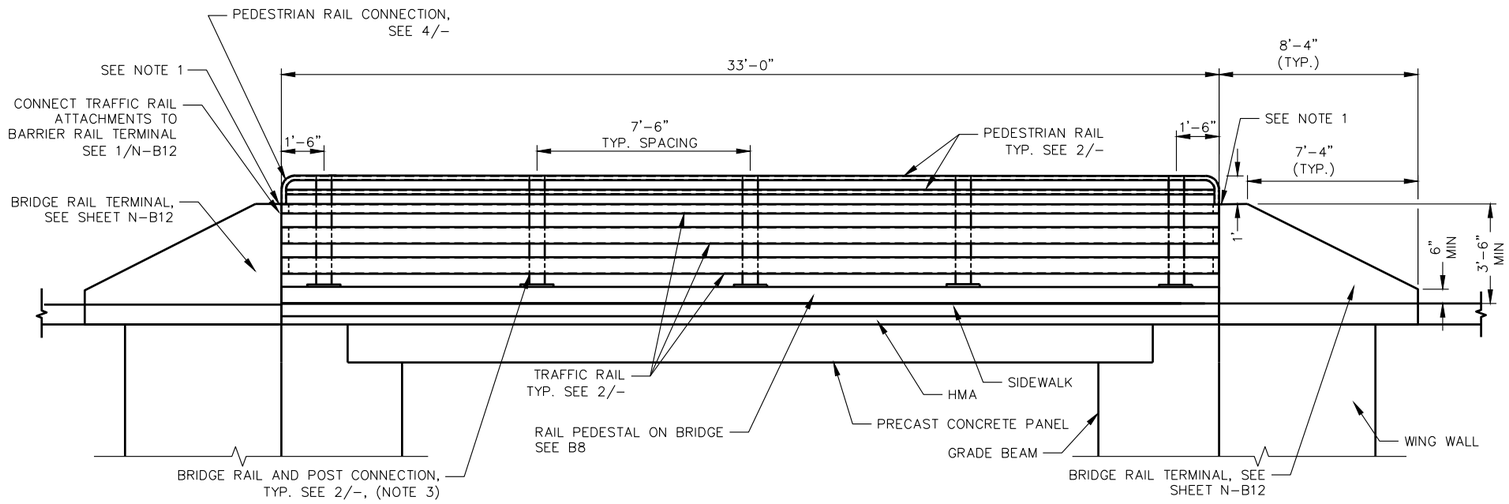
NEWPORT KEY SIDEWALK PLAN AND SECTION DETAILS

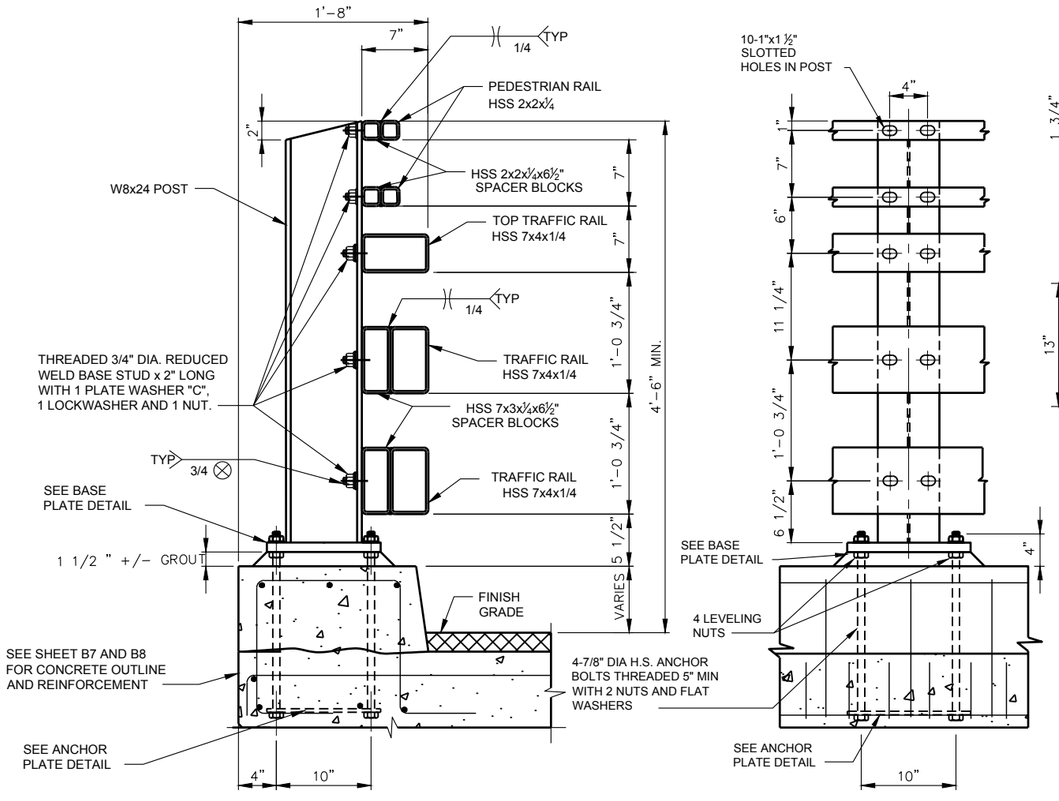
N-B10 | SHT 53 OF 58



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

GENERAL NOTES

1. ALIGN TOP OF CAST IN PLACE CONCRETE BRIDGE RAIL TERMINAL WITH TOP OF UPPER MOST TRAFFIC RAIL.
2. NOT USED.
3. CONSTRUCT RAILING CONFORMING TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE. INSTALL POSTS NORMAL TO GRADE IN LONGITUDINAL DIRECTION AND VERTICAL IN TRANSVERSE 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 (2)
SCALE: NTS

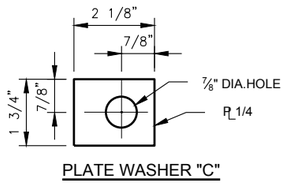
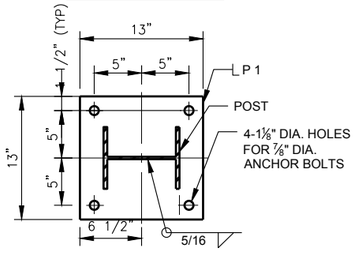
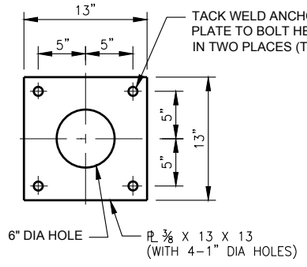


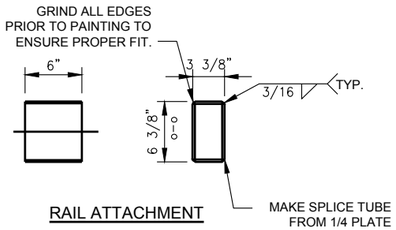
PLATE WASHER "C"



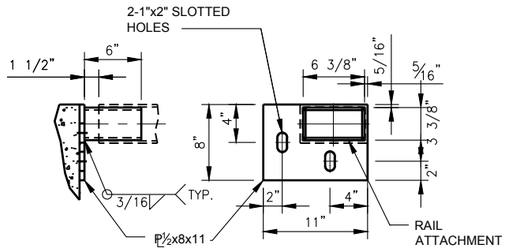
BASE PLATE DETAI



ANCHOR PLATE DETAIL

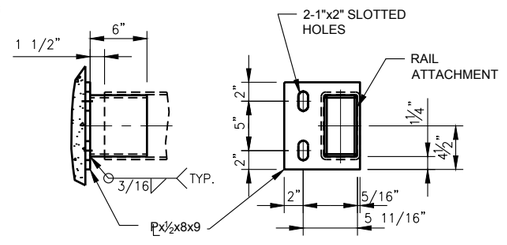


RAIL ATTACHMENT



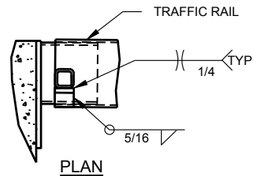
NOTE
RAIL ATTACHMENT BRACKET SHOWN FOR RIGHT SIDE ABUTMENT 1 AND LEFT SIDE ABUTMENT 2. DETAILS FOR OTHER TERMINALS SIMILAR BUT MIRRORED AROUND LEFT EDGE OF PLATE

TOP TRAFFIC RAIL ATTACHMENT BRACKET

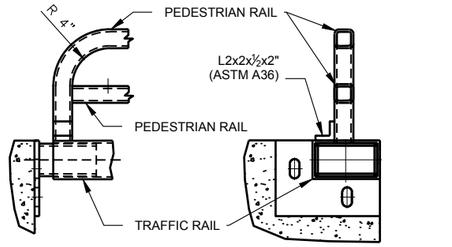


TRAFFIC RAIL ATTACHMENT BRACKET

TRAFFIC RAIL ATTACHMENT BRACKET DETAIL (3 / B10)
SCALE: NTS



PLAN



SECTION AT BARRIER RAIL

SECTION AT BARRIER TERMINAL FACE

PEDESTRIAN RAIL CONNECTION DETAIL (4 / -)
SCALE: NTS

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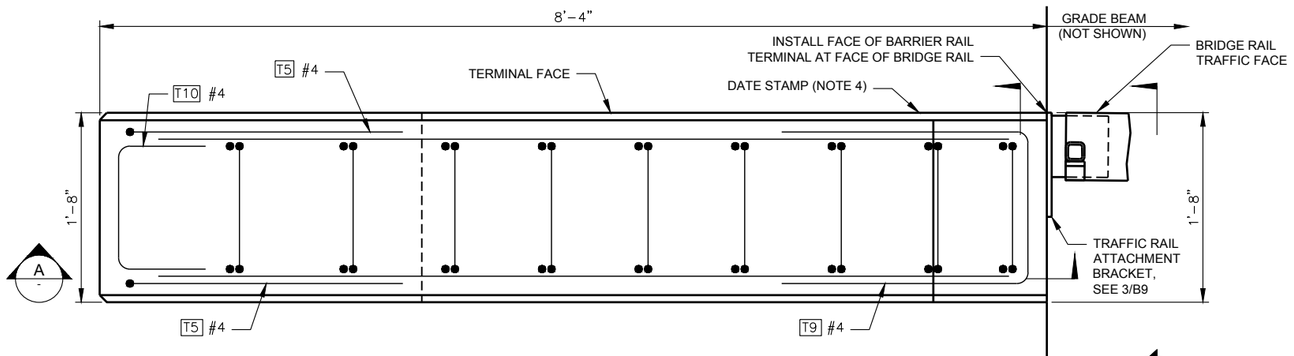
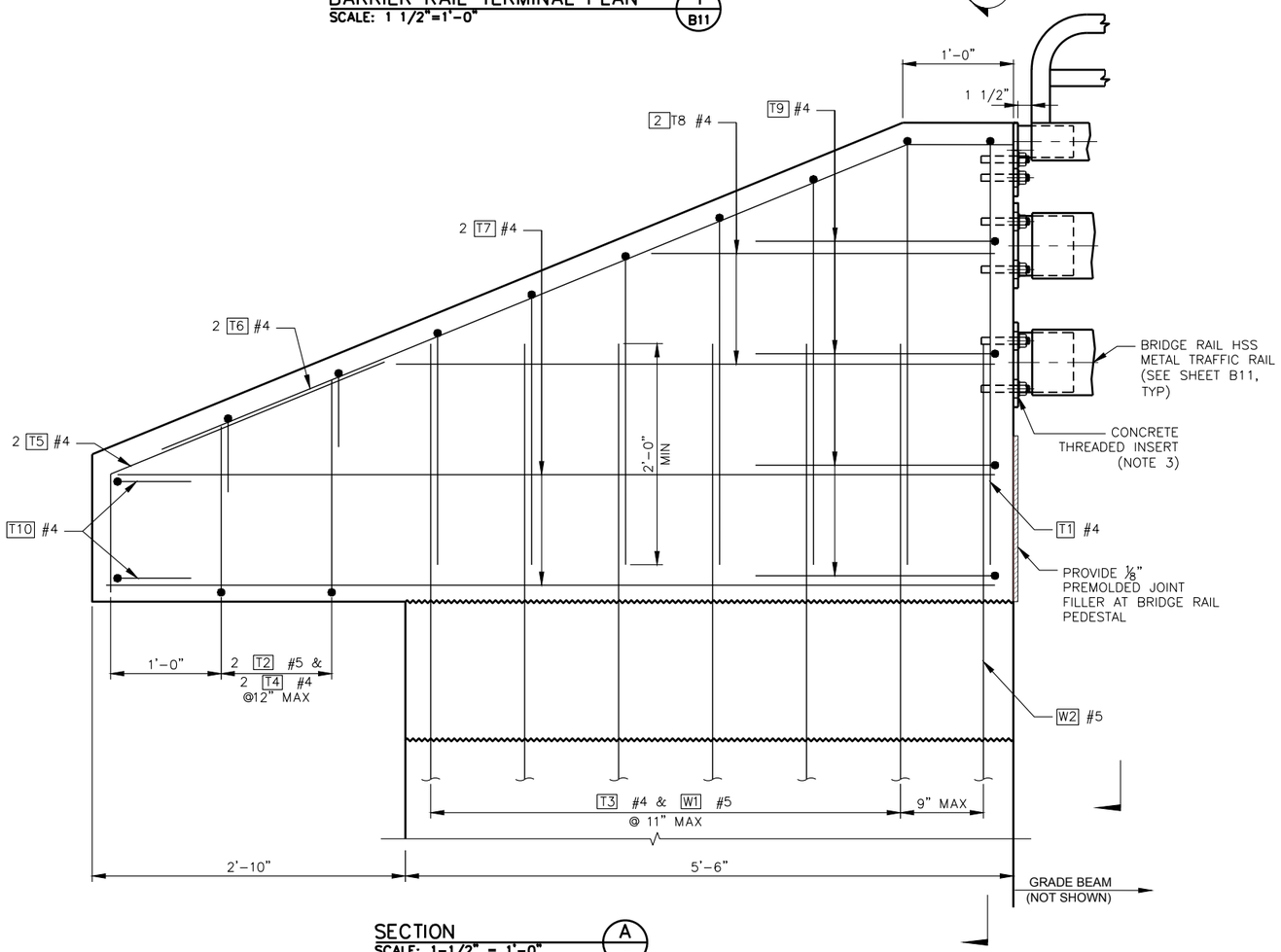
BRIDGE RAIL DETAILS 1

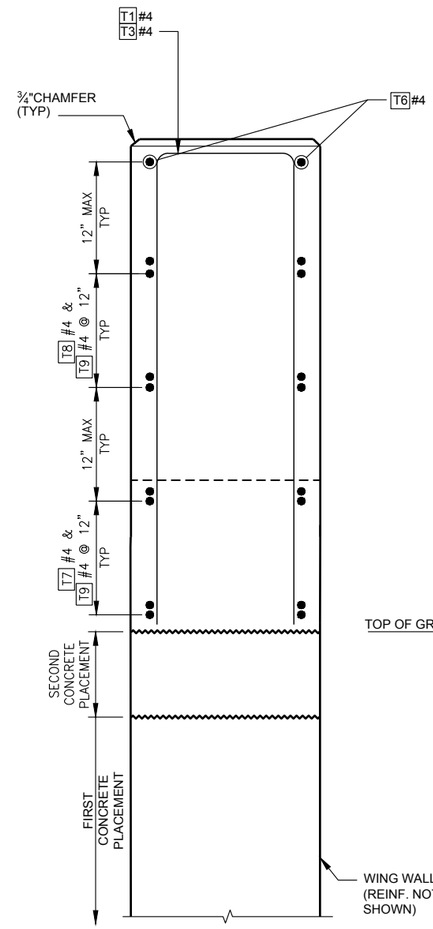
N-B11 | SHT 54 OF 58



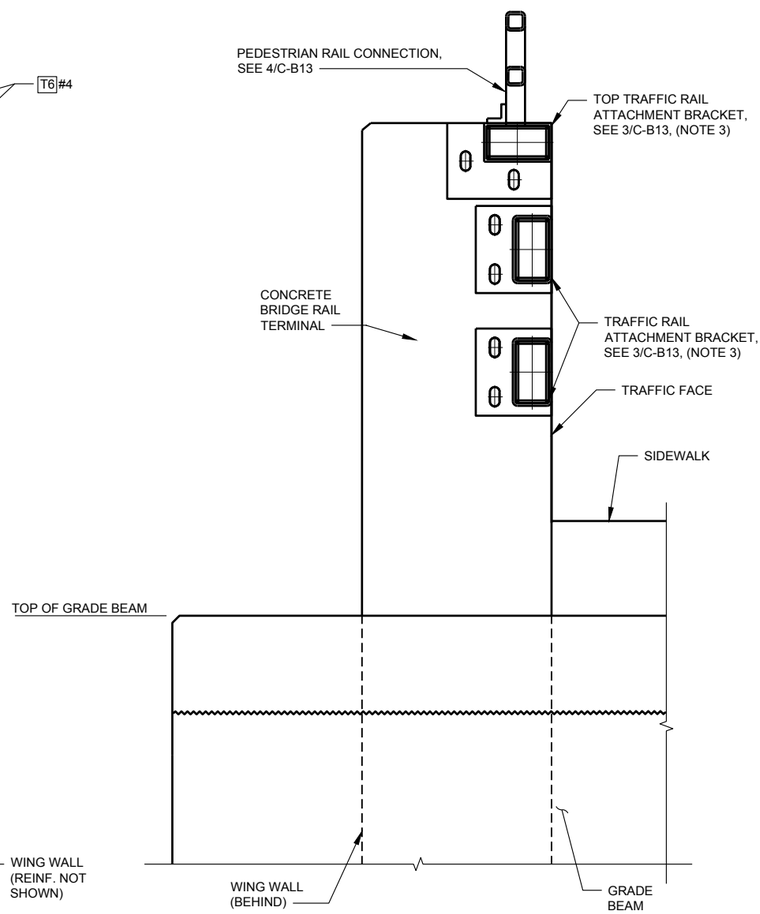
BARRIER RAIL TERMINAL PLAN (1/B11)
SCALE: 1 1/2"=1'-0"



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

1. SEE NOTES ON N-B11 FOR HARDWARE REQUIREMENTS FOR BRIDGE RAILING.
2. ALL REINFORCEMENT SHALL CONFORM TO ASTM A706 OR AASHTO M31 (ASTM A615) GRADE 60.
3. CONCRETE INSERTS SHALL BE HOT-DIP GALVANIZED FERRULE LOOP 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
4. STAMP BRIDGE YEAR CONSTRUCTION NUMERAL "2018" 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.
5. NORTH SIDE ABUTMENT 1 TERMINAL SHOWN. DETAILS FOR OTHER ABUTMENTS SIMILAR BUT MIRRORED ABOUT THE CENTERLINE AND MIDSPAN OF THE BRIDGE.

90% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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TETRA TECH
www.tetratech.com
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Seattle, Washington 98101
Phone: 206-728-9655 Fax: 206-883-9301

Approved By

DESIGN MANAGER DATE

PROJECT MANAGER DATE

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

City of Bellevue
UTILITIES

NEWPORT KEY CULVERT REPLACEMENT
NEWPORT KEY BRIDGE RAIL TERMINAL DETAILS

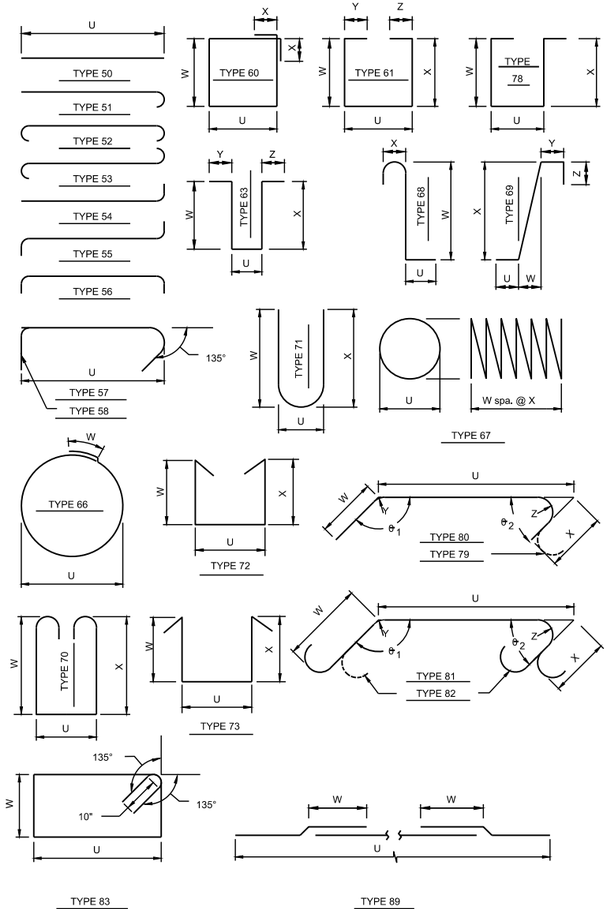
N-B12

SHT 55 OF 58

S = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES
L - LUMP SUM QUANTITY
T OR S - FOR TIE & STIRRUP RADIUS
E - FOR EARTHQUAKETAIL 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 REQ'D	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	FT	IN	FT	IN	FT	IN	FT	IN	DEG	DEG	FT	IN	LBS

BENDING DIAGRAMS



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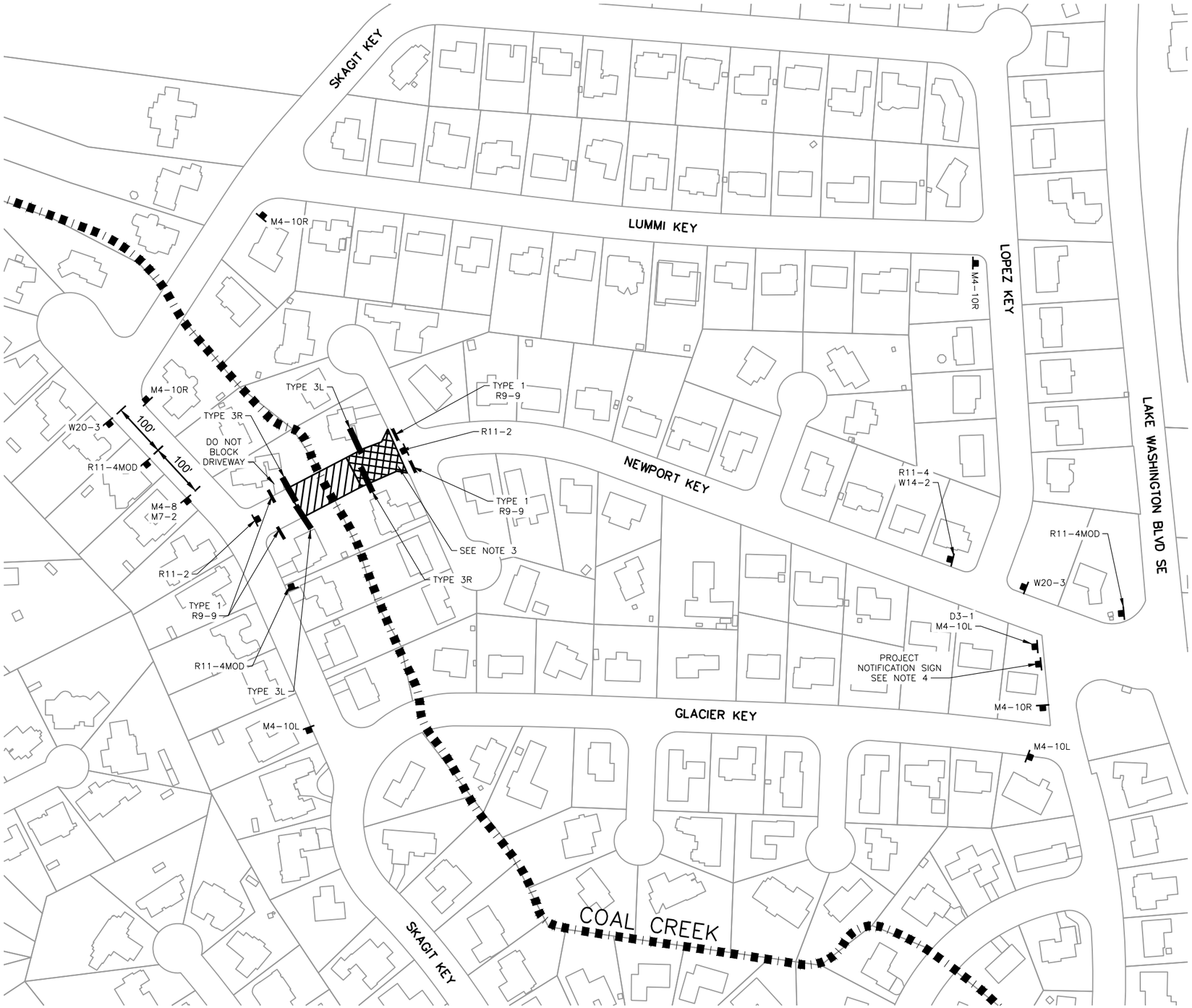
UTILITIES

FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY BAR LIST

N-B13

SHT 56 OF 58



LEGEND

- TYPE 1 BARRICADE
- TYPE 3 BARRICADE
- TEMPORARY TRAFFIC CONTROL SIGN
- TEMPORARY WORK ZONE
- WORK SPACE

R11-4MOD 60x30 — NEWPORT KEY CLOSED / FOLLOW DETOUR

R11-2 48x30 — ROAD CLOSED

M7-2 24x18

R11-4 60x30 — ROAD CLOSED TO THRU TRAFFIC

W14-2 36x36 — NO OUTLET

M4-10L 48x18 — DETOUR

M4-10R 48x18 — DETOUR

R9-9 24x12 — SIDEWALK CLOSED

W20-3 36x36 — ROAD CLOSED AHEAD

M4-8 24x12 — DETOUR

D3-1 18x12 — NEWPORT KEY

TRAFFIC CONTROL 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 EAST DURING DRILLING OPERATION. DO NOT BLOCK INTERSECTION WITH TEMPORARY WORK ZONE.
4. CONTRACTOR TO INSTALL PROJECT NOTIFICATION SIGN, PROVIDED BY COB, PER COB STD DETAIL W-53.
5. ALL SIGNS ARE BLACK AND ORANGE UNLESS OTHERWISE NOTED..

TRAFFIC CONTROL PLAN SUBMITTAL:

1. CONTRACTOR SHALL SUBMIT FOR APPROVAL PROJECT SPECIFIC TRAFFIC CONTROL PLAN REFLECTING THEIR WORK ACTIVITIES WHEN IT DIFFERS FROM THE TRAFFIC CONTROL SHOWN. SEE SECTION 1-10 OF THE CONTRACT SPECIFICATIONS.

DATUM
NAVD 88

N

0 50 100 150 200
SCALE IN FEET

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GG CHECKED BY DATE

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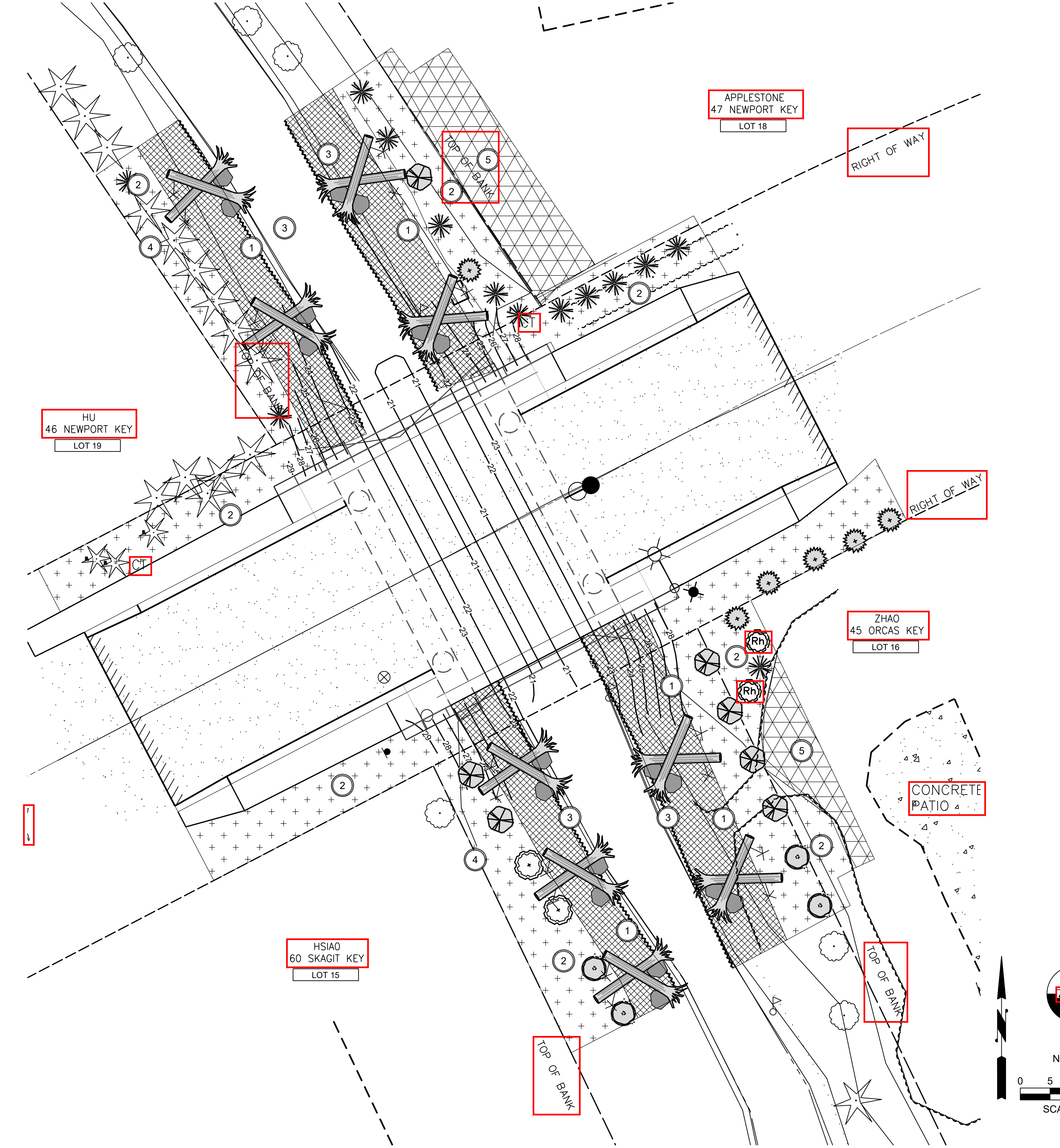
UTILITIES

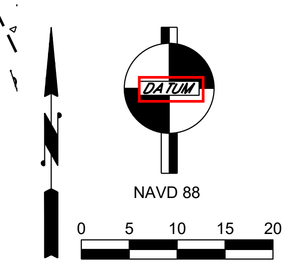
FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY TRAFFIC CONTROL

N-TC1

SHT 57 OF 58

Path: P:\T34271 Lower Coal Creek Ph 2 Early Action\04 02 Design\CAD\SheetFiles\57 TC1_NEWPORT KEY TRAFFIC CONTROL.dwg Plot date: Dec 11, 2017-01:21:41pm CAD User: Adam.Forcier.
Xref Filename: | C-XP-GIS-PARCEL | Group2-border |





PLANTING LEGEND AND MATERIALS LIST:

	SCIENTIFIC NAME	COMMON NAME	QTY	MIN SIZE / CONDITION	SPACING	NOTES
	TREES					
	ACER CIRCINATUM	VINE MAPLE	4	3/4" CAL / #5 CONT	Per Plan	SEE DETAIL 4/C-L2
	ACER MACROPHYLLUM	BIG LEAF MAPLE	2	3/4" CAL / #5 CONT	Per Plan	
	CORYLUS CORNUTA	BEAKED HAZELNUT	7	3/4" CAL / #5 CONT	Per Plan	
	PSEUDOTSUGA MENZIESII	DOUGLAS-FIR	7	4' TALL / #5 CONT	Per Plan	
	THUJA PLICATA	WESTERN RED CEDAR	13	4' TALL / #5 CONT	Per Plan	
	ZONE 1 PLANTINGS					
	CORNUS SERICEA	RED OSIER DOGWOOD	357	30" x 1/2" / LIVESTAKE	18" OC	SEE DETAIL 1/C-L2
	SALIX HOOKERIANA	HOOKER'S WILLOW	357	30" x 1/2" / LIVESTAKE	18" OC	
	SALIX SITCHENSIS	SITKA WILLOW	357	30" x 1/2" / LIVESTAKE	18" OC	
	ZONE 2 PLANTINGS					
	CORNUS SERICEA	RED OSIER DOGWOOD	80	12" / #1 CONT	3' OC	SEE DETAIL 2/C-L2
	HOLODISCUS DISCOLOR	OCEANSPRAY	35	12" / #1 CONT	3' OC	
	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	35	12" / #1 CONT	3' OC	
	ROSA PISOCARPA	CLUSTERED WILD ROSE	80	12" / #1 CONT	3' OC	
	RUBUS SPECTABILIS	SALMONBERRY	80	12" / #1 CONT	3' OC	
	SYMPHORICARPOS ALBUS	SNOWBERRY	80	12" / #1 CONT	3' OC	
	GAULTHERIA SHALLON	SALAL	40	12" / #1 CONT	3' OC	
	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	40	24" / #2 CONT	3' OC	
Rh	RHODODENDRON MACROPHYLLUM	PACIFIC RHODODENDRON	2	24" / #2 CONT	Per Plan	
	COIR LOG PLANTINGS					
	SALIX SITCHENSIS	SITKA WILLOW	78	30" x 1/2" / LIVESTAKE	1' OC	SEE DETAIL 3/C-L2
	CORNUS SERICEA	RED OSIER DOGWOOD	78	30" x 1/2" / LIVESTAKE	1' OC	
	SALIX HOOKERIANA	HOOKER'S WILLOW	78	30" x 1/2" / LIVESTAKE	1' OC	
	LAWN RESTORATION					
	SOD					SEE DETAIL 6/C-L2

CONSTRUCTION NOTES:

1. ZONE 1 RIPARIAN RESTORATION, SEE DETAIL 1C-/L2
2. ZONE 2 RIPARIAN RESTORATION, SEE DETAIL 2C-/L2
3. COIR LOG PLANTING, SEE DETAIL 3/C-L2
4. ADJUST PLANT INSTALLATION AROUND RETAINED TREES.
5. LAWN RESTORATION

GENERAL NOTES

1. LOCATE AND PROTECT EXISTING LANDSCAPE IRRIGATION. REPAIR OR REPLACE IF DAMAGE.

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JC	12/11/17
DESIGNED BY	DATE
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BB	12/11/17
CHECKED BY	DATE

City of Bellevue
UTILITIES

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FLOOD HAZARD REDUCTION PROJECT
NEWPORT KEY RIPARIAN RESTORATION PLAN

N-L1