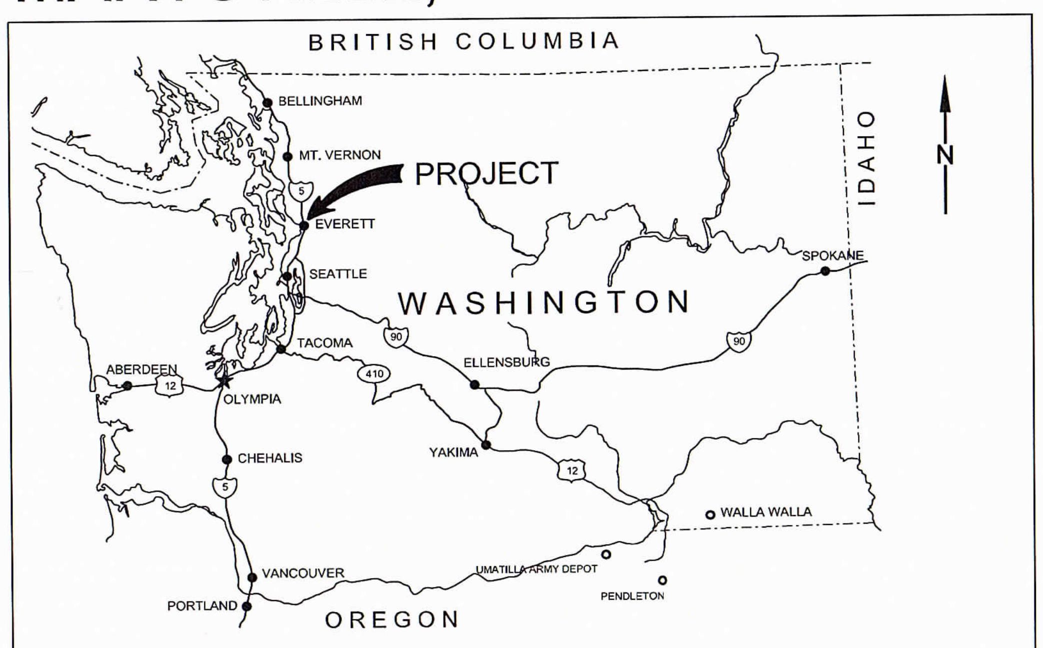
US Army Corps of Engineers ® Seattle District

SEALASKA CONSTRUCTOR LLC REDLINES

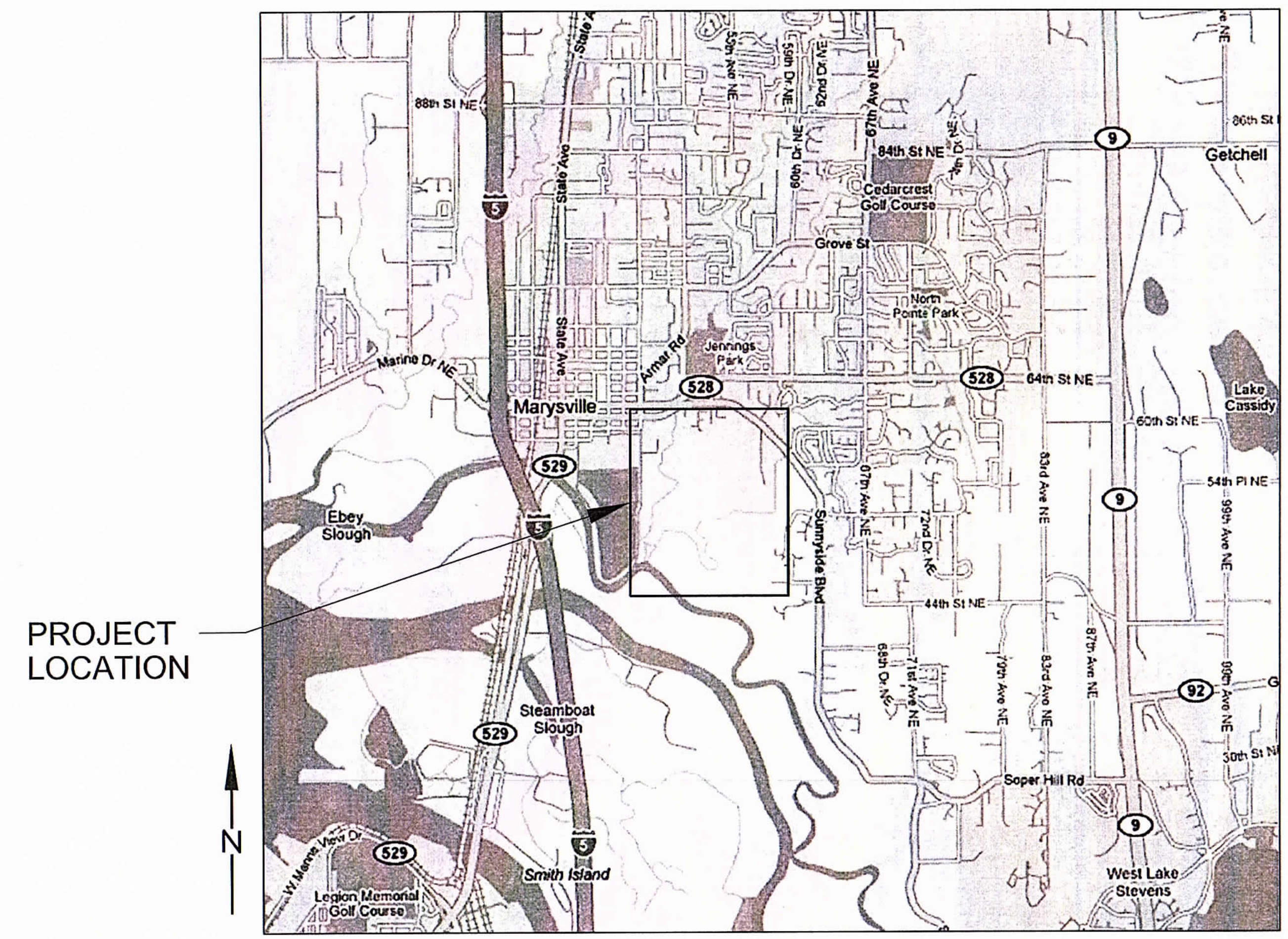
QWULOOLT ECOSYSTEM RESTORATION

MARYSVILLE, WASHINGTON



VICINITY MAP

NOT TO SCALE



PROJECT LOCATION MAP

NOT TO SCALE

CONSTRUCTION SET

PN 142460

SAFETY PAYS

IF SHEET MEASURES LESS THAN 22" X 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY.

US Army Corps of Engineers ® Seattle District

Date: 13 JULY 2012

File No.: PN 142460

Solicitation No.:

Recommended by: GUY GREEN, P.E., Chief, Design Branch	07/2012 Date
Approved by: MARK OLSTROM, P.E., Chief, Engineering Div.	07/2012 Date
Submitted by: LYNN WETZLER, Project Manager	07/2012 Date
Reviewed by: ANIL NISARGAND, P.E., Chief, Specs. and Tech Review	07/2012 Date
U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT, SEATTLE, WASHINGTON	
Prepared by: JENNIFER WEST, P.E., Chief, Civil Section	07/2012 Date

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

COVER SHEET

SHEET IDENTIFICATION G-001
SHEET 1 OF 48

DESIGN FILE: c:\users\g3ecdlf9\documents\cenws01\dms51216\PN142460_QTWR-G-001CVR.dgn

DATE AND TIME PLOTTED: $$$DATE$$$

ABBREVIATIONS

APPROX.	APPROXIMATE	N	NORTHING
CASC	CRUSHED AGGREGATE SURFACE COURSE	NIC	NOT IN CONTRACT
℄	CENTERLINE	NTS	NOT TO SCALE
(D), DEMO	DEMOLISH	PI	POINT OF INTERSECTION
DS	DOWNSTREAM	PIP	PROTECT IN PLACE
E	EASTING	POB	POINT OF BEGINING
EL,ELEV	ELEVATION	POE	POINT OF END
EG	EXISTING GRADE	RC	RELATIVE COMPACTION
EX	EXISTING	S	SLOPE
FG	FINISHED GRADE	SD	STORM DRAIN
FT	FOOT, FEET	SPECS	SPECIFICATIONS
GB	GRADE BREAK	STA	STATION
HORZ	HORIZONTAL	3H:1V	SLOPE, HORIZONTAL:VERTICAL
IE	INVERT ELEVATION	TBD	TO BE DETERMINED
LF	LINEAR FEET	TYP	TYPICAL
L	LENGTH	USACE	UNITED STATES ARMY CORPS OF ENGINEERS
MIN	MINIMUM	VERT	VERTICAL
MAX	MAXIMUM	VIF	VERIFY IN FIELD
OHW	ORDINARY HIGH WATER		

LEGEND

4	EXISTING CONTOUR
4	NEW MAJOR CONTOUR
	NEW MINOR CONTOUR
	GRADING DAYLIGHT
	DRAINAGE DITCH
	EASEMENT
	TOP OF SLOPE TOE OF SLOPE
1 / C-XXX	1 INDICATES DETAIL OR SECTION NUMBER 2 INDICATES SHEET NUMBER ON WHICH SECTION OR DETAIL APPEARS
A / A-503	1 INDICATES SECTION NUMBER 2 INDICATES SHEET NUMBER ON WHICH SECTION OR DETAIL APPEARS
	APPROXIMATE WATER LEVEL
	CONSTRUCTION STAGING AREA
	AGGREGATE FILTER
	RIPRAP (SEE CALL OUT FOR TYPE)
	EXISTING GROUND (PLAN & SECTION)
	EXCAVATION (PLAN & SECTION)
	FILL (PLAN & SECTION)
1 / 4 , 4H:1V	BANK SLOPE
ACCESS	CONSTRUCTION ACCESS
203	SOIL BORE HOLE

GENERAL NOTES

1. THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN SHALL BE SUBMITTED BY CONTRACTOR AND REVIEWED AND APPROVED BY USACE. APPROVED MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO ANY SITE WORK.
2. DO NOT EXCAVATE OR DISTURB BEYOND THE PROJECT LIMITS UNLESS NOTED OTHERWISE.
3. RUBBISH, DEBRIS, GARBAGE, AND OTHER REFUSE SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF LEGALLY, OFF SITE.
4. ENSURE THE WORK CREW HAS ALL APPLICABLE SAFETY TRAINING PRIOR TO CONSTRUCTION.
5. ALL AREAS OF THE JOB SITE TEMPORARILY DISTURBED BY CONSTRUCTION SHALL BE GRADED TO THE PRE-CONSTRUCTION GRADE AND PROTECTED AND/OR REVEGETATED AS NECESSARY
6. ALL MATERIALS USED FOR CONSTRUCTION SHALL BE NEW AND UNDAMAGED UNLESS OTHERWISE APPROVED BY USACE. THE SAME MANUFACTURER OF EACH ITEM SHALL BE USED THROUGHOUT THE WORK UNLESS OTHERWISE APPROVED BY USACE.
7. DO NOT FILL EXISTING DITCHES OR CHANNELS UNLESS OTHERWISE SHOWN ON PLANS.
8. TEMPORARY STORAGE OF CONSTRUCTION EQUIPMENT IS ALLOWED ANYWHERE WITHIN THE CONSTRUCTION LIMITS SHOWN ON THE PLANS.

TABLE 1: HORIZONTAL CURVE DATA

POB (1) 0+00.000
NORTHING: 386168.649
EASTING: 1315033.818

Tangent Direction: S 14^36'50.129" E
Tangent Length: 110.631

PI (2) 1+36.60
NORTHING: 386036.47
EASTING: 1315068.28
Radius: 300
Length: 51.802
Tangent: 25.963
Delta: 9^53'32.985" Right
Degree of Curvature(Arc): 19^05'55.325"

Tangent Direction: S 4^43'17" E
Tangent Length: 606.51

PI (3) 7+97.58
NORTHING: 385377.605
EASTING: 1315122.699
Radius: 100
Length: 55.78
Tangent: 28.64
Delta: 31^57'33" Right
Degree of Curvature(Arc): 57^17'44.806"

Tangent Direction: S27^14'15.994"W
Tangent Length: 2068.16

PI (4) 29+17.11
NORTHING: 383491.773
EASTING: 1314151.941
Radius: 100
Length: 47.539
Tangent: 24.227
Delta: 27^14'15.994" Left
Degree of Curvature(Arc): 57^17'44.806"

Tangent Direction: S 0^00'00.000" E
Tangent Length: 1014.481

POE (5) 39+54.90
NORTHING: 382453.065
EASTING: 1314151.941

M1

MODIFICATION #1

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6	C-002	EXISTING CONDITIONS 2
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44	C-318	LEVEE CROSS SECTIONS 14
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48	S-301	STRUCTURAL SECTIONS 1 - HEAD AND WING WALLS
49	S-302	STRUCTURAL SECTIONS 2 - FLOW CONTROL STRUCTURE

HORIZONTAL CONTROL POINTS

1. DATUM:
   WASHINGTON STATE PLANE NORTH COORDINATES NAD 83 / 91 (GROUND).
   CONVERTED TO GRID COORDINATES
   VERTICAL : NAVD 88
2. BENCHMARK OFF SITE:
   WSDOT MONUMENT GP31529-169
   GRID COORDINATES
   N 385512.730
   E 1311593.702
   ELEVATION 16.654 FEET (NAVD 88)
3. BENCHMARK ON SITE:
   SPIKE SET ON NORTH SIDE OF DIKE, COMPUTER POINT NUMBER 10
   GRID COORDINATES
   N 382380.1005
   E 1314559.7561
   ELEVATION 12.5935 FEET (NAVD 88)
4. HORIZONTAL CONTROL POINTS NOT SHOWN ON PLANS. POINTS ARE OUTSIDE PROPOSED WORK SHEET SET UP.

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.
M1	MODIFIED HORIZONTAL CURVE DATA	8 JUL 2014	EF				

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEE KAR ZPC | DATE: 13 JULY 2012
DWN BY: MCP | CKD BY: CAN | SOLICITATION NO.:
SUBMITTED BY: WETZLER | CONTRACT NO.:
PLOT DATE: | PLOT TIME: 2:35:20 PM | FILE NUMBER:
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FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEGENDS AND ABBREVIATIONS

SHEET IDENTIFICATION
G-002
SHEET 2 OF 49

DATE AND TIME PLOTTED: 7/10/2014
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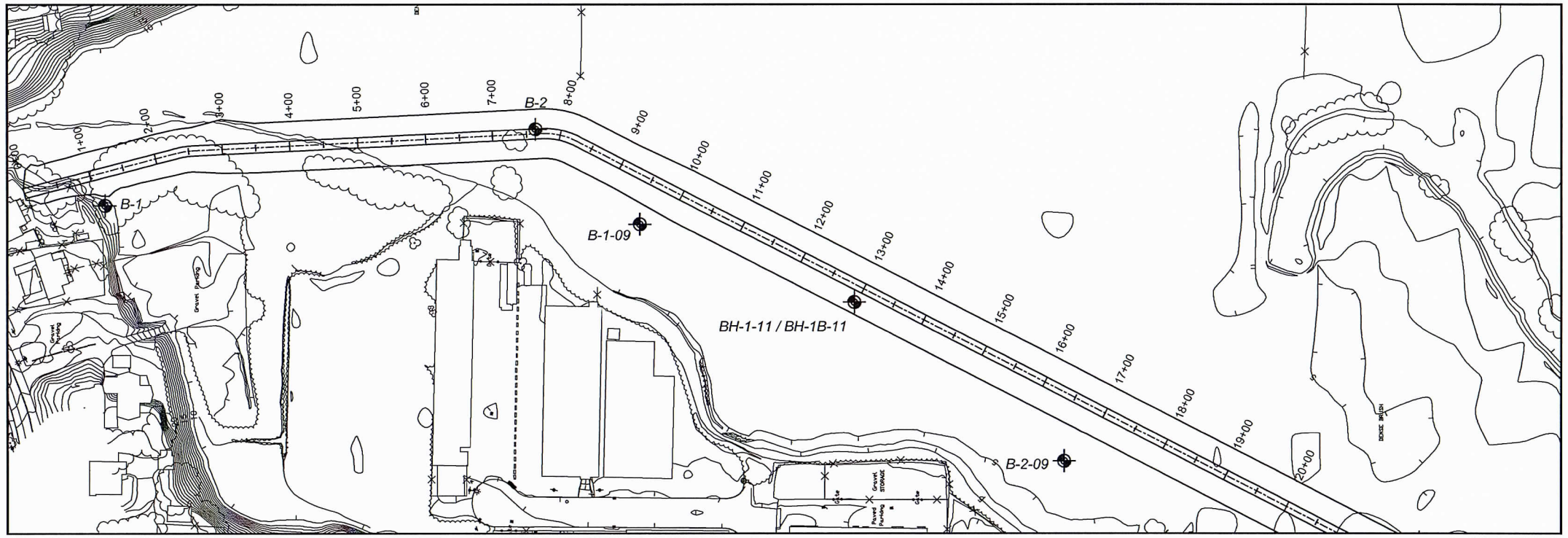
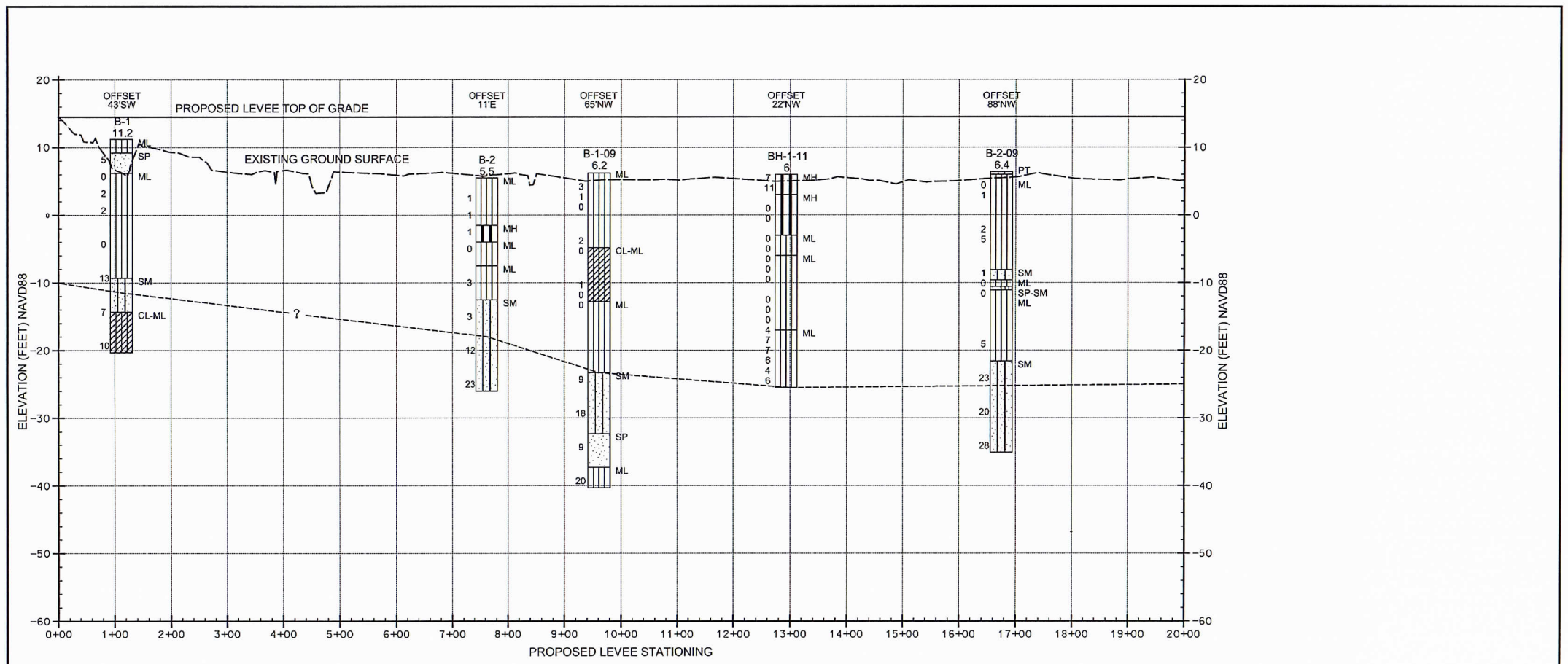


N

1 B-201 PLAN - STA 0+00 TO 20+00
1"=100'

0 100 200



PROFILE - STA 0+00 TO 20+00

HORIZONTAL SCALE: 1"=120'
0 120 240

VERTICAL SCALE: 1"=10'
0 10 20

GENERAL NOTE:

GEOTECHNICAL EXPLORATION LOCATIONS AND LOGGING ARE PER KLEINFELDER REPORTS 2008, 2009 AND 2011 FOUND IN APPENDIX A OF THE GEOTECHNICAL REPORT.

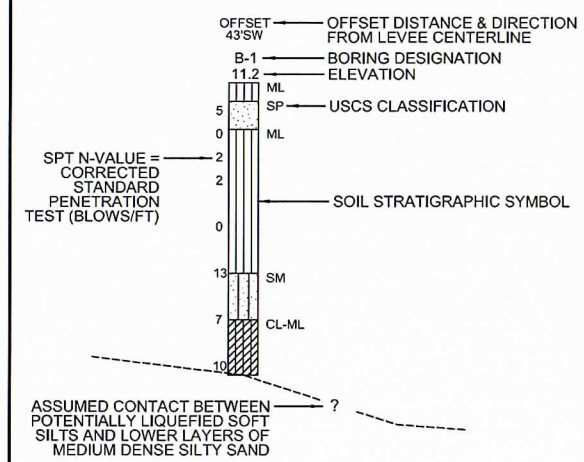
SURVEY NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

LEGEND

USCS SYMBOL

CL-ML	CLAYEY SILT
MH	ELASTIC SILT
ML	INELASTIC SILT
OL	ORGANIC MATERIAL
PT	PEAT
SM	SILTY SAND
SP-SM	SANDY SILT
SP	POORLY GRADED SAND



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SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.

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DRN BY: SWANSON
SUBMITTED BY: MCCLAIN
DATE: 13 JUL 2012
CKD BY: RUDIE
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SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY'12 QWULLOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

GEOTECHNICAL PLAN AND PROFILE 1 - STA 0+00 TO 20+00

SHEET IDENTIFICATION
B-201
SHEET 3 OF 49

DESIGN FILE: c:\temp\g3eceklo\dms53494\PN142460_QTWR-B-201PRO.DGN
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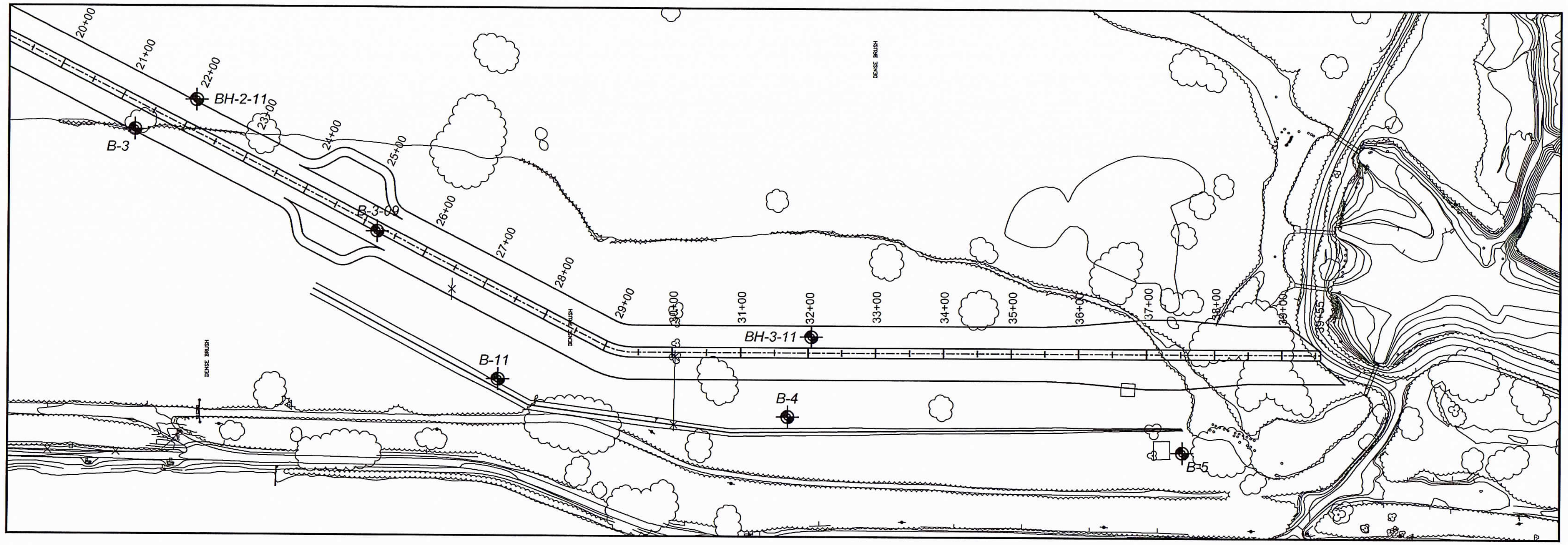
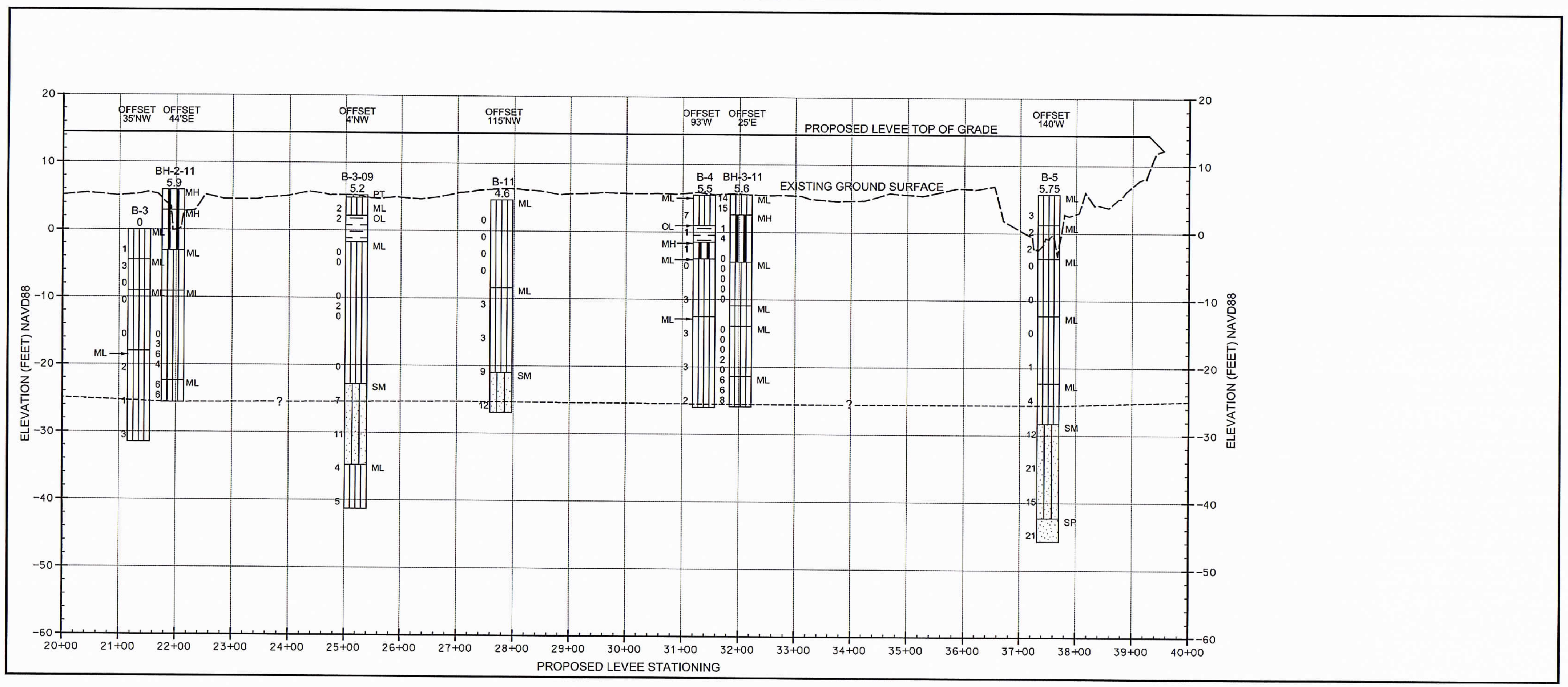


1 PLAN - STA 20+00 TO 39+55
B-202 1"=100'
0 100 200



PROFILE - STA 20+00 TO 40+00

HORIZONTAL SCALE: 1"=120'
0 120 240

VERTICAL SCALE: 1"=10'
0 10 20

GENERAL NOTE:

FOR LEGEND, ABBREVIATIONS AND ADDITIONAL NOTES, SEE PLATE B-201.

SURVEY NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: ELLITHY		DATE: 13 JUL 2012
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FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

GEOTECHNICAL PLAN AND PROFILE 2 - STA 20+00 TO 40+00

SHEET IDENTIFICATION
B-202
SHEET 4 OF 49

DATE AND TIME PLOTTED: 7/13/2012

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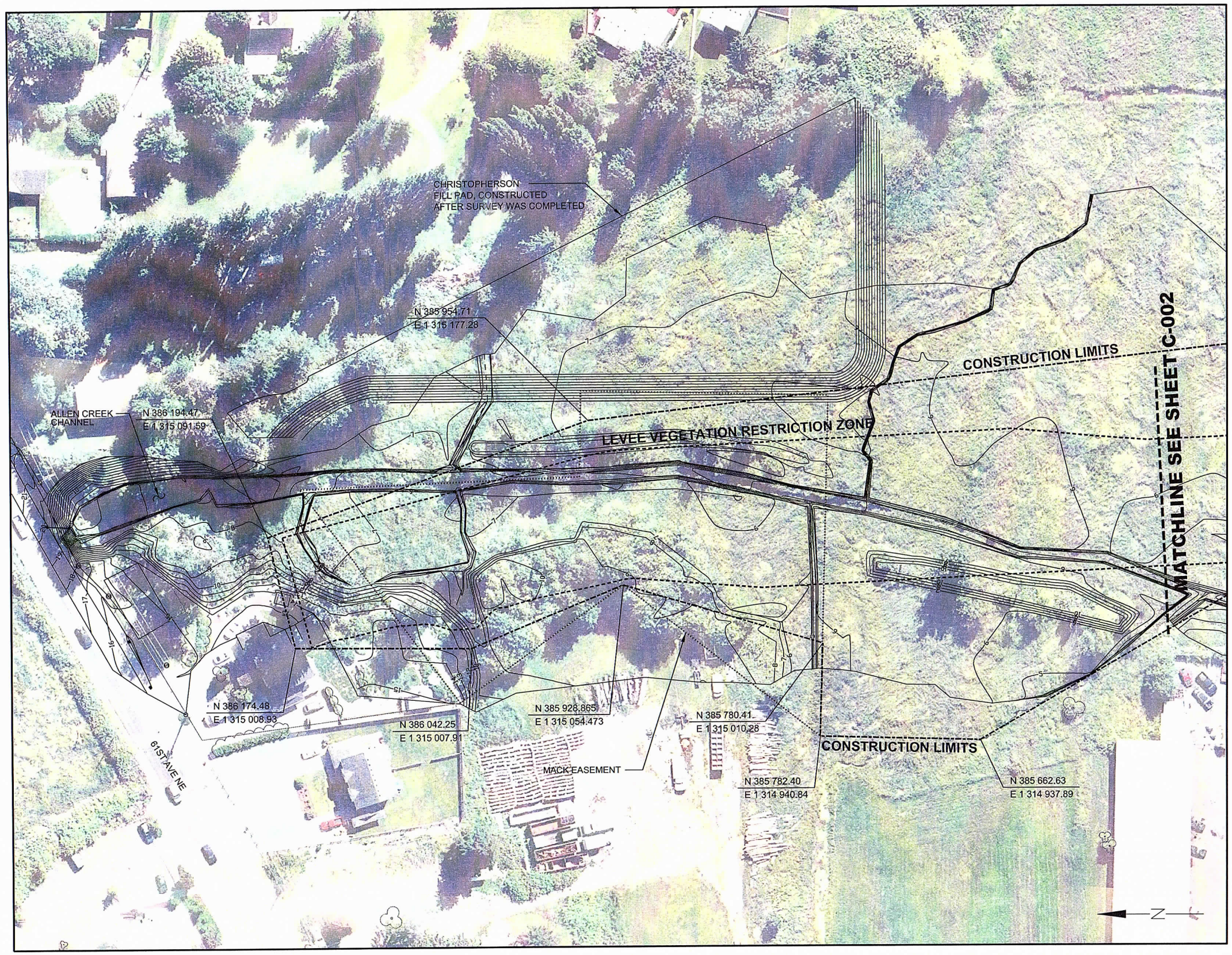

1 C-001 EXISTING CONDITIONS 1
1"=40'
0 40 80

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.
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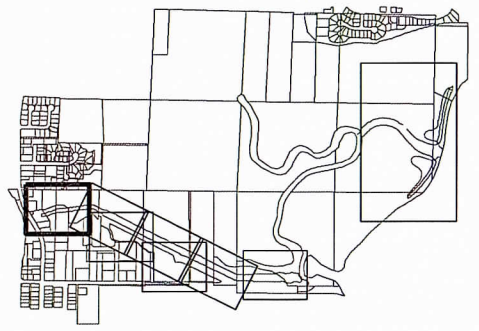
3. ALL VEGETATION, INCUDING TREES, SHOWN WITHIN THE LEVEE VEGETATION RESTRICTION ZONE WILL BE CLEARED AND STRIPPED. THIS ZONE EXTENDS 15' BEYOND THE TOE OF BOTH SIDES OF THE LEVEE.



KEY MAP
NTS

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SEATTLE DISTRICT

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SOLICITATION NO.:
DATE: 13 JUL 2012
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U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULLOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN#142460

EXISTING CONDITIONS 1

SHEET IDENTIFICATION
C-001
SHEET 5 OF 49

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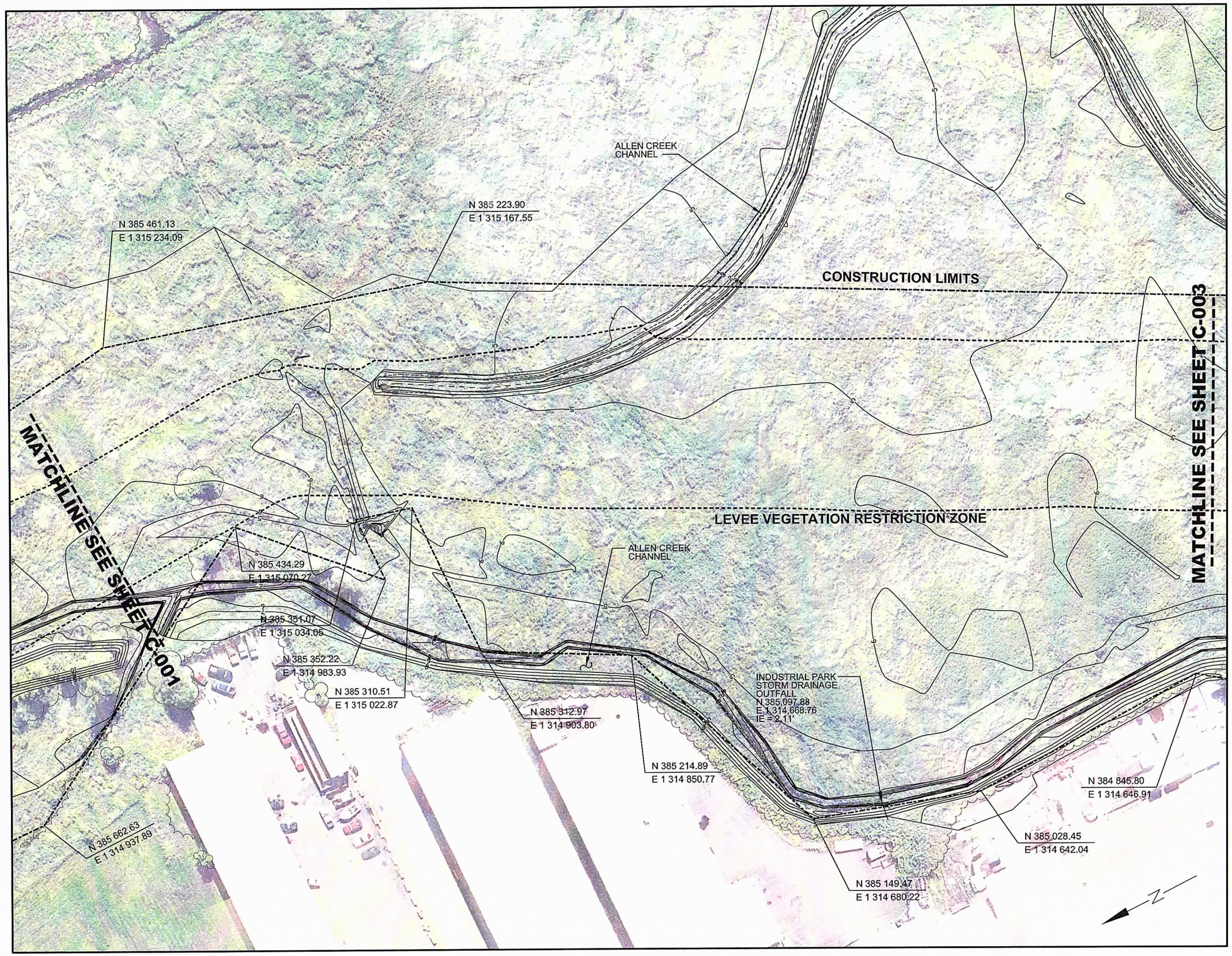
DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-002 EXISTING CONDITIONS 2
1"=40'
0 40 80

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

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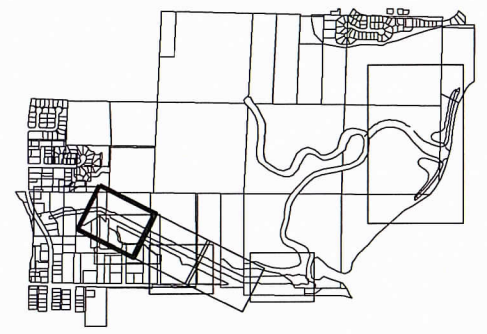

KEY MAP
NTS

US Army Corps of Engineers®
SEATTLE DISTRICT

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MARK	DESCRIPTION	DATE	APPR.

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DATE: 13 JUL 2012
SOLICITATION NO.:
CONTRACT NO.:
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U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

EXISTING CONDITIONS 2

SHEET IDENTIFICATION
C-002
SHEET 6 OF 49

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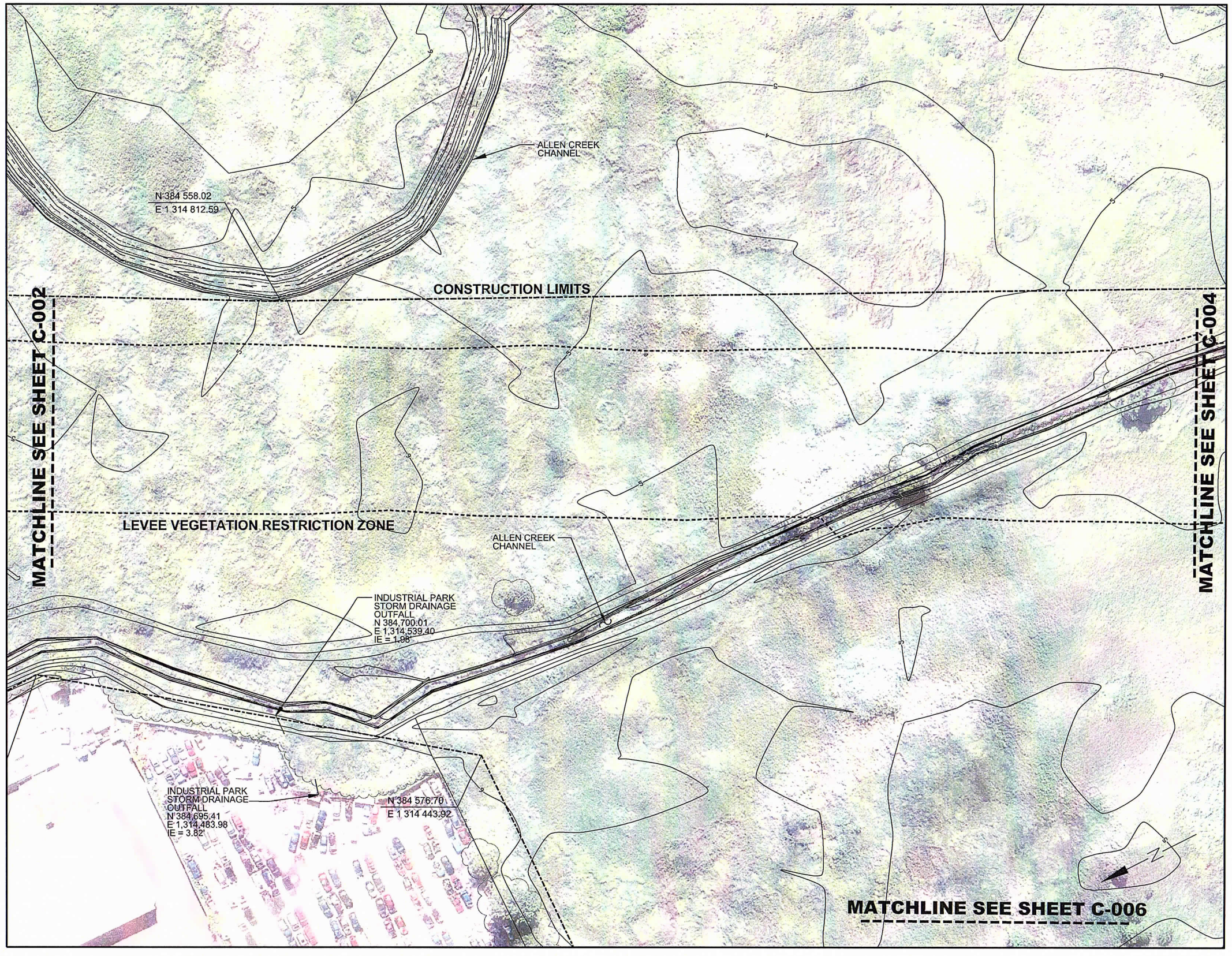

1 C-003 EXISTING CONDITIONS 3
1"=40'
0 40 80

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

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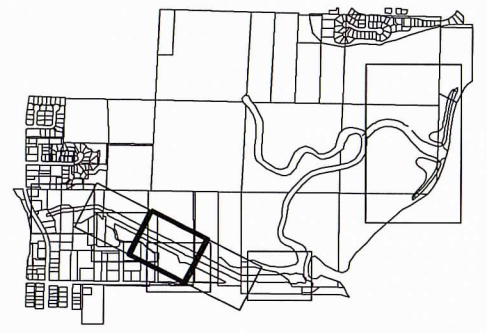

KEY MAP
NTS

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LBF, KAR, ZPC
DRAWN BY: MKP
CKD BY: DMK
SUBMITTED BY: WETZLER
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FY'12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

EXISTING CONDITIONS 3

SHEET IDENTIFICATION
C-003
SHEET 7 OF 49

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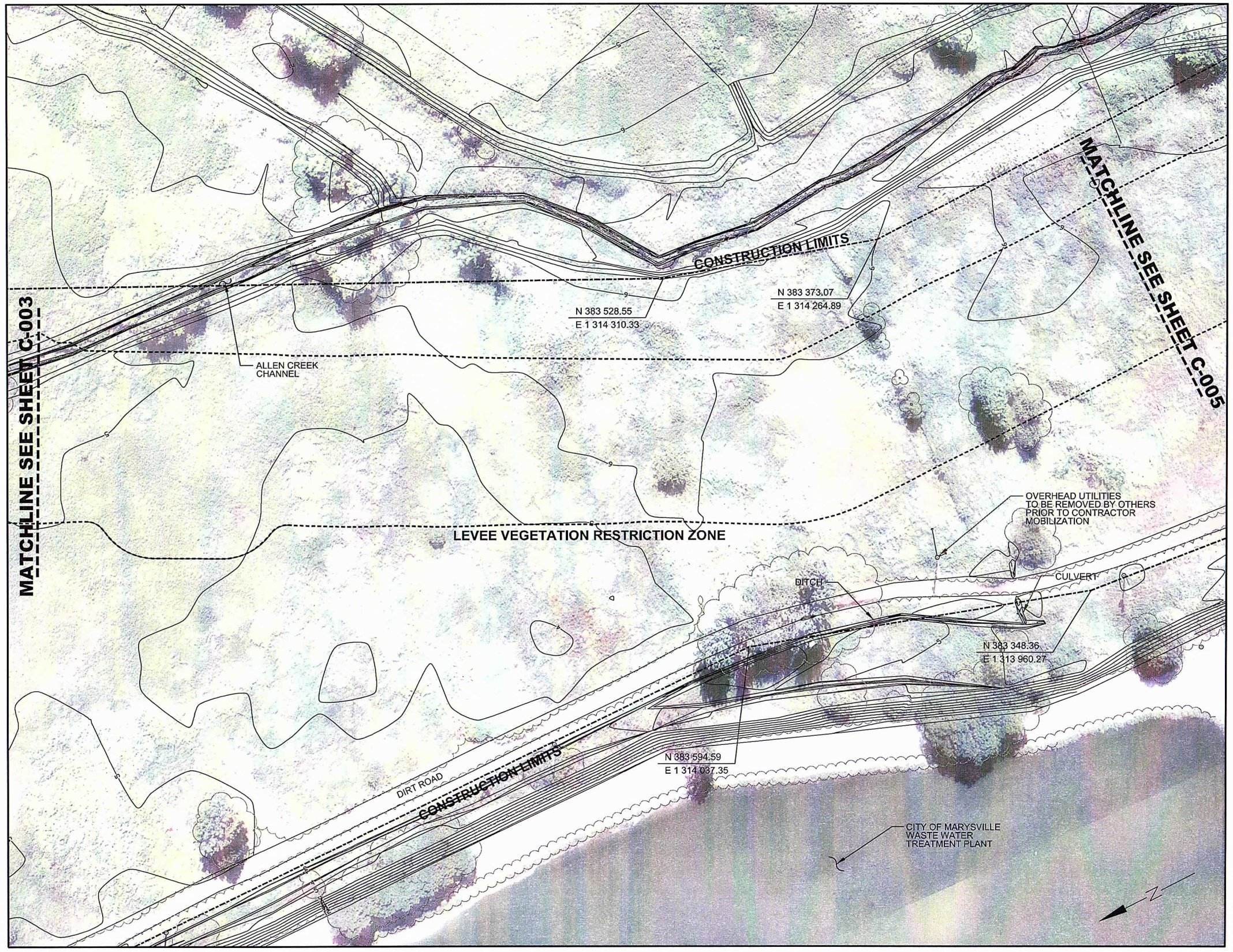
DATE AND TIME PLOTTED: $$$DATE$$$$



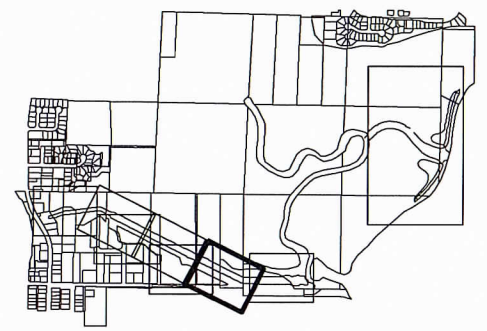
1 C-004 EXISTING CONDITIONS 4
1"=40'
0 40 80

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

2. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION.

3. ALL VEGETATION, INCUDING TREES, SHOWN WITHIN THE LEVEE VEGETATION RESTRICTION ZONE WILL BE CLEARED AND STRIPPED. THIS ZONE EXTENDS 15' BEYOND THE TOE OF BOTH SIDES OF THE LEVEE.



KEY MAP
NTS

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC
DRAWN BY: ROP
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI D
DATE: 13 JULY 2012
CKD BY: DAK
PLOT TIME: 2:37:27 PM
FILE NAME: PN142460_QTWR-C-004SPE04.DGN
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

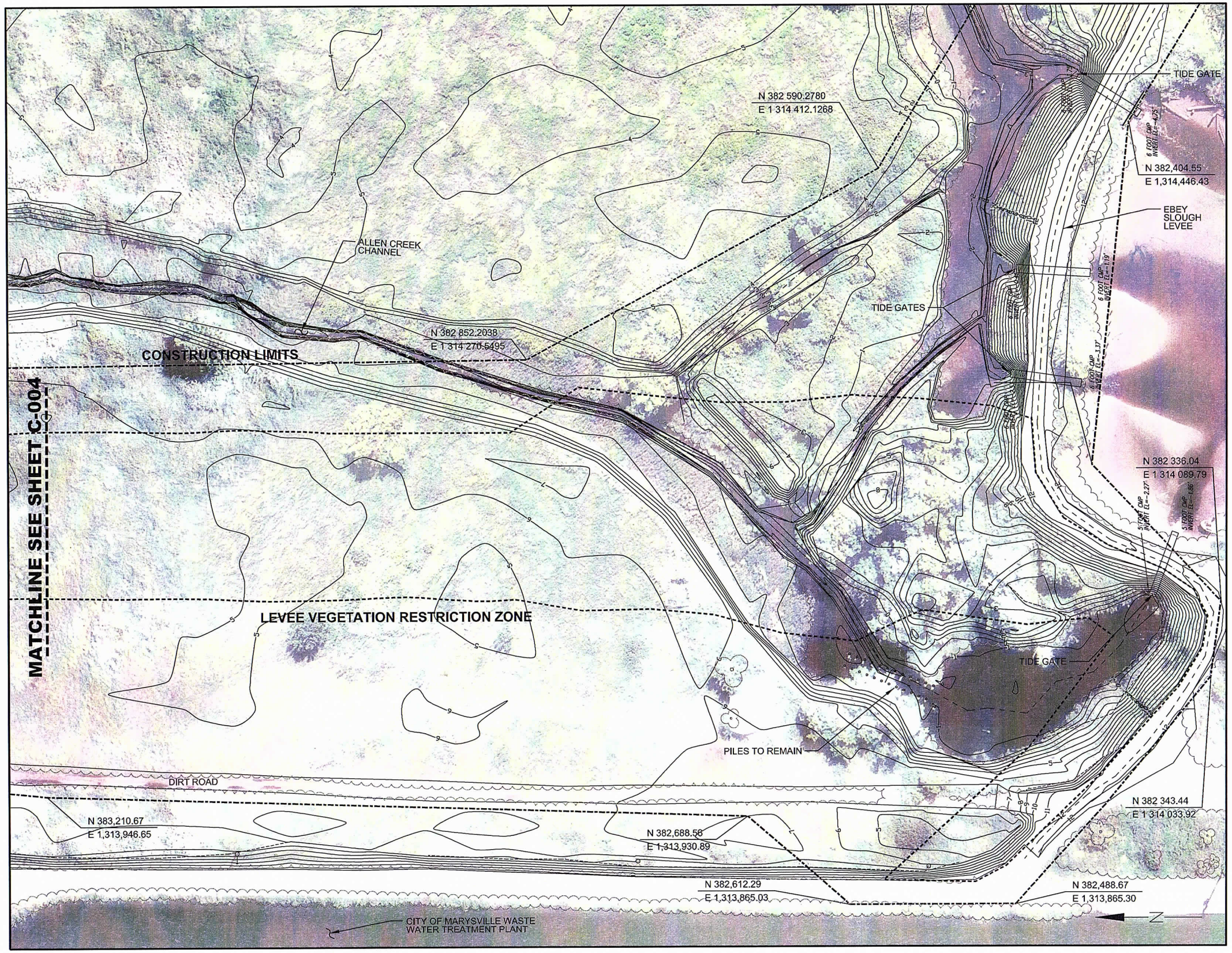
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

EXISTING CONDITIONS 4

SHEET IDENTIFICATION
C-004
SHEET 8 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcpimy documents\pwworkdms5122\PN142460_QTWR-C-004SPE04.DGN

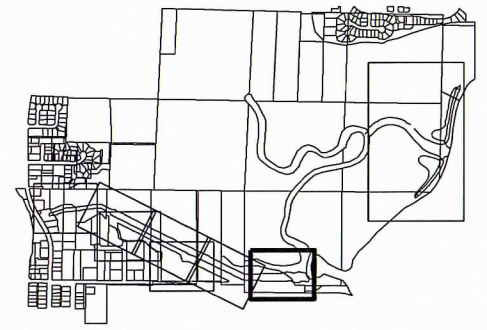
DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-005 EXISTING CONDITIONS 5
1"=40'
0 40 80

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.
2. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION.
3. ALL VEGETATION, INCUDING TREES, SHOWN WITHIN THE LEVEE VEGETATION RESTRICTION ZONE WILL BE CLEARED AND STRIPPED. THIS ZONE EXTENDS 15' BEYOND THE TOE OF BOTH SIDES OF THE LEVEE.



KEY MAP
NTS

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, PFA,ZPC
DWN BY: MDP
SUBMITTED BY: SEATTLE
PLOT DATE:
DATE: 13 JUL 2012
SOLICITATION NO.:
CKD BY: GWK
CONTRACT NO.:
PLOT TIME: 2:36:50 PM
FILE NUMBER:
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-005SPE05.DGN

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

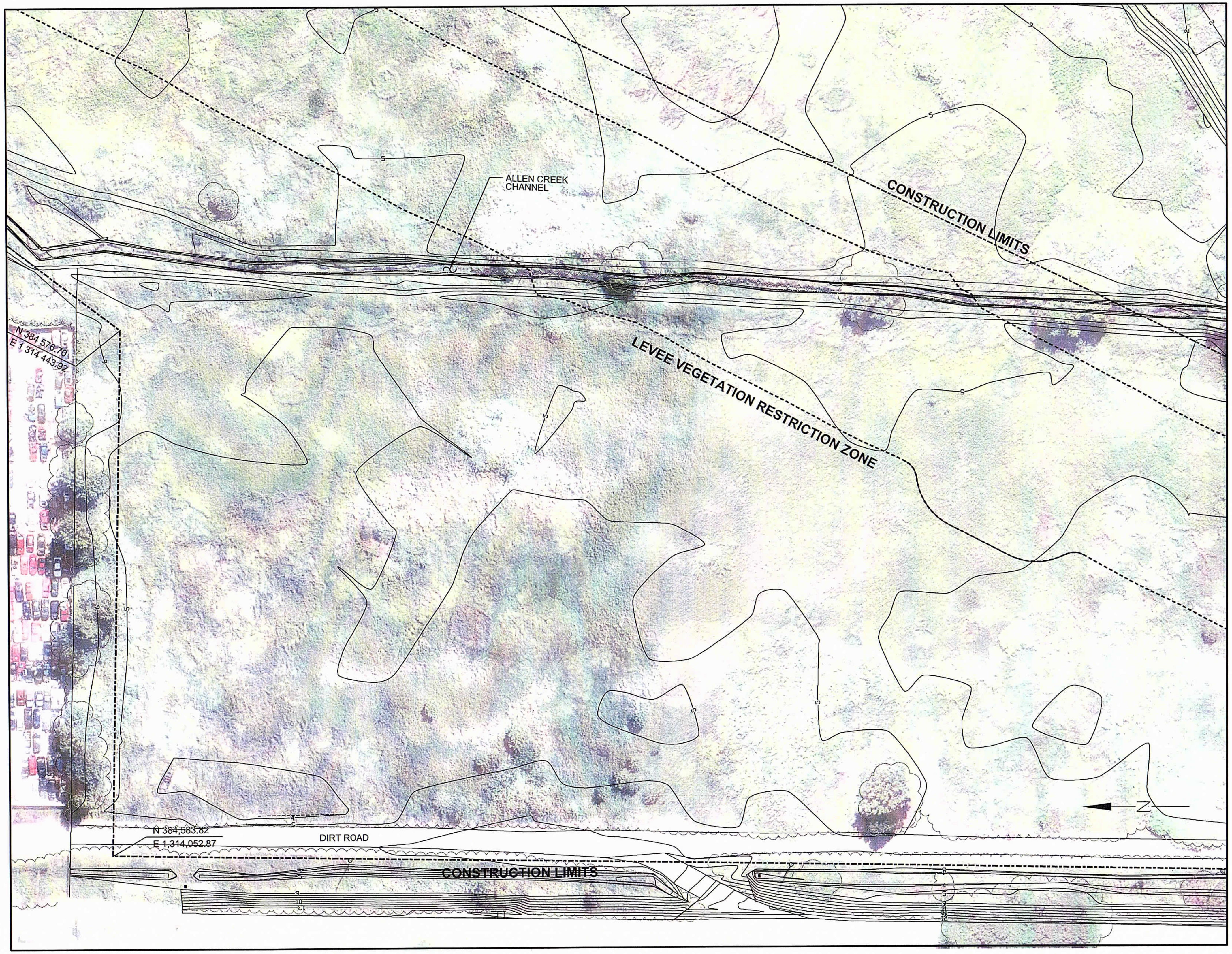
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

EXISTING CONDITIONS 5

SHEET IDENTIFICATION
C-005
SHEET 9 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmp\my documents\pnwork\dms51223\PN142460_QTWR-C-005SPE05.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



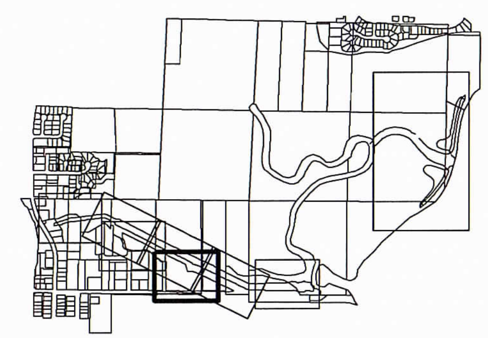
1 EXISTING CONDITIONS 6
C-006 1"=40'
0 40 80

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

2. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION.

3. ALL VEGETATION, INCLUDING TREES, SHOWN WITHIN THE LEVEE VEGETATION RESTRICTION ZONE WILL BE CLEARED AND STRIPPED. THIS ZONE EXTENDS 15' BEYOND THE TOE OF BOTH SIDES OF THE LEVEE.



KEY MAP
NTS

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:36:15 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-006SPE06.DGN	

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

EXISTING CONDITIONS 6

SHEET IDENTIFICATION
C-006
SHEET 10 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-006SPE06.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.

2. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION.

JONES CREEK CHANNEL
DRAINAGE DITCH
DRAINAGE DITCH
CITY OF MARYSVILLE MITIGATION LEVEE
N 381 027.22
E 1 315 220.53
N 381 039.573
E 1 315 366.353
N 380 808.14
E 1 315 711.79
TIDE GATE
DENSE BRUSH
N 380 846.63
E 1 316 046.57
DENSE BRUSH
N 380 758.22
E 1 315 897.56
N 380 723.44
E 1 316 664.15
EBEY SLOUGH LEVEE
EBEY SLOUGH
CONSTRUCTION LIMITS
N 380 306.17
E 1 315 801.48
N 380 200.59
E 1 316 909.20
N

KEY MAP
NTS

1 C-007 EXISTING CONDITIONS 7 - BREACH
1"=100'
0 40 80

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MDP
CHD BY: GKK
SUBMITTED BY: MICHELE
PLOT DATE: PLOT TIME: 2:35:20 PM
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-007SPE07.DGN

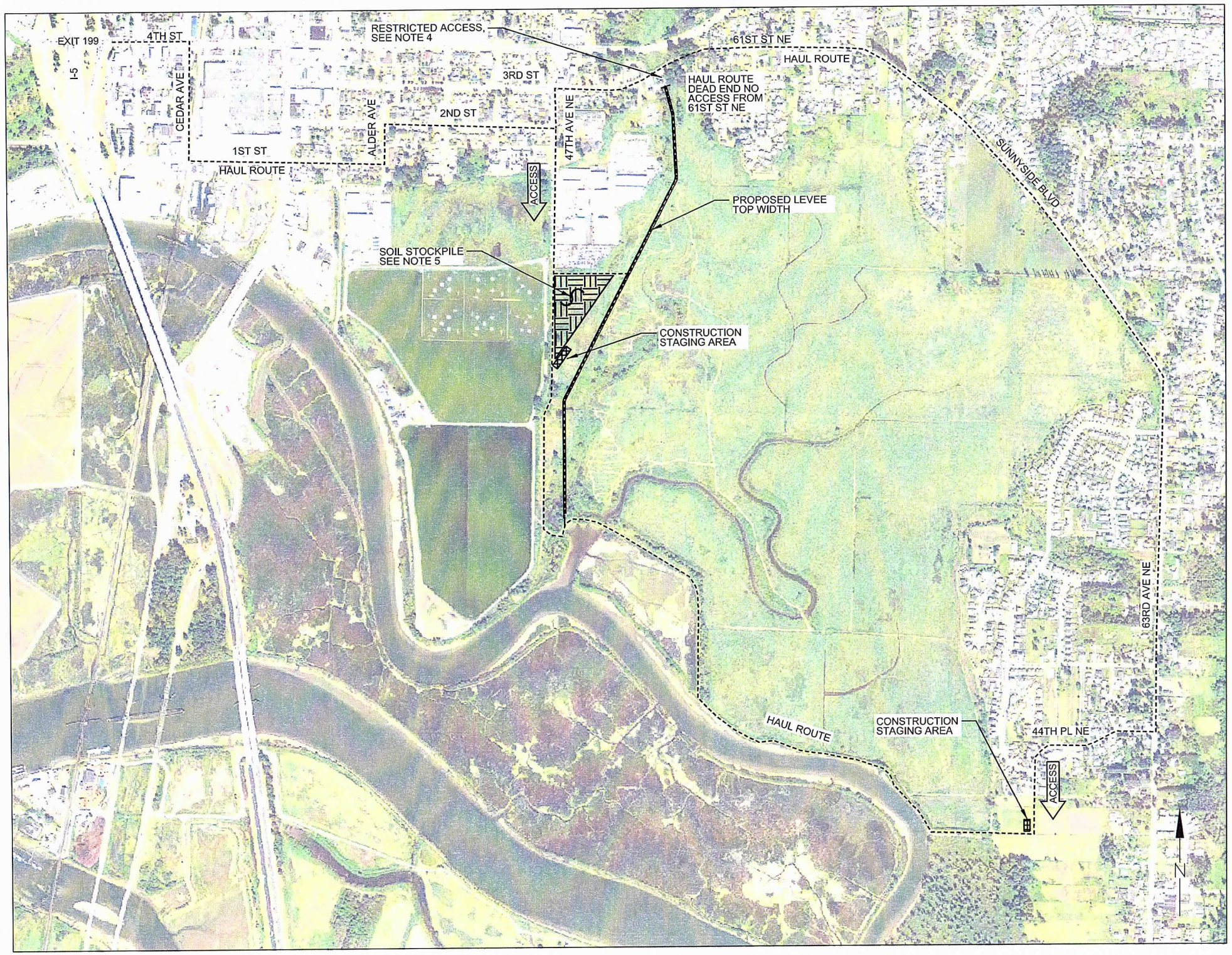
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

EXISTING CONDITIONS 7
BREACH

SHEET IDENTIFICATION
C-007
SHEET 11 OF 49

DESIGN FILE: c:\documents and settings\g3eadmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-007SPE07.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-101 HAUL ROUTE/ STAGING AREA PLAN
1"= 500'
0 500 1000

HAUL ROUTE NOTES:

1. PROVIDE STABILIZED CONSTRUCTION ENTRANCES AT BOTH ACCESS POINTS.
2. DISTANCE FROM EXIT 199 IS 1.23 MILES FROM WEST ACCESS AND 3.13 MILES FROM EAST ACCESS
3. SEE SPECIFICATION 01 40 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS FOR TRAFFIC CONTROL PLAN REQUIREMENTS AND FURTHER INFORMATION REGARDING RESTRICTED ACCESS.
4. ALL FILL REQUIRED FOR SURCHARGE LEVEE CONSTRUCTION WILL BE PROVIDED AT THE INDICATED SOIL STOCKPILE LOCATION.
5. ACCESS TO THE SITE IS LIMITED. CONTRACTOR TO USE CAUTION MOBILIZING AND DEMOBILIZING. OVERHEAD ELECTRIC LINES COULD BE PRESENT BUT ARE NOT SHOWN.

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: RCP
DRAWN BY: JMT
SUBMITTED BY: WETZLER
CHK BY: CRC
PLOT DATE: PLOT TIME: 2:34:39 PM
SIZE: ANSI D
FILE NAME: PN142460_QTWRC-101G01.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

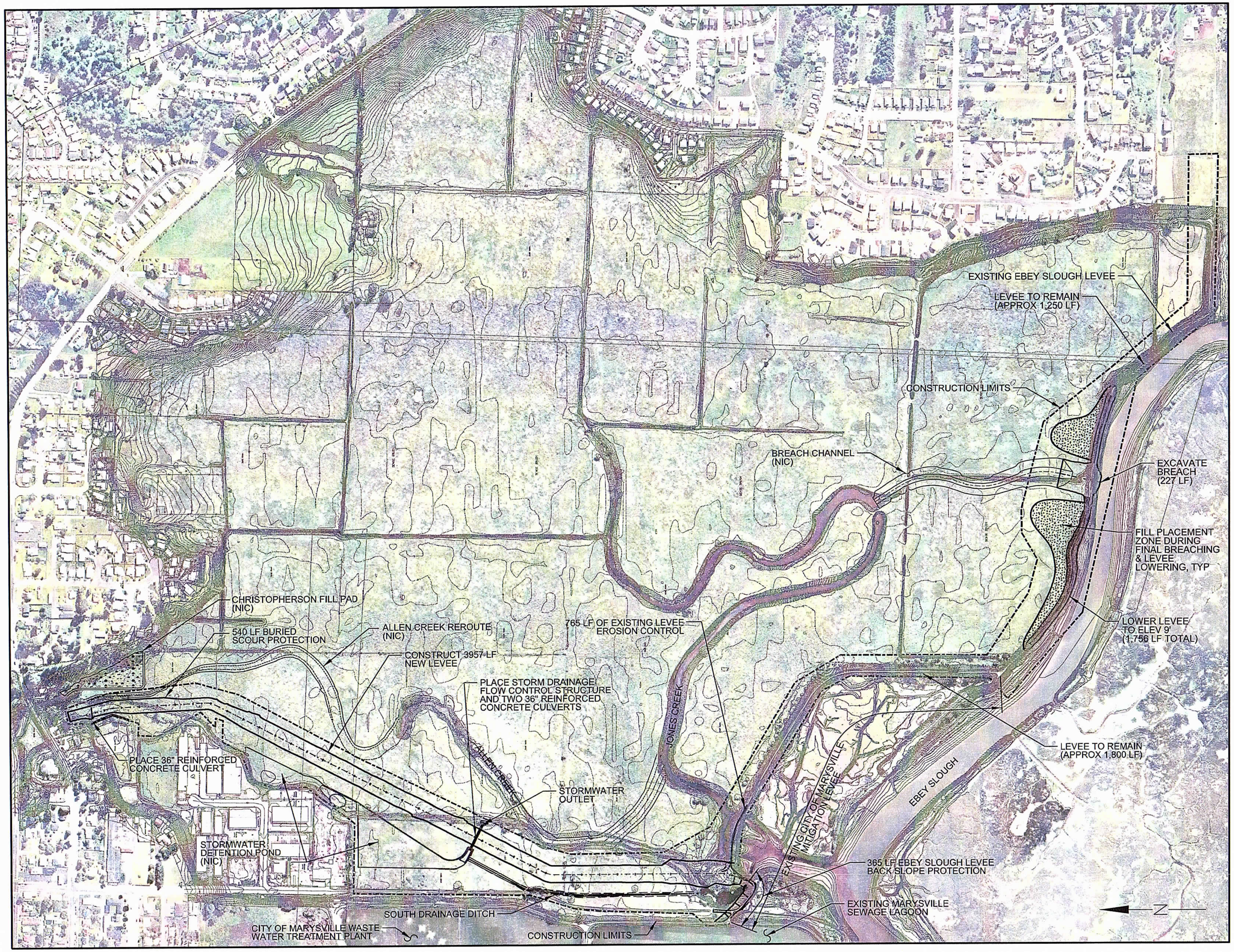
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

HAUL ROUTE/ STAGING AREA PLAN

SHEET IDENTIFICATION
C-101
SHEET 12 OF 49

DESIGN FILE: c:\documents and settings\g3aedmcp\my documents\pwwork\dms\1223\PN142460_QTWRC-101G01.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-102 GENERAL SITE PLAN
1"=300'
0 300 600

GENERAL NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATEPLANE WASHINGTON NORTH IN FEET.
2. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD CHECKED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION.
3. DRAINAGE PIPE AT STORMWATER DETENTION OUTLET DISCHARGES TO THE EXISTING THALWEG OF ALLEN CREEK.

LEGEND

———	NEW WORK, THIS CONTRACT
———	N.I.C

US Army Corps of Engineers® SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF/XAR/ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:33:40 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN14246O_QTWR-C-102GEN.DGN	

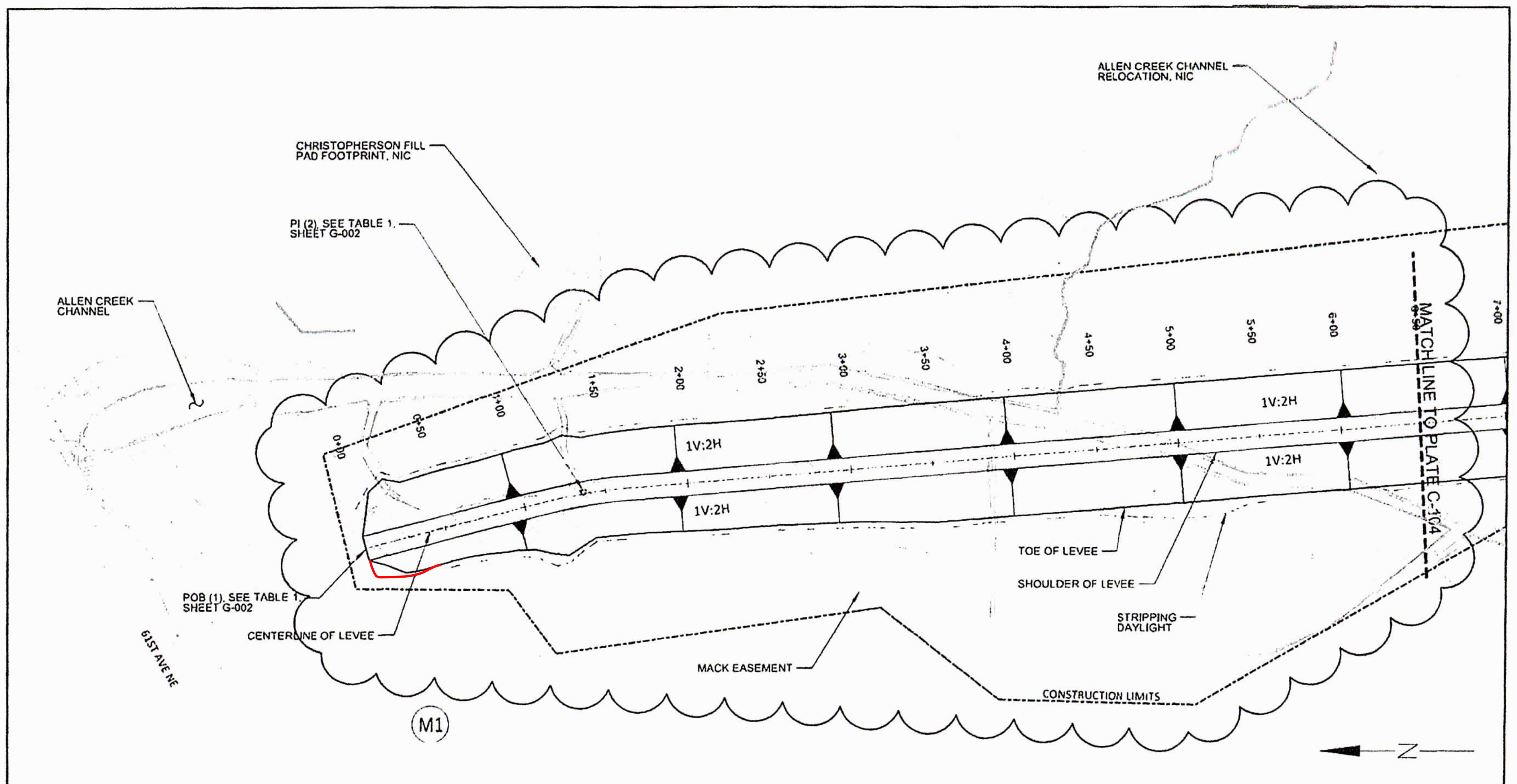
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

GENERAL SITE PLAN

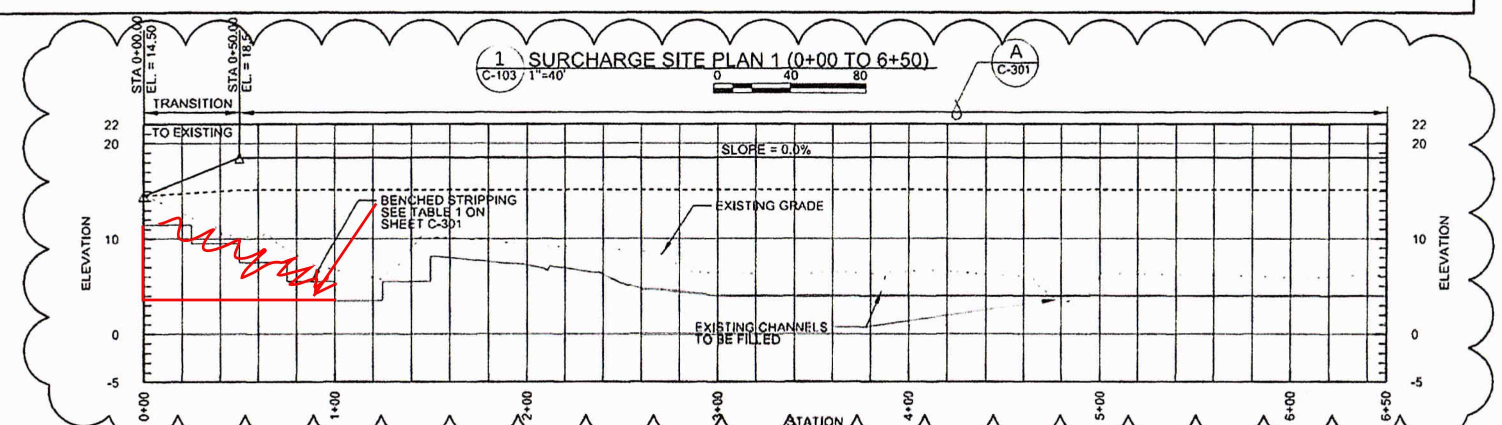
SHEET IDENTIFICATION
C-102
SHEET 13 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-102GEN.DGN

DATE AND TIME PLOTTED: $$DATE$$$$



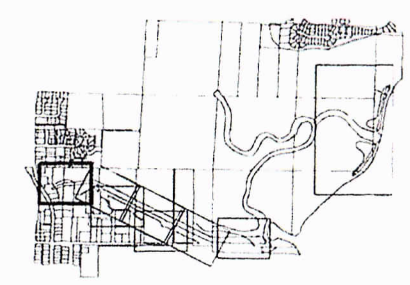
1 (C-103) SURCHARGE SITE PLAN 1 (0+00 TO 6+50)
1"=40'
0 40 80



1 (C-103) PROFILE 1 (0+00 TO 6+50)
HORZ SCALE NAD 83 IN FEET
0 40 80
VERT SCALE NAVD 88 IN FEET
0 4 8
VERT EXAGGERATION x5

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



KEY MAP
NTS

PROFILE LEGEND	
———	SURCHARGE LEVEE GRADE
- - - - - -	FINAL LEVEE GRADE
———	EXISTING GROUND
———	STRIPPING DEPTH

MODIFICATION #1

US Army Corps of Engineers® SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.
M1	MODIFIED ALIGN. & CONST'R. LIMITS	8 JUL 2014	LEF
M2	MODIFIED EXISTING GRADE	8 JUL 2014	LEF

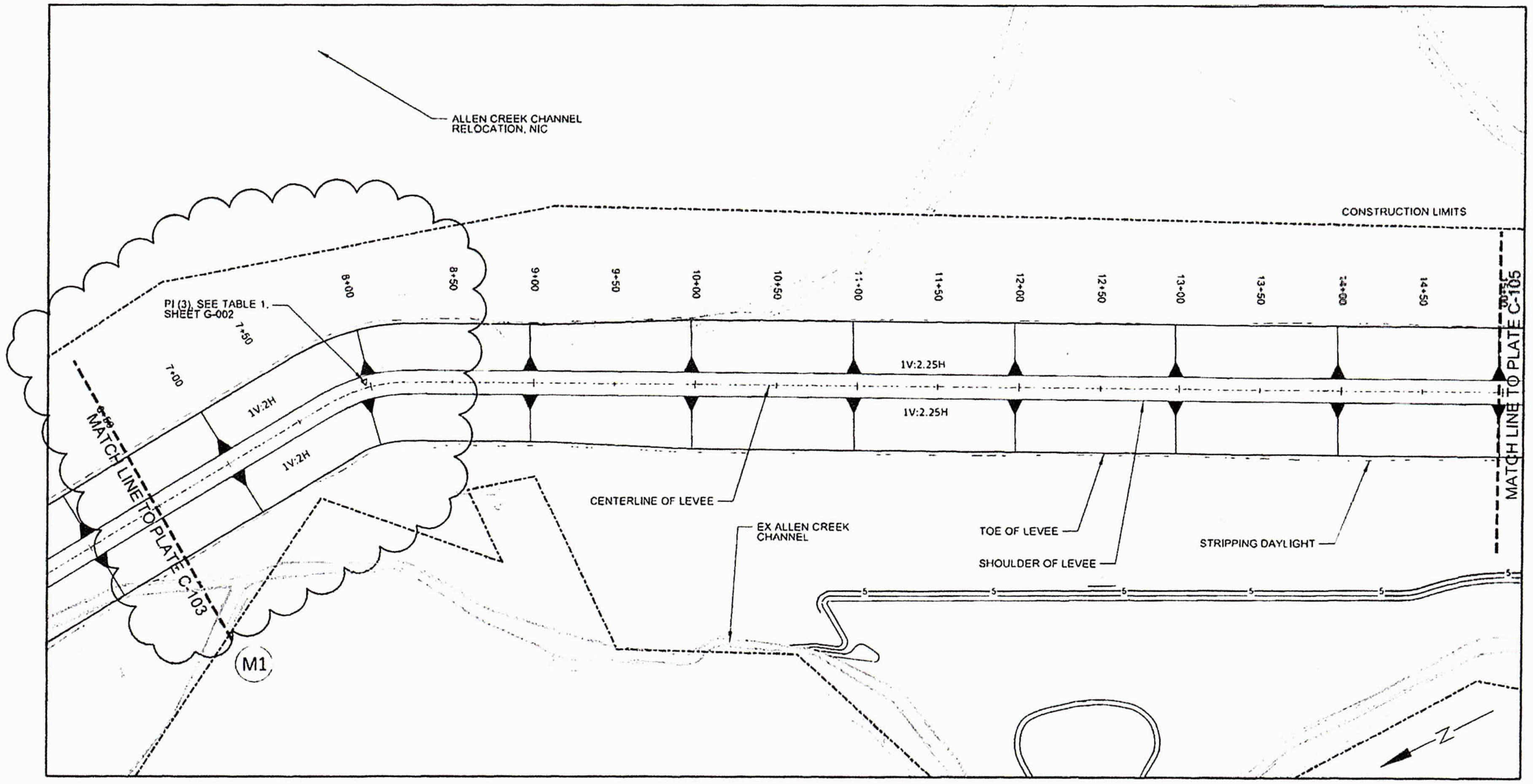
U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF / MJH / JTC
DATE: 13 JULY 2012
DWN BY: MCP
CKD BY: GAR
SOLICITATION NO.:
SUBMITTED BY: WETZLER
CONTRACT NO.:
PLOT DATE:
PLOT TIME: $TIME$
FILE NUMBER:
SIZE: ANSI D
FILE NAME: PN142460_C-103 SURCHARGE SITE PLAN 1

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460
SURCHARGE SITE PLAN AND PROFILE 1
(STA 0+00 TO STA 6+50)

SHEET IDENTIFICATION
C-103
SHEET 14 OF 49

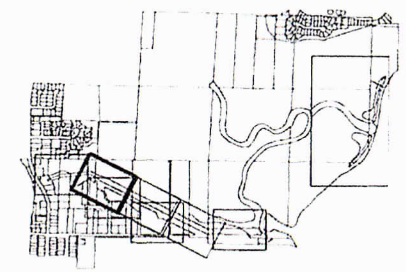
DESIGN FILE: $$$DGN$$
DATE AND TIME PLOTTED: $$$DATE$$$$



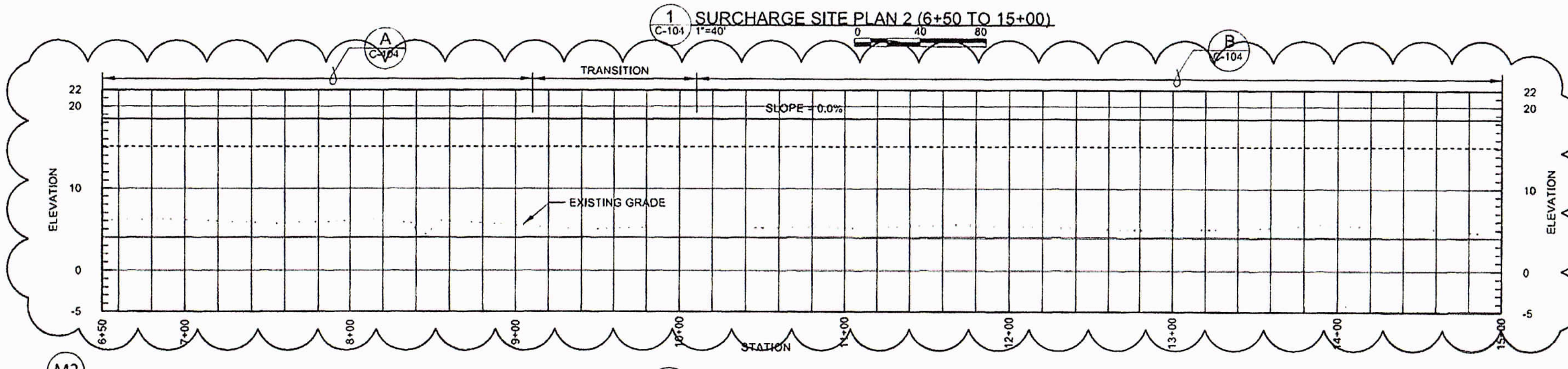
1 SURCHARGE SITE PLAN 2 (6+50 TO 15+00)
C-104 1"=40'
0 40 80

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



KEY MAP
NTS



PROFILE LEGEND	
———	SURCHARGE LEVEE GRADE
- - - -	FINAL LEVEE GRADE
———	EXISTING GROUND
———	STRIPPING DEPTH

1 PROFILE 2 (6+50 TO 15+00)
C-104
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

MODIFICATION #1

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.
M1	MODIFIED ALIGNMENT	8 JUL 2014	LEF				
M2	MODIFIED EXISTING GRADE	8 JUL 2014	LEF				

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF KAK ZHC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: CAN	SOLICITATION NO.:
SUBMITTED BY: METZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: $TIME$	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_OTWR-C-104 SURCHARGE SITE PLAN...	

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

SURCHARGE SITE PLAN AND PROFILE 2
(STA 6+50 TO STA 15+00)

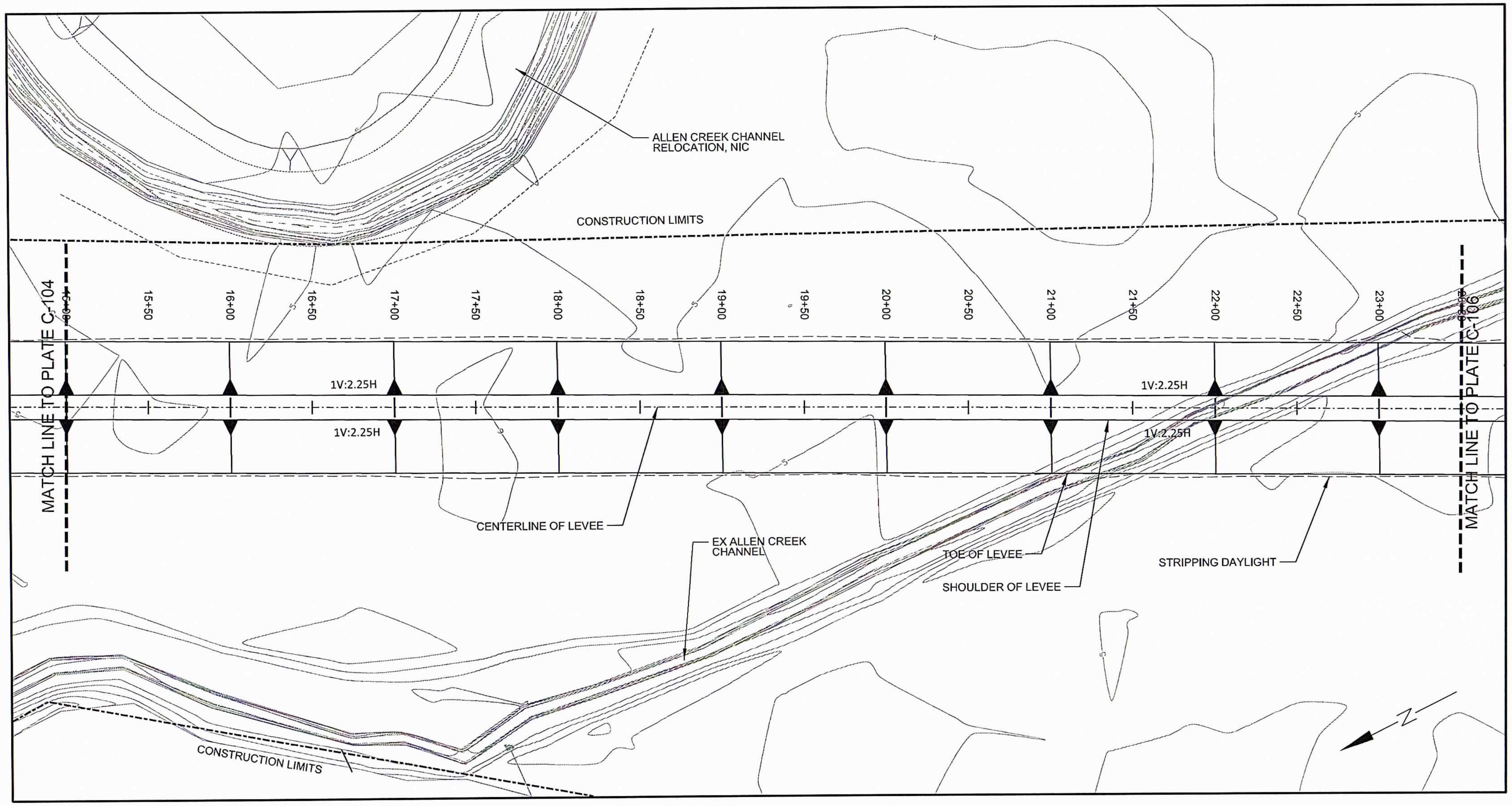
SHEET IDENTIFICATION
C-104
SHEET 15 OF 49

DESIGN FILE: $$$DGN$$$

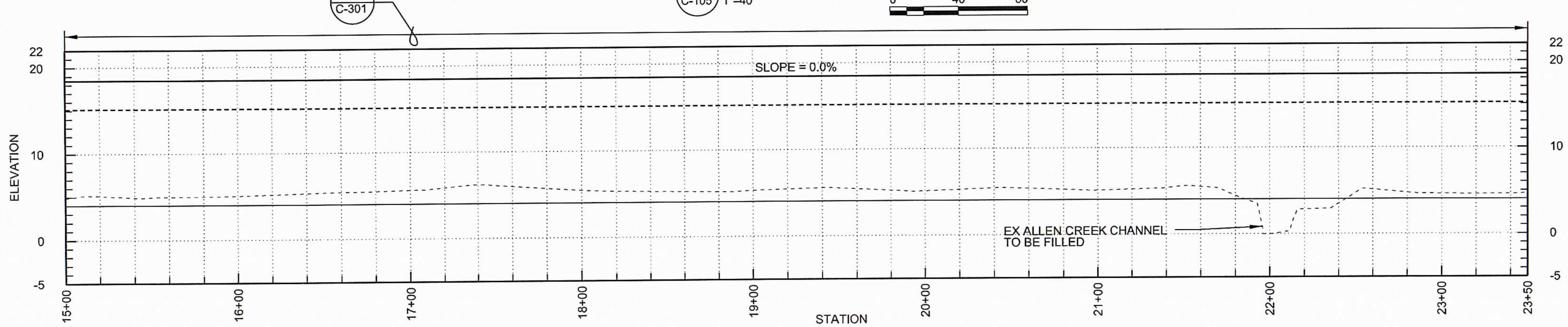
DATE AND TIME PLOTTED: $$$DATE$$$$

NOTES:

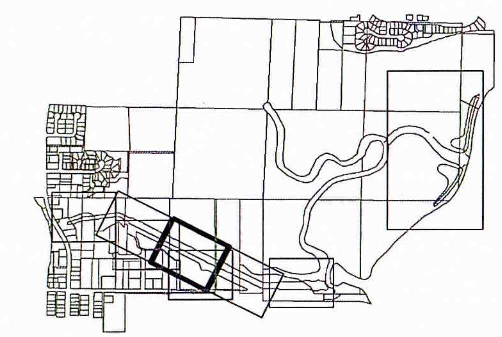
1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



1 C-105 SURCHARGE SITE PLAN 3 (15+00 TO 23+50)
1"=40'
0 40 80



1 C-105 PROFILE 3 (15+00 TO 23+50)
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5



KEY MAP
NTS

PROFILE LEGEND

- SURCHARGE LEVEE GRADE
- FINAL LEVEE GRADE
- EXISTING GROUND
- STRIPPING DEPTH

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:43:05 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-105 SURCHARGE SITE PLAN 3	

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

SURCHARGE SITE PLAN AND PROFILE 3
(STA 15+00 TO STA 23+50)

SHEET IDENTIFICATION
C-105
SHEET 16 OF 49

DATE AND TIME PLOTTED: $$$DATE$$$$

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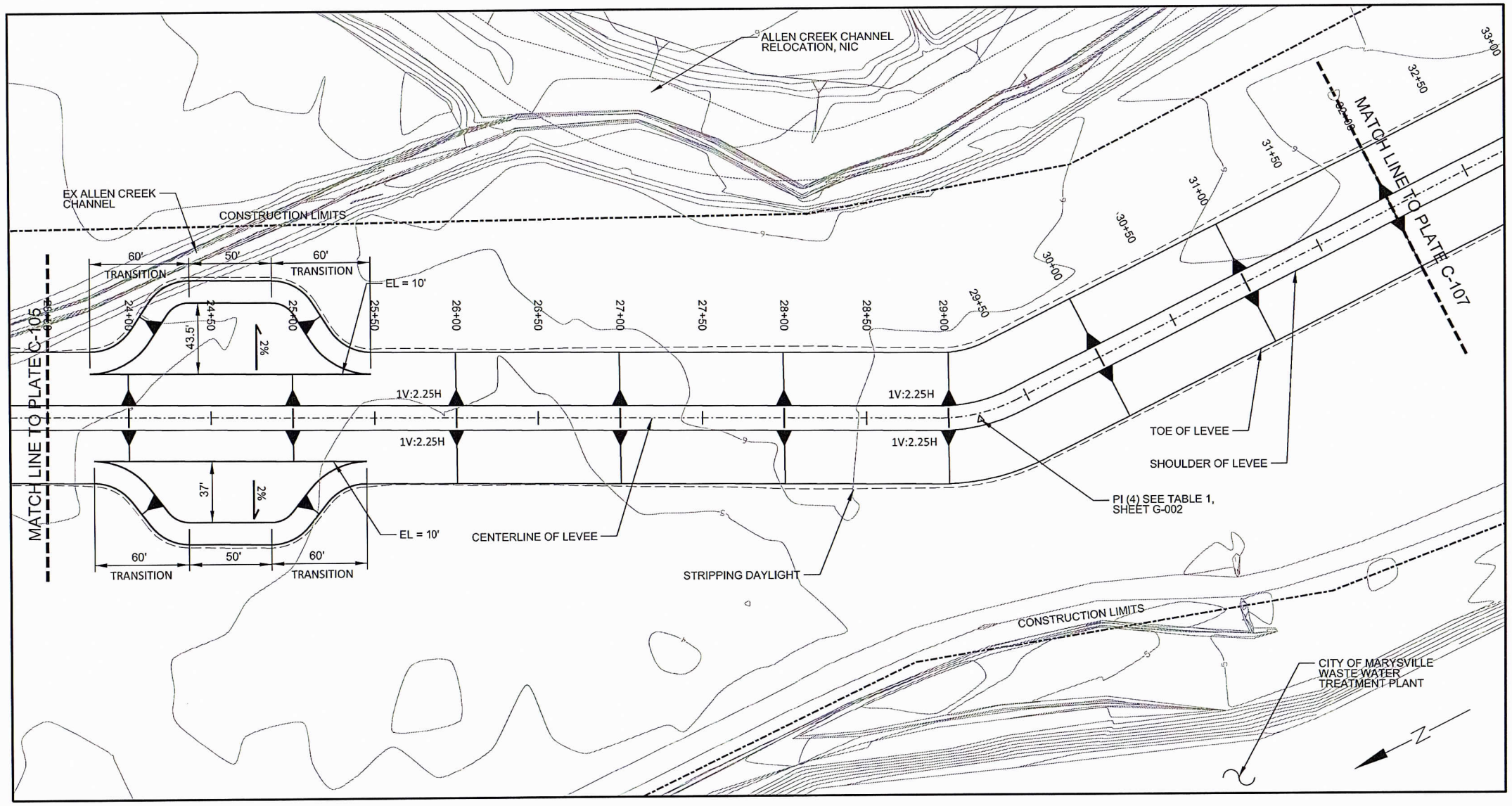
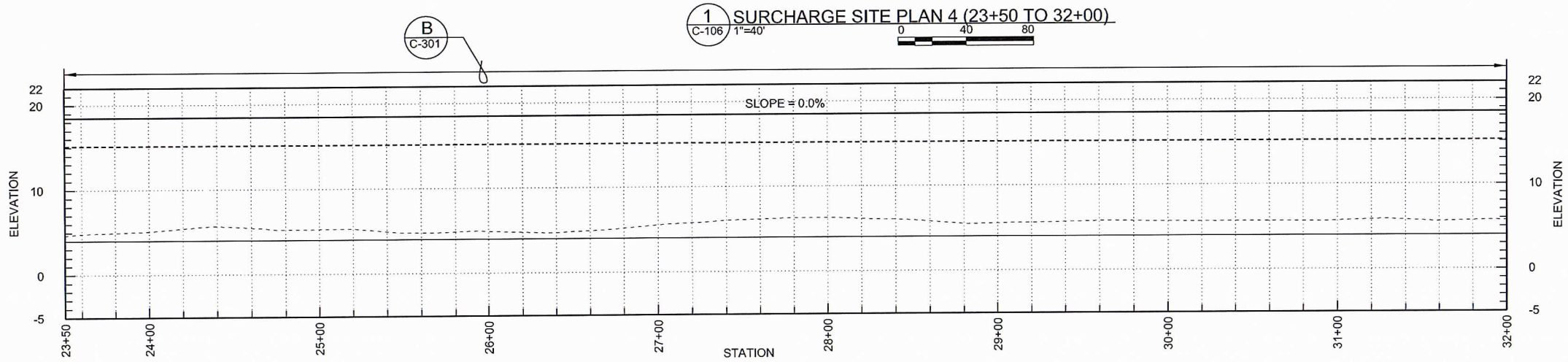


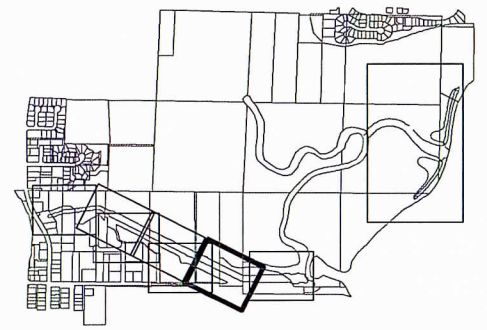
1 C-106 SURCHARGE SITE PLAN 4 (23+50 TO 32+00)
1"=40'
0 40 80



1 C-106 PROFILE 4 (23+50 TO 32+00)
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



KEY MAP
NTS

PROFILE LEGEND	
	SURCHARGE LEVEE GRADE
	FINAL LEVEE GRADE
	EXISTING GROUND
	STRIPPING DEPTH

US Army Corps of Engineers®
SEATTLE DISTRICT

DESCRIPTION	DATE	APPR.

DESCRIPTION	DATE	APPR.	MARK

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

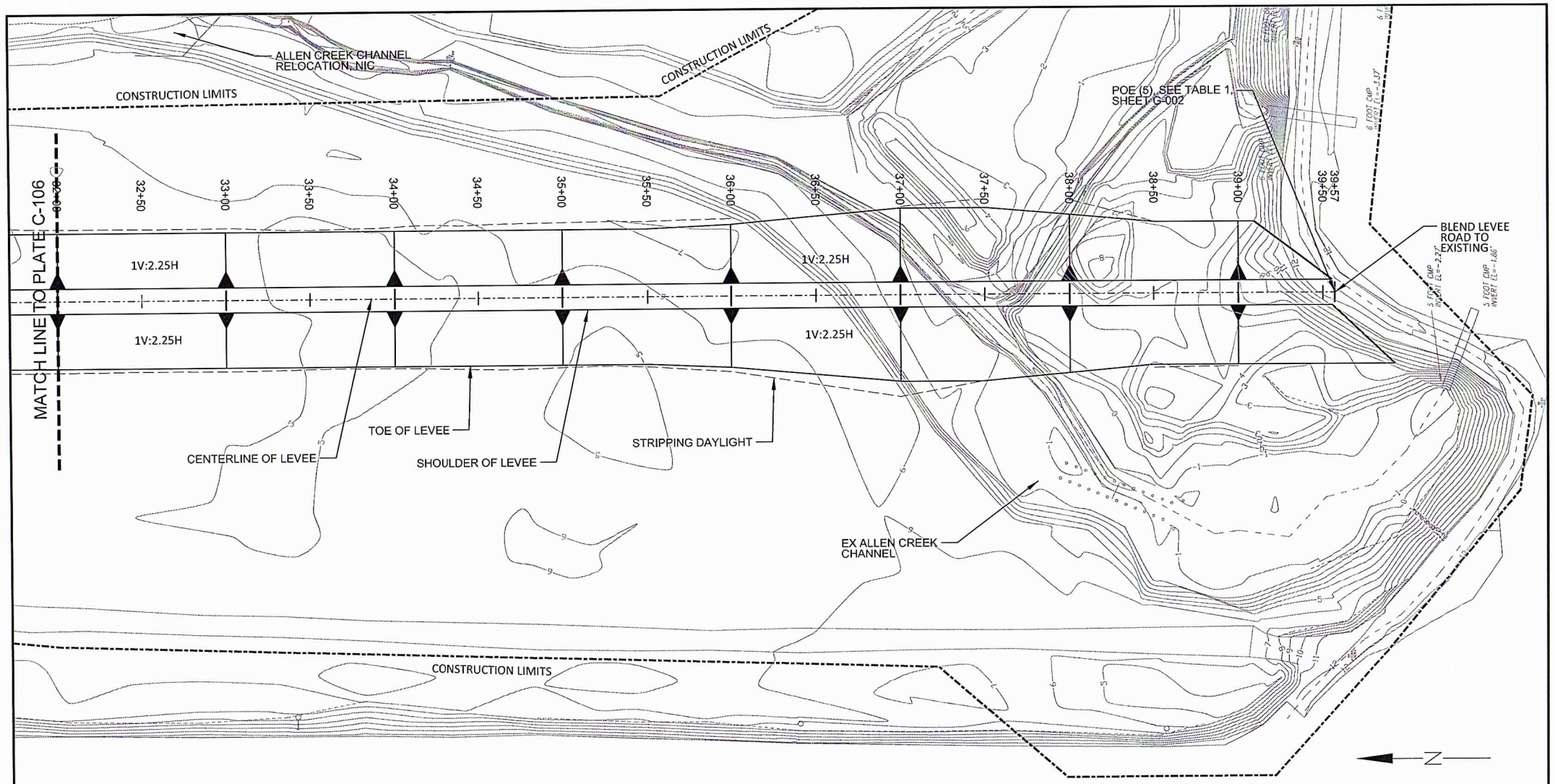
DESIGNED BY: LEF, KAR, ZPC
DRAWN BY: MDP
SUBMITTED BY: WEBER
PLOT DATE: PLOT TIME: 2:43:32 PM
SIZE: ANSI D
FILE NAME: PN142460_QTWRC-106 SURCHARGE SITE PLAN 4.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

SURCHARGE SITE PLAN AND PROFILE 4
(STA 23+50 TO STA 32+00)

SHEET IDENTIFICATION
C-106
SHEET 17 OF 49

DESIGN FILE: c:\documents and settings\g3eadmp\my documents\pwworkldms51223\PN142460_QTWR-C-106 SURCHARGE SITE PLAN 4.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$



NOTES:

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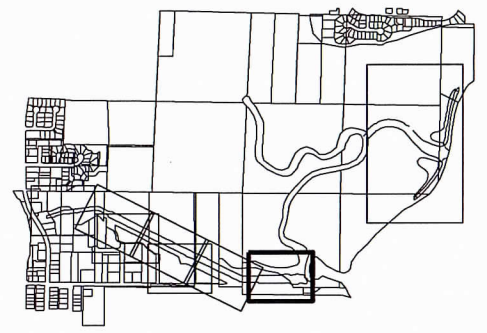
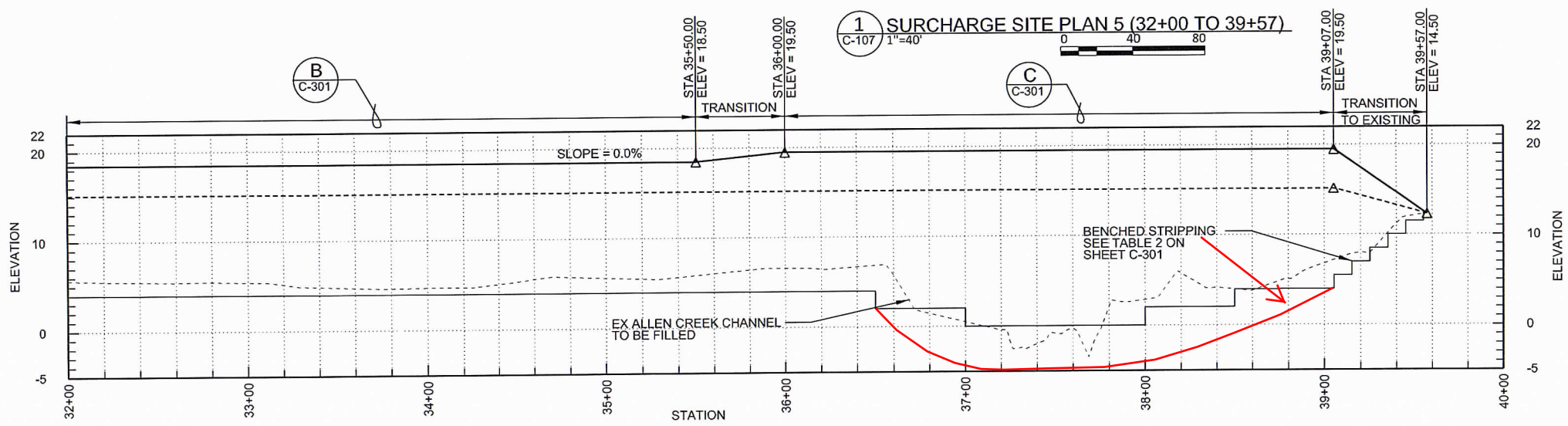
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



KEY MAP
NTS



1 C-107 SURCHARGE SITE PLAN 5 (32+00 TO 39+57)
1"=40'
0 40 80

1 C-107 PROFILE 5 (32+00 TO 39+57)
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

PROFILE LEGEND
- SURCHARGE LEVEE GRADE
- FINAL LEVEE GRADE
- EXISTING GROUND
- STRIPPING DEPTH

US Army Corps of Engineers®
SEATTLE DISTRICT

DESCRIPTION	DATE	APPR.

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: LEF, IAR, ZPC
DRN BY: MCP
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI D
DATE: 13 JULY 2012
CKD BY: GKK
PLOT TIME: 2:44:00 PM
FILE NAME: PN142460_QTWR-C-107 SURCHARGE SITE PLAN 5.DGN
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

SURCHARGE SITE PLAN AND PROFILE 5
(STA 32+00 TO STA 39+57)

SHEET IDENTIFICATION
C-107
SHEET 18 OF 49

DESIGN FILE: c:\documents and settings\g3acdmcp\my documents\pwworkdms\51223\PN142460_QTWR-C-107 SURCHARGE SITE PLAN 5.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
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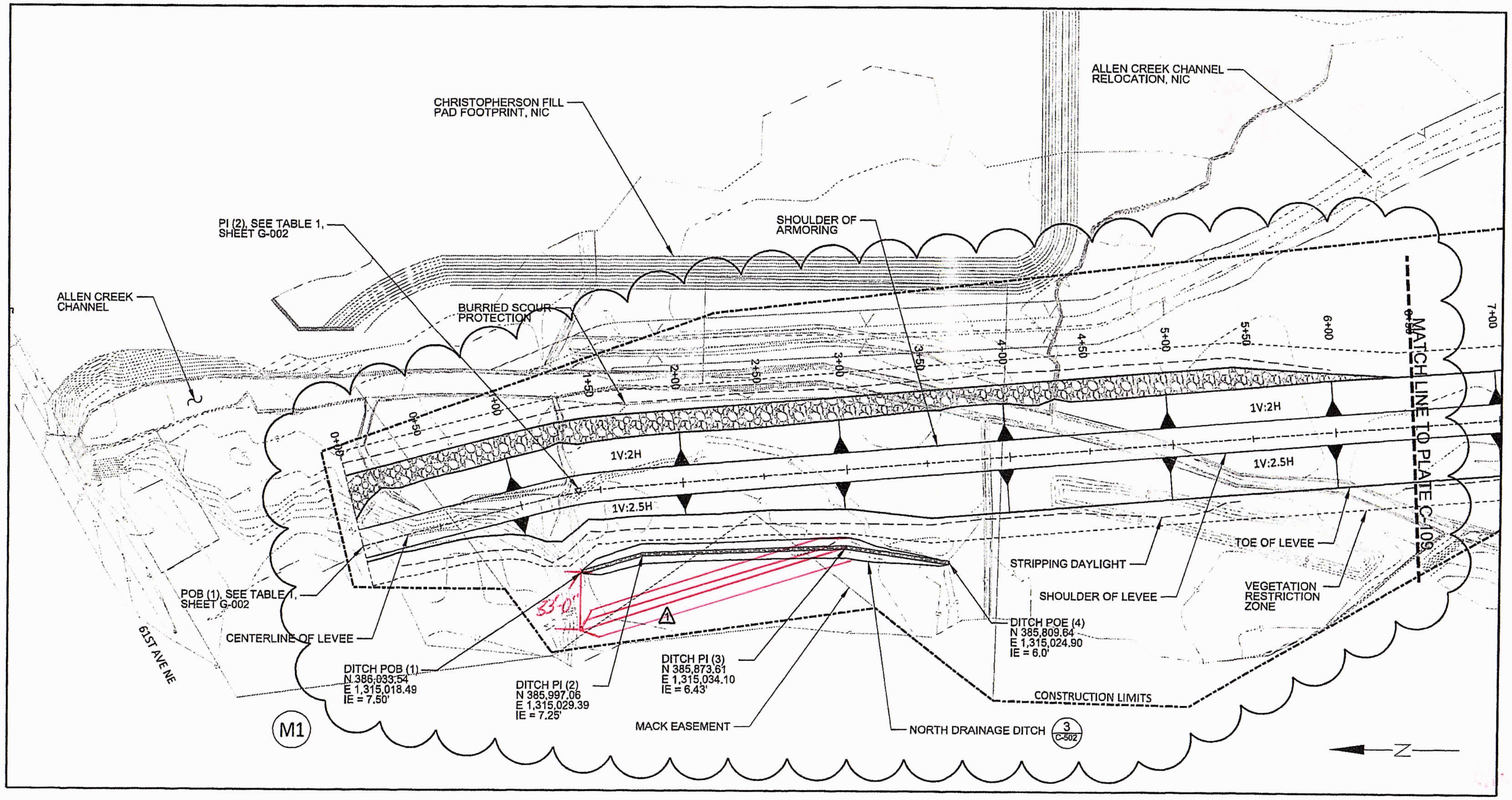
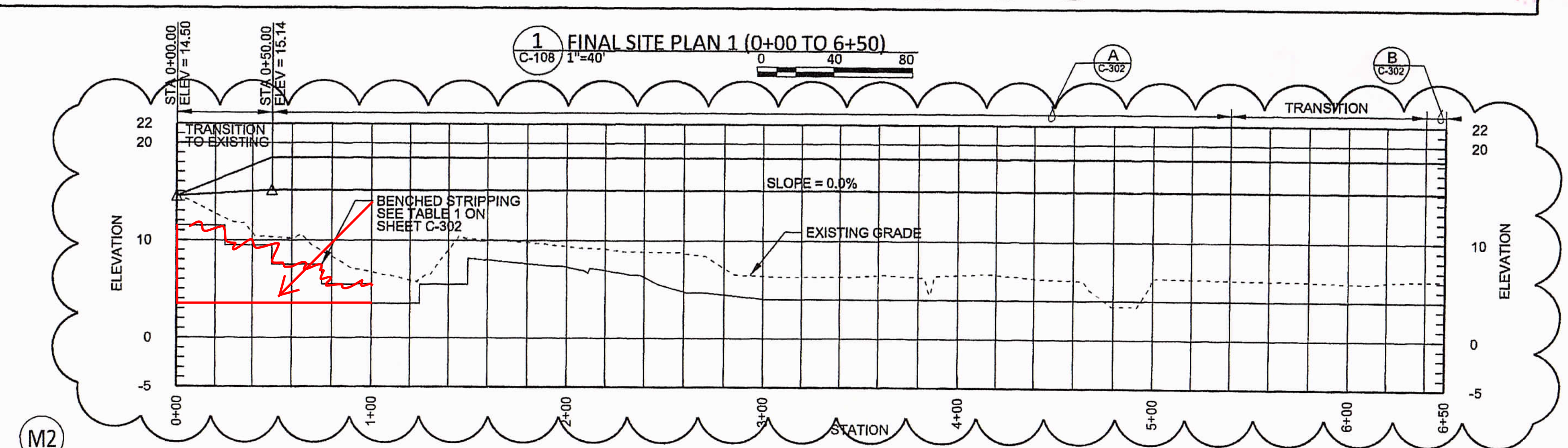
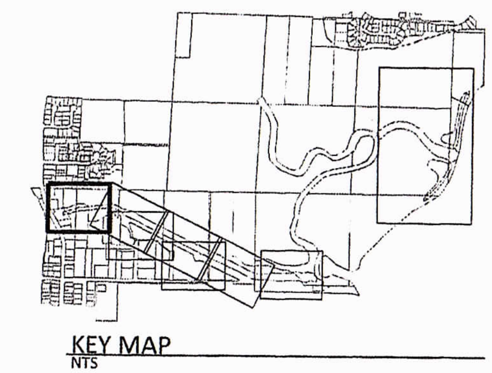
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



1 C-108 FINAL SITE PLAN 1 (0+00 TO 6+50)
1"=40'
0 40 80



1 C-108 PROFILE 1 (0+00 TO 6+50)
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5



PROFILE LEGEND
FINAL LEVEE GRADE
SURCHARGE LEVEE GRADE
EXISTING GROUND
STRIPPING DEPTH

MODIFICATION #1

US Army Corps of Engineers® SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.
M2	MODIFIED EXISTING GRADE	8 JUL 2014	LEF
M1	MODIFIED ALIGN, CONSTR. LIMITS & DITCH	8 JUL 2014	LEF
1	NORTH DRAINAGE DITCH GRADE CHANGE	18 JAN 2013	LEF

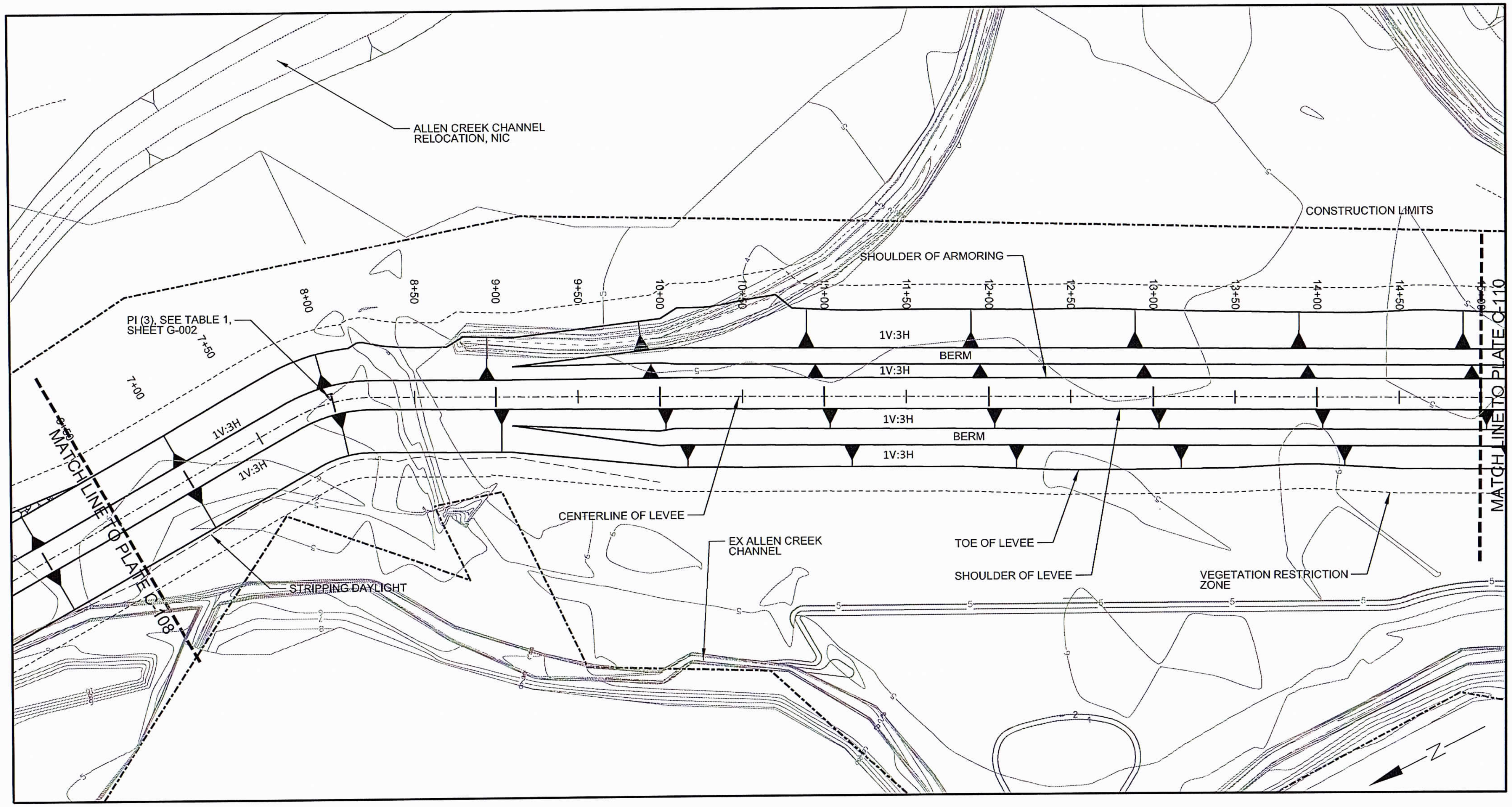
U.S. ARMY CORPS OF ENGINEERS SEATTLE DISTRICT SEATTLE, WASHINGTON	DESIGNED BY: LEF, KAR, ZPC	DATE: 13 JULY 2012
	DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
	SUBMITTED BY: WETZLER	CONTRACT NO.:
	PLOT DATE:	PLOT TIME: $TIME$	FILE NUMBER:
	SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-108506.DGN

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

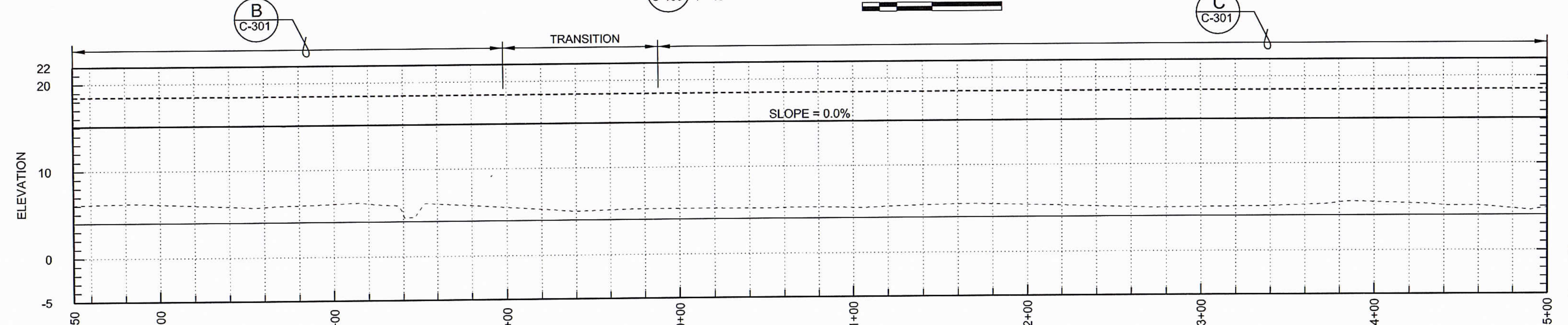
FINAL SITE PLAN AND PROFILE 1
(STA 0+00 TO STA 6+50)

SHEET IDENTIFICATION
C-108
SHEET 19 OF 49

DESIGN FILE: $$$DGN$$
DATE AND TIME PLOTTED: $$$DATE$$$$



1 FINAL SITE PLAN 2 (6+50 TO 15+00)
C-109 1"=40'
0 40 80



1 PROFILE 2 (6+50 TO 15+00)
C-109
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

NOTES:

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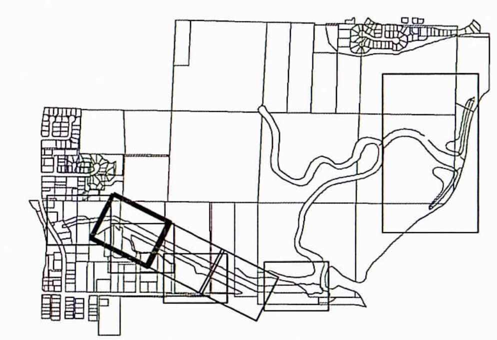
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



KEY MAP
NTS

PROFILE LEGEND
FINAL LEVEE GRADE
SURCHARGE LEVEE GRADE
EXISTING GROUND
STRIPPING DEPTH

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC | DATE: 13 JULY 2012
DWN BY: MCP | CKD BY: GKK | SOLICITATION NO.:
SUBMITTED BY: WETZLER | CONTRACT NO.:
PLOT DATE: | PLOT TIME: 2:44:55 PM | FILE NUMBER:
SIZE: ANSI D | FILE NAME: PN142460_QTWR-C-109S07.DGN

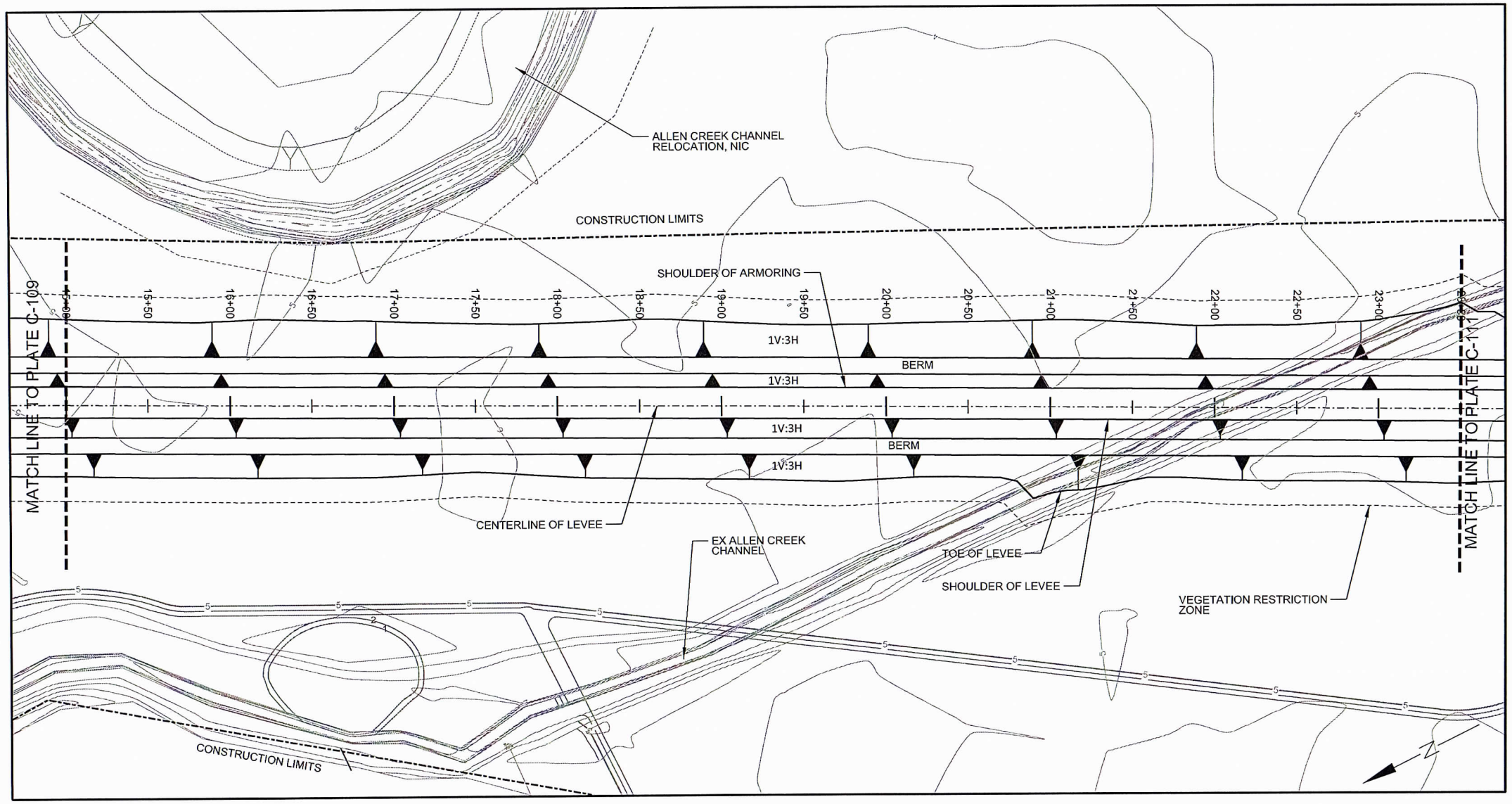
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

FINAL SITE PLAN AND PROFILE 2
(STA 6+50 TO STA 15+00)

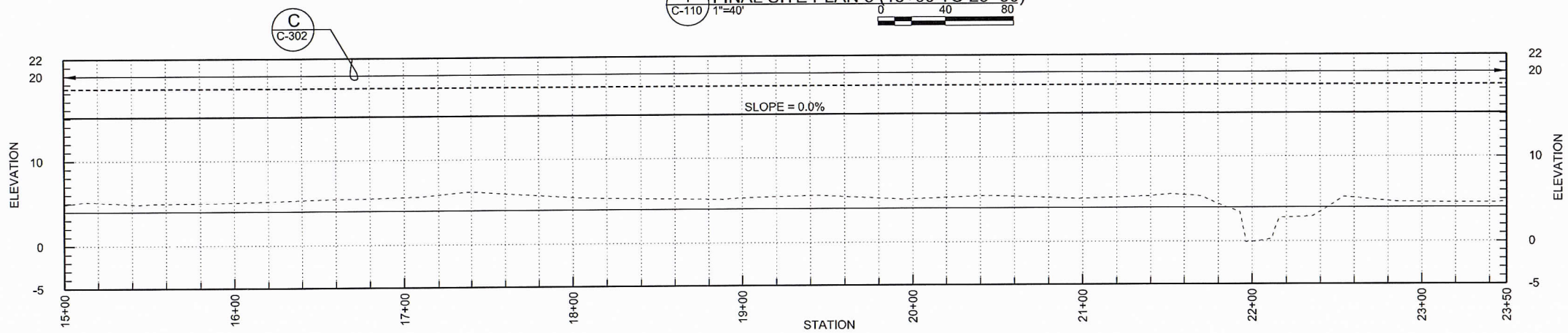
SHEET IDENTIFICATION
C-109
SHEET 20 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-109S07.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-110 FINAL SITE PLAN 3 (15+00 TO 23+50)
1"=40'
0 40 80



1 C-110 PROFILE 3 (15+00 TO 23+50)
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

NOTES:

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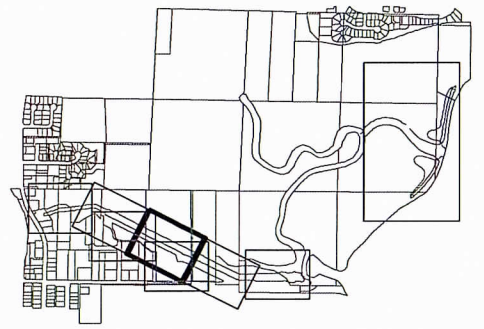


KEY MAP
NTS

PROFILE LEGEND	
———	FINAL LEVEE GRADE
- - - - -	SURCHARGE LEVEE GRADE
- - - - -	EXISTING GROUND
———	STRIPPING DEPTH

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwworkdms51223\PN142460_QTWR-C-110S08.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

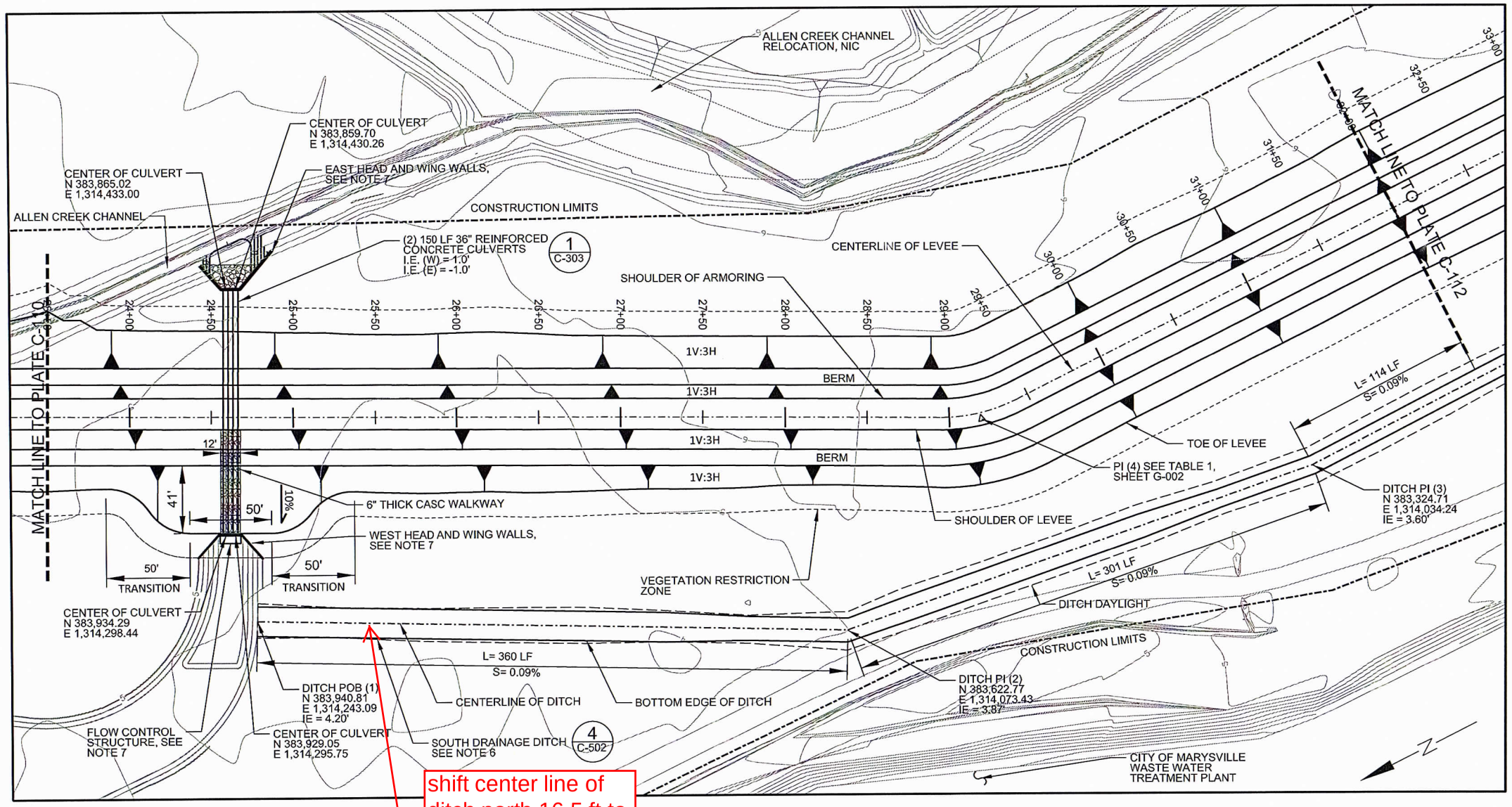
DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
CKD BY: GKK
SUBMITTED BY: WETZLER
PLOT DATE:
PLOT TIME: 2:45:22 PM
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-110S08.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

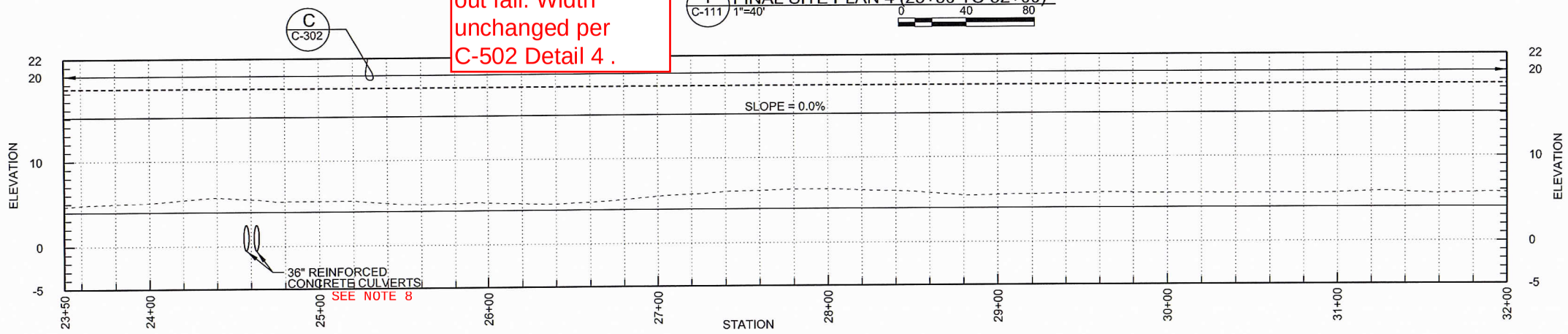
FINAL SITE PLAN AND PROFILE 3
(STA 15+00 TO STA 23+50)

SHEET IDENTIFICATION
C-110
SHEET 21 OF 49



shift center line of ditch north 16.5 ft to out fall. Width unchanged per C-502 Detail 4 .

1 C-111 FINAL SITE PLAN 4 (23+50 TO 32+00)
1"=40'
0 40 80



1 C-111 PROFILE 4 (23+50 TO 32+00)
HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

NOTES:

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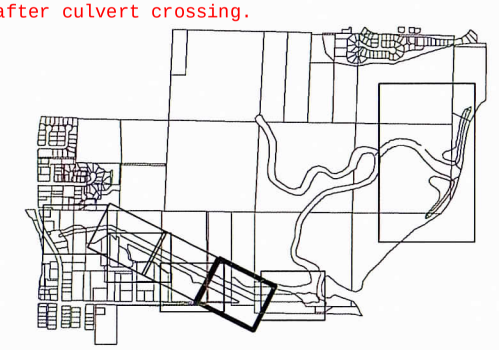
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.
6. DITCH CAN BE PLACED DURING SURCHAGE LEVEE CONSTRUCTION TO FACILITATE DRAINAGE DURING CONSTRUCTION. DITCH WIDTH TO TAPER AT 1' PER 100 LF FROM STORMWATER POND TO ENERGY DISSIPATOR.
7. SEE STRUCTURAL SHEETS FOR DETAIL OF CONCRETE STRUCTURES.
8. High Strength Geotextile will be reinstalled after culvert crossing.



KEY MAP
NTS

PROFILE LEGEND	
	FINAL LEVEE GRADE
	SURCHARGE LEVEE GRADE
	EXISTING GROUND
	STRIPPING DEPTH

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DRAWN BY: KDP
SUBMITTED BY: WETZLER
DATE: 13 JULY 2012
SOLICITATION NO.:
CKD BY: GWA
CONTRACT NO.:
PLOT DATE: 2:45:50 PM
FILE NUMBER:
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-111S09.DGN

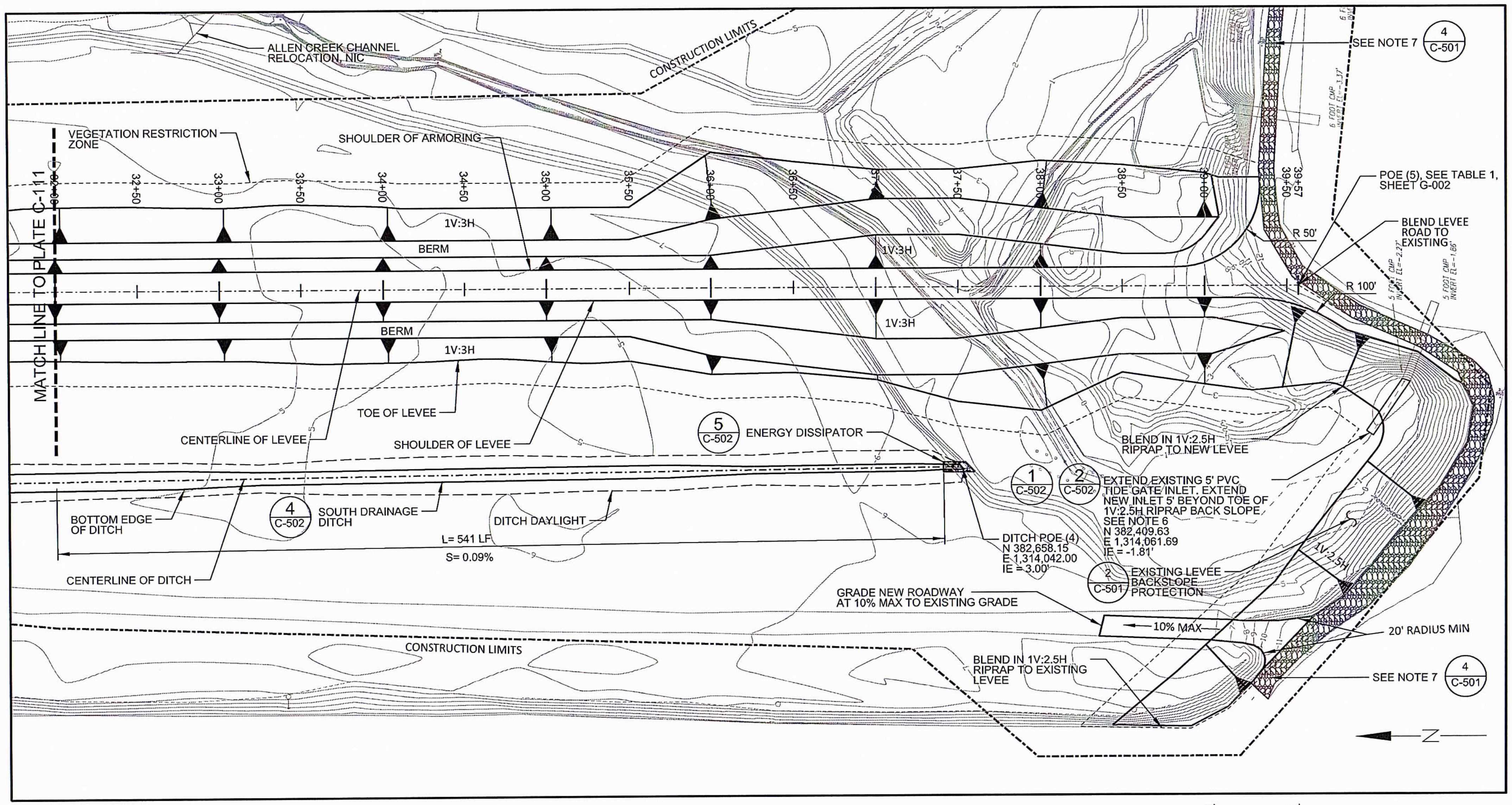
U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 DWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

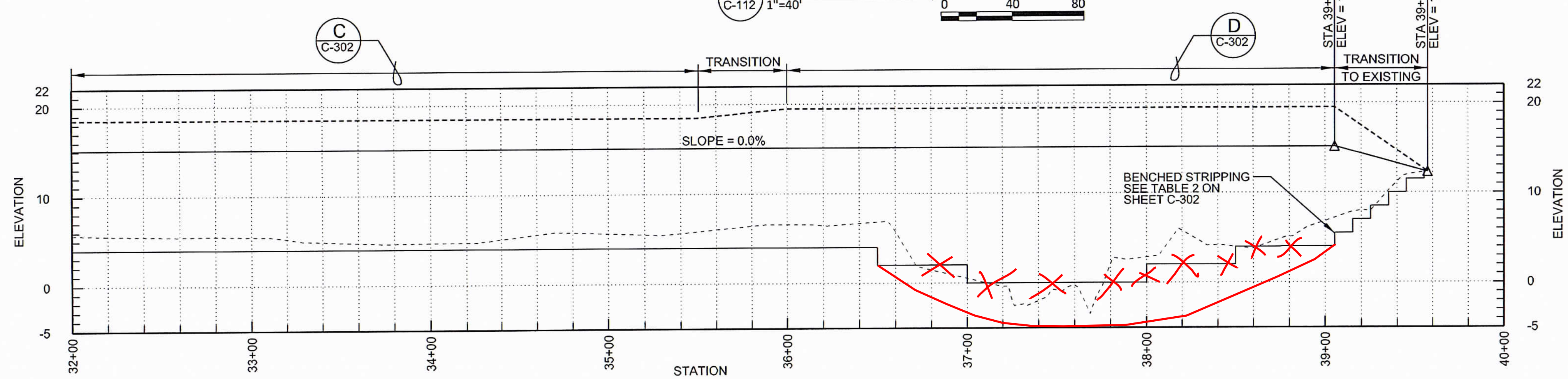
FINAL SITE PLAN AND PROFILE 4
(STA 23+50 TO STA 32+00)

SHEET IDENTIFICATION
C-111
SHEET 22 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-111S09.DGN
DATE AND TIME PLOTTED: $$SDATE$$$$



1 (C-112) FINAL SITE PLAN 5 (32+00 TO 39+57)
1"=40'
0 40 80

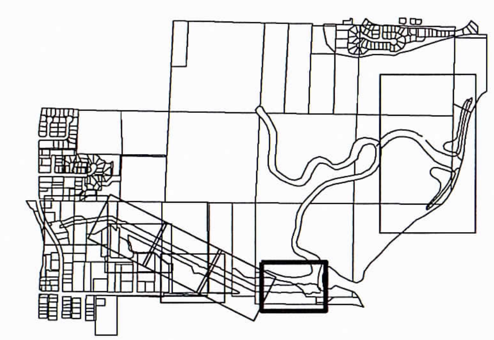


1 (C-112) PROFILE 5 (32+00 TO 39+57)

HORZ SCALE NAD 83 IN FEET
0 40 80
0 4 8
VERT SCALE NAVD 88 IN FEET
VERT EXAGGERATION x5

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF TIDE GATE INLET EXTENSION FOR USACE APPROVAL.
7. EXISTING ROAD ON TOP OF MARYSVILLE LEVEE TO BE RESURFACED WITH 6" COMPACTED AGGREGATE BASE COURSE FROM POE TO POINT 400 FT UPSTREAM (EAST), UNLESS IN-SITU MATERIALS EXCEED GRADATION, AND FROM POE TO END OF EXISTING LEVEE BACKSLOPE PROTECTION.



KEY MAP
NTS

PROFILE LEGEND

- FINAL LEVEE GRADE
- SURCHARGE LEVEE GRADE
- EXISTING GROUND
- STRIPPING DEPTH

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

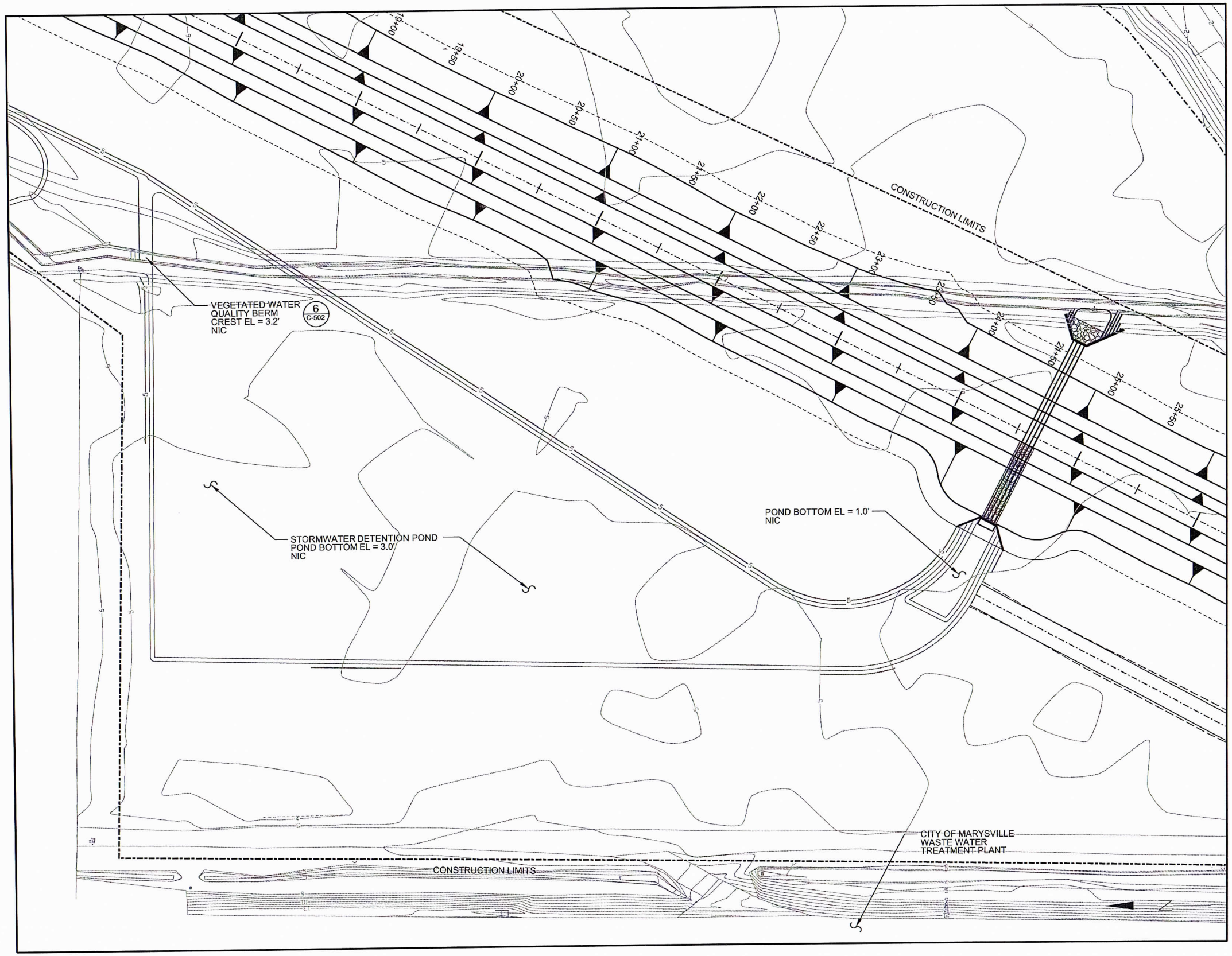
DESIGNED BY: LEF, KAR, ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:55:57 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-112S10.DGN	

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

FINAL SITE PLAN AND PROFILE 5
(STA 32+00 TO STA 39+57)

SHEET IDENTIFICATION
C-112
SHEET 23 OF 49

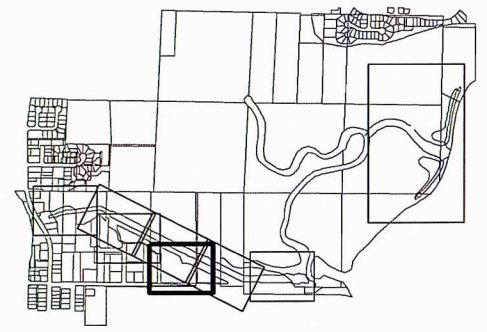
DESIGN FILE: c:\users\g3ecdlf9\documents\cenws01\dms51223\PN142460_QTWR-C-112S10.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-113 POND SITE PLAN 1
1"=40'
0 40 80

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.
6. SEE SHEET C-111 FOR CULVERT HORIZONTAL CONTROL.



KEY MAP
NTS

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MDP
CKD BY: GKK
SUBMITTED BY:
WES LEE
PLOT DATE:
PLOT TIME: 2:48:45 PM
SIZE: ANSI D
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FILE NUMBER:
CONTRACT NO.:
SOLICITATION NO.:
DATE: 13 JULY 2012

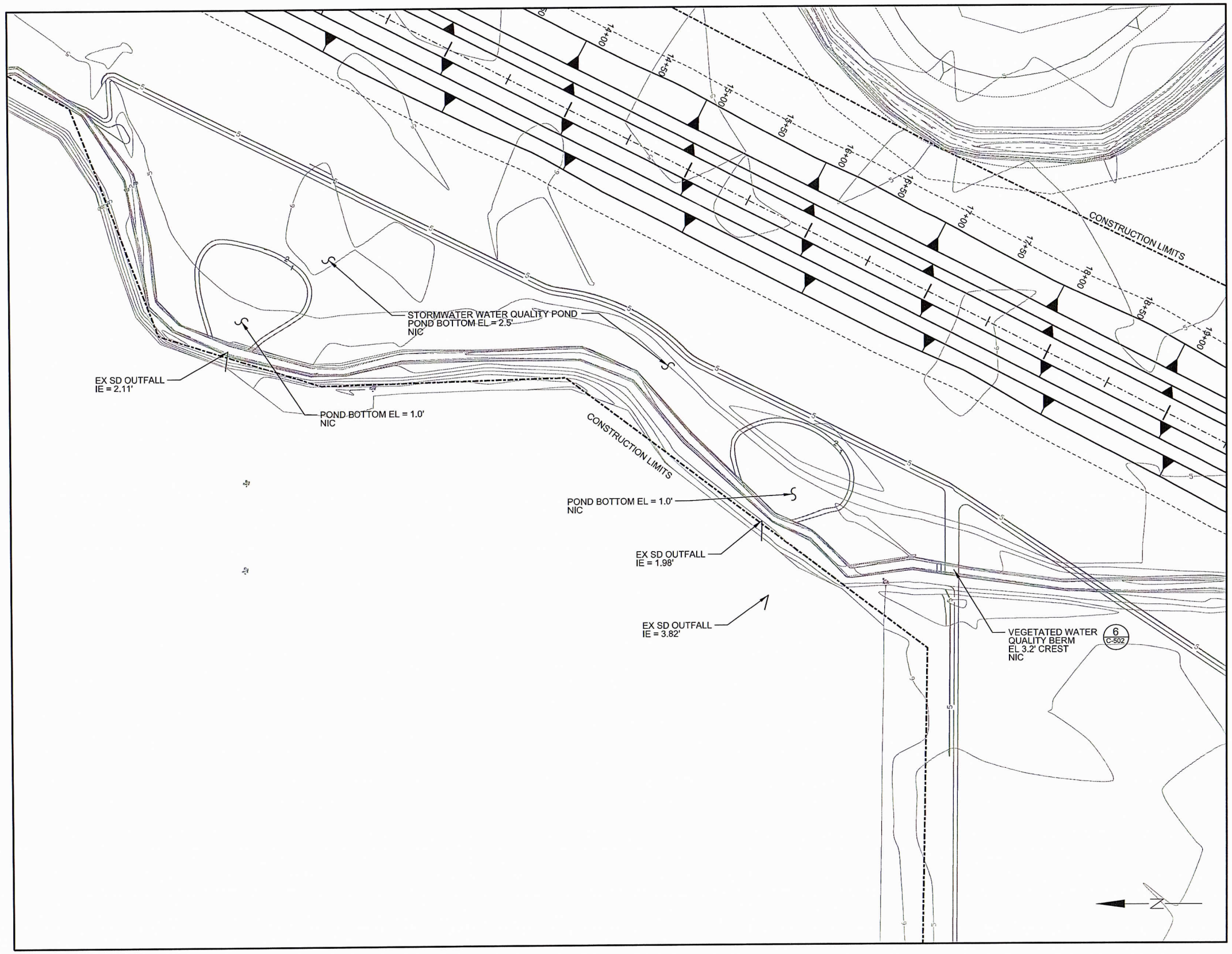
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

POND SITE PLAN 1

SHEET IDENTIFICATION
C-113
SHEET 24 OF 49

DESIGN FILE: c:\documents and settings\g3g4cdmc\my documents\pwwork\dms51223\PN142460_QTWR-C-113S11.DGN

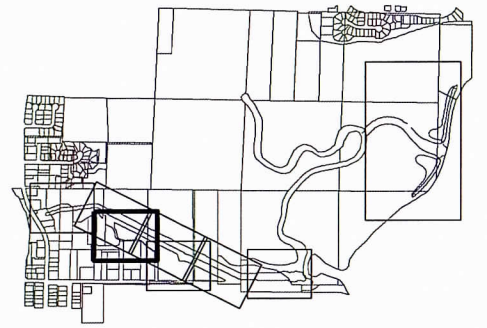
DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-114 POND SITE PLAN 2
1"=40'
0 40 80

NOTES:

1. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON A GROUND SURVEY, PREPARED BY DAVID R. DOWNING AND ASSOCIATES, DATED OCTOBER 2011. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) IN FEET. HORIZONTAL DATUM AT SITE IS NORTH AMERICAN DATUM OF 1983 (NAD 83) STATE PLANE WASHINGTON NORTH IN FEET.
2. FILL EXISTING CHANNELS WITHIN THE LEVEE FOOTPRINT WITH STOCKPILED LEVEE MATERIAL OR OTHER APPROVED EQUIVALENT.
3. REFER TO SPECIFICATION 01 14 00 WORK RESTRICTIONS FOR SITE WATER LEVELS.
4. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR MAXIMUM LIFT HEIGHT AND COMPACITON REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



KEY MAP
NTS

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT TIME: 2:47:13 PM
FILE NAME: PN142460_QTWR-C-114S12.DGN
DESIGNED BY: LEF, KAR, ZPC
DWN BY: KAR
CKD BY: DAK
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

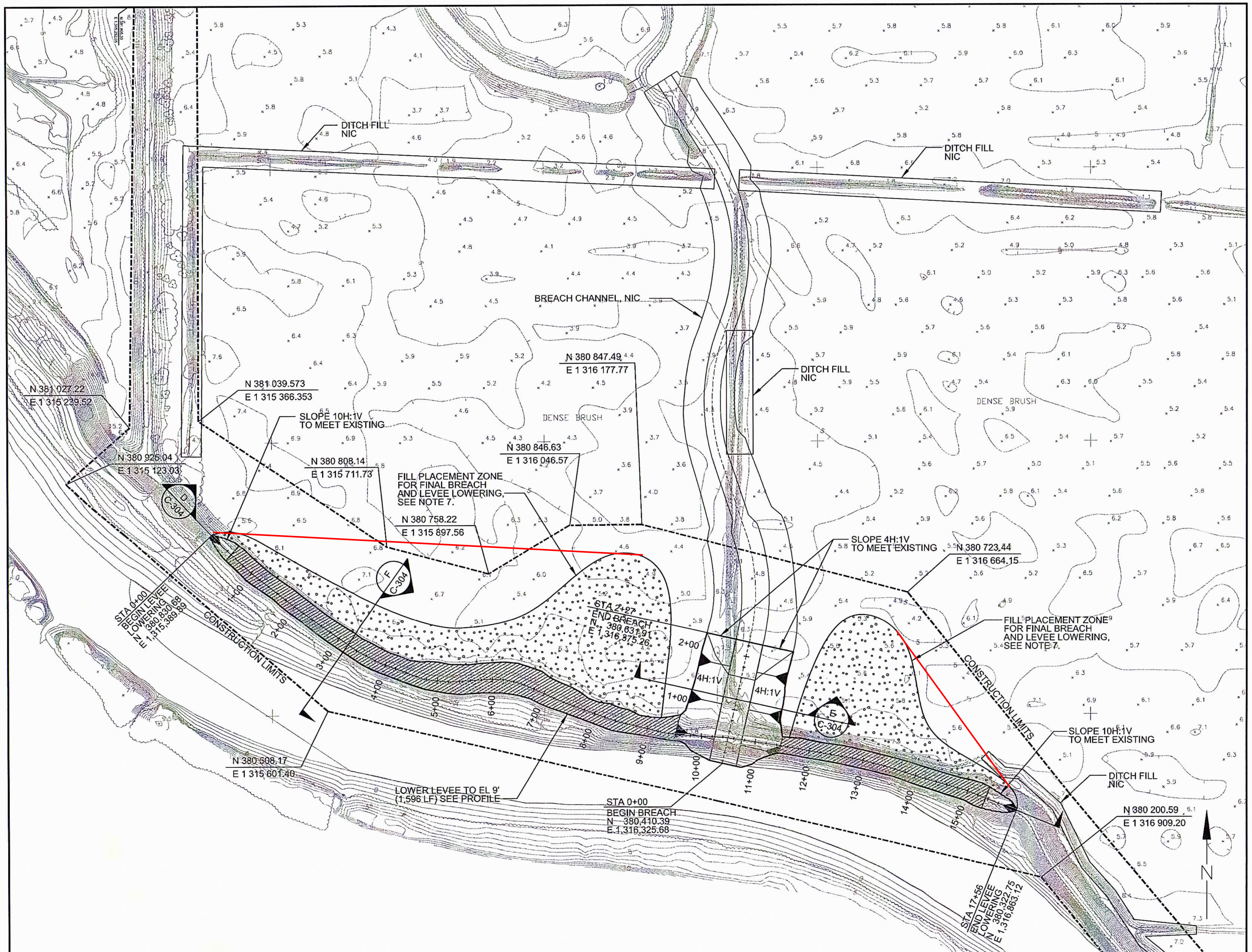
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

POND SITE PLAN 2

SHEET IDENTIFICATION
C-114
SHEET 25 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwworkldms\51223\PN142460_QTWR-C-114S12.DGN

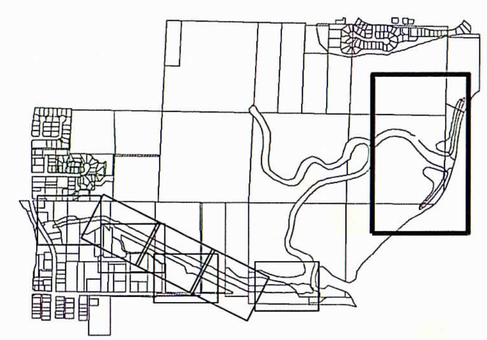
DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-115 BREACH SITE PLAN (OPTION)
1"=100'   0   100   200

NOTES:

1. TOPOGRAPHIC MAPPING PREPARED BY DUANE HARTMAN AND ASSOCIATES USING AERIAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPH DATED JUNE 19, 2005. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET. HORIZONTAL DATUM AT THE SITE IS NORTH AMERICAN DATUM OF 1983 (NAD83) STATE PLANE WASHINGTON NORTH IN FEET.
2. ELEVATIONS ARE APPROXIMATE, AND MAY NOT BE SHOWN ACCURATELY IN AREAS PONDED WHEN PHOTOGRAPH WAS TAKEN. MAPPING SHOULD BE FIELD VERIFIED BEFORE FINAL DESIGN, AND CRITICAL GRADES SURVEYED IN THE FIELD BEFORE CONSTRUCTION.
3. SEE SPECIFICATION 01 14 00-A FOR SITE WATER LEVEL INFORMATION. EBEY SLOUGH SUBJECT TO DAILY TIDAL FLUCTUATIONS OF 10' OR MORE.
4. SEE SPECIFICATION 01 57 20 ENVIRONMENTAL PROTECTION FOR TURBIDITY CONTROL REQUIREMENTS.
5. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.
6. PER SPECIFICATIONS, THE CONTRACTOR SHALL SUBMIT A BREACH PLAN FOR USACE APPROVAL PRIOR TO THE COMMENCEMENT OF WORK.
7. THE FILL PLACEMENT ZONE FOOTPRINT SHOWN HAS BEEN APPROXIMATED. THE CONTRACTOR SHALL DEFINE LIMIT OF FILL IN BREACH PLAN. FINAL GRADE OF FILL IS TO BE SMOOTH WITH NO DEPRESSIONS, GRADUALLY SLOPING FROM LOWERED REMNANT LEVEE TO THE INBOARD SIDE.



KEY MAP
NTS

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC | DATE: 13 JULY 2012
DWN BY: LAL | CKD BY: GKK | SOLICITATION NO.:
SUBMITTED BY: WETZLER | CONTRACT NO.:
PLOT DATE: | PLOT TIME: 4:49:03 PM | FILE NUMBER:
SIZE: ANSI D | FILE NAME: PN142460_QTWR-C-115S13.DGN

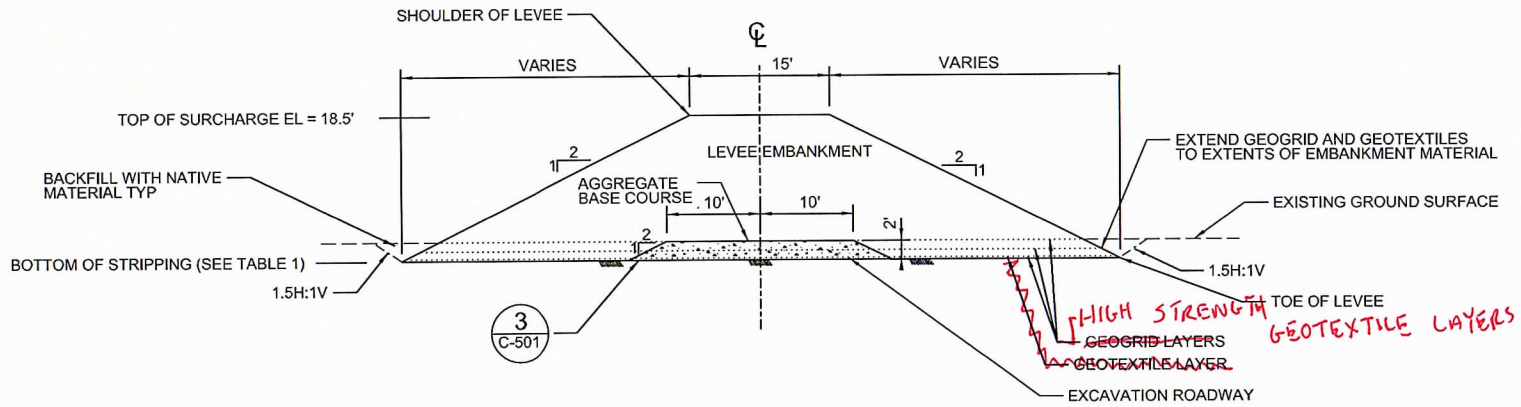
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

BREACH SITE PLAN (OPTION)

SHEET IDENTIFICATION
C-115
SHEET 26 OF 49

DESIGN FILE: c:\users\g3ecdlf9\documents\cenws01\dms51223\PN142460_QTWR-C-115S13.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



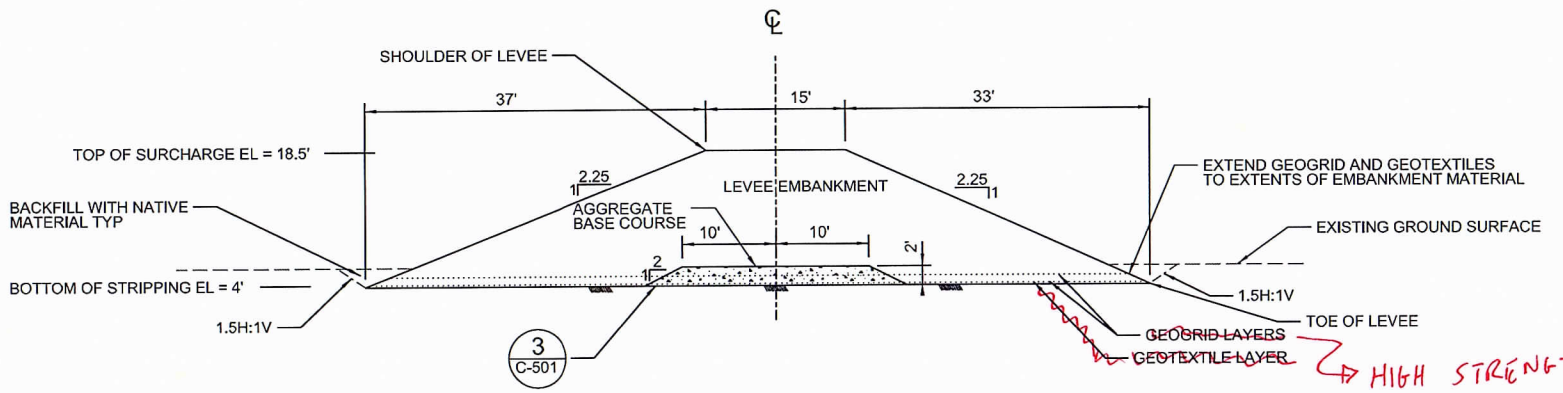
A TYPICAL SECTION - SURCHARGE LEVEE SECTION (STA 0+00 TO 9+10)
C-103 NTS
C-104

TABLE 1. SECTION A STRIPPING DEPTH

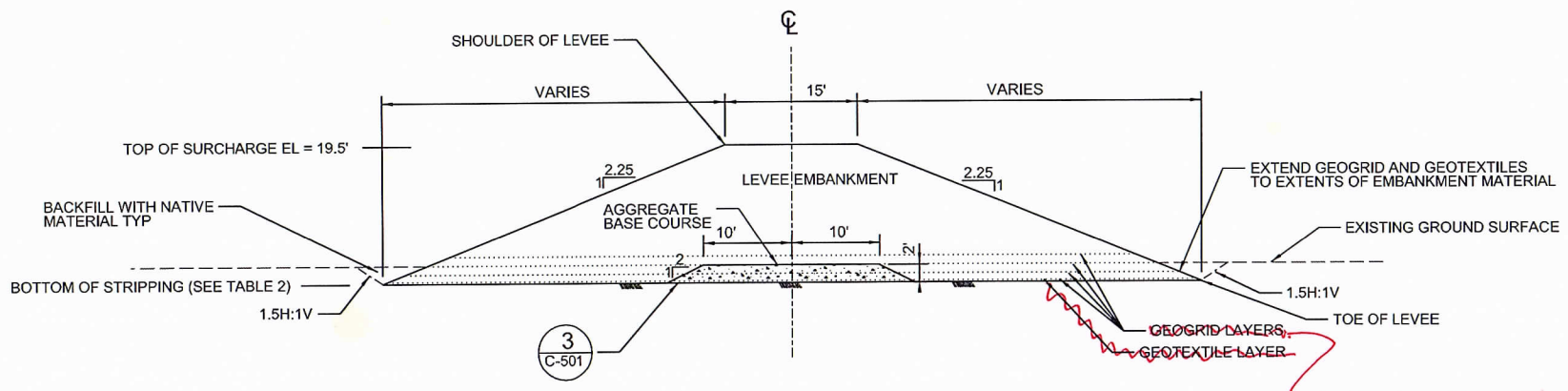
STATION	STRIPPING DEPTH
0+00 - 0+25	EL ~~11.5~~ 3.5
0+25 - 0+50	EL ~~9.5~~ 3.5
0+50 - 0+75	EL ~~7.5~~ 3.5
0+75 - 1+00	EL ~~5.5~~ 3.5
1+00 - 1+25	EL 3.5'
1+25 - 1+50	EL 5.5'
1+50 - 3+00	2' BELOW EXISTING
3+00 - 9+10	EL 4'

NOTES:

1. VERTICAL DATUM FOR ELEVATION CALL-OUTS IS NAVD 88 IN FEET.
2. SEE SPECIFICATION 32 92 19 SEEDING FOR SURFACE COVERAGE REQUIREMENTS.



B TYPICAL SECTION - SURCHARGE LEVEE SECTION (STA 9+10 TO 36+00)
C-104 NTS
C-107



C TYPICAL SECTION - SURCHARGE LEVEE (STA 36+00 TO 39+57)
C-107 NTS

TABLE 2. STRIPPING DEPTH

STATION	STRIPPING DEPTH
36+00 - 36+50	EL 4'
36+50 - 37+00	EL 2'
37+00 - 38+00	EL ~~0~~ -5'
38+00 - 38+50	EL ~~2~~ -5'
38+50 - 39+07	EL ~~4~~ -2.5'
39+07 - 39+17	EL 5.5'
39+17 - 39+27	EL 7'
39+27 - 39+37	EL 8.5'
39+37 - 39+47	EL 10'
39+47 - 39+57	EL 11.5'

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.
MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

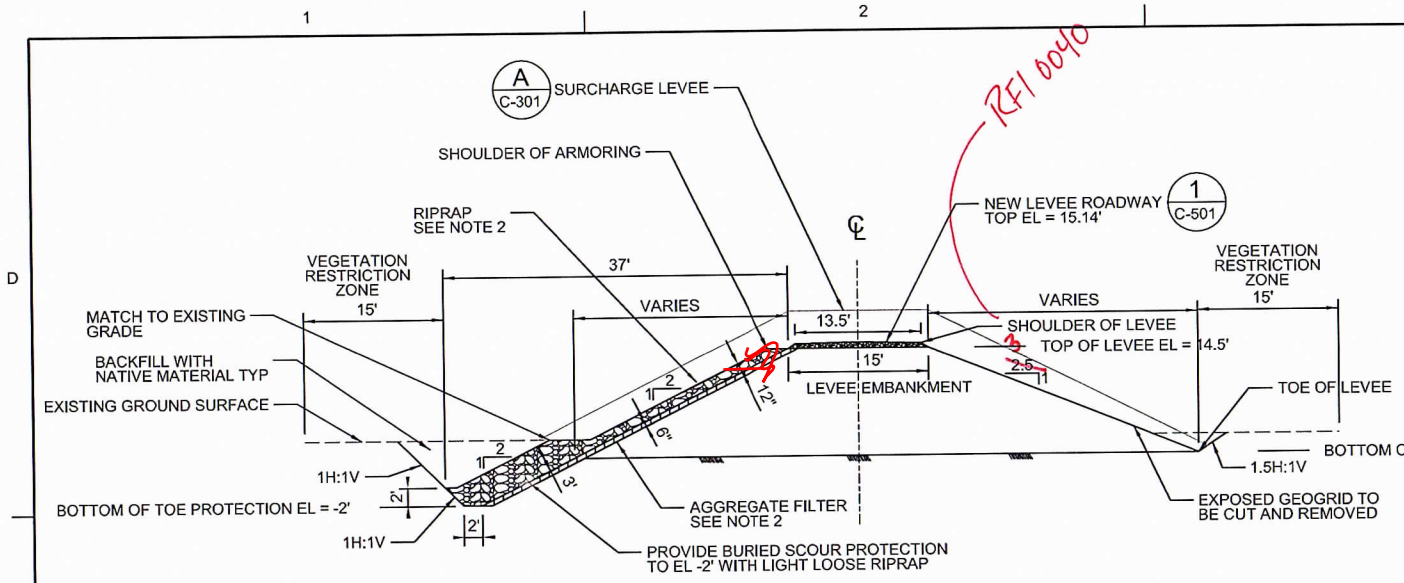
DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
SUBMITTED BY: SECTION
PLOT DATE:
PLOT TIME: 9:00:04 AM
SIZE: ANSI D
DATE: 13 JULY 2012
CHD BY: GNK
FILE NAME: PN142460_QTWR-C-301PR1.DGN
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

SURCHARGE LEVEE TYPICAL SECTIONS

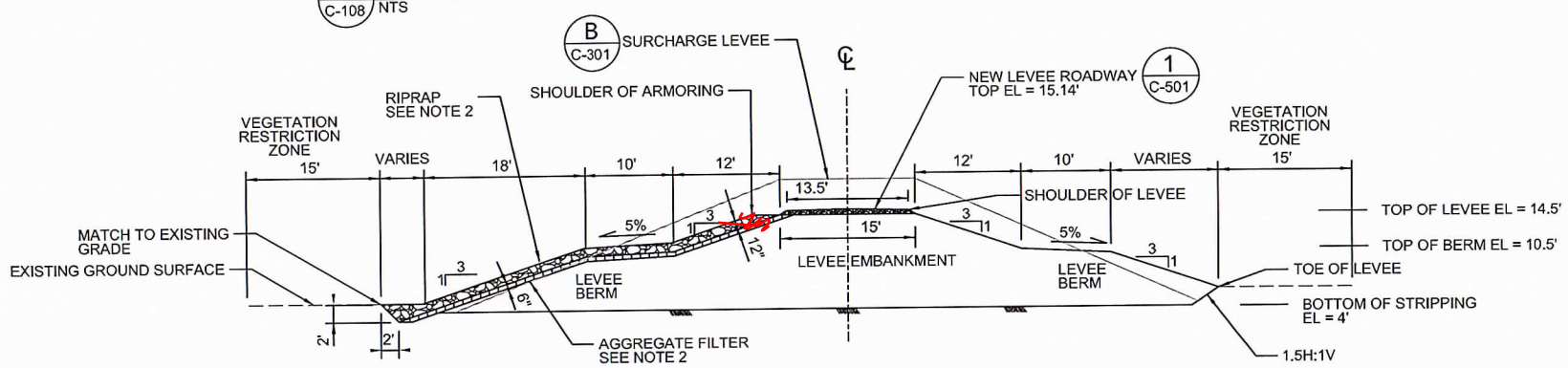
SHEET IDENTIFICATION
C-301
SHEET 27 OF 49

DESIGN FILE: c:\users\g3edfl9\documents\cenws01\cdms51223\PN142460_QTWR-C-301PR1.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$

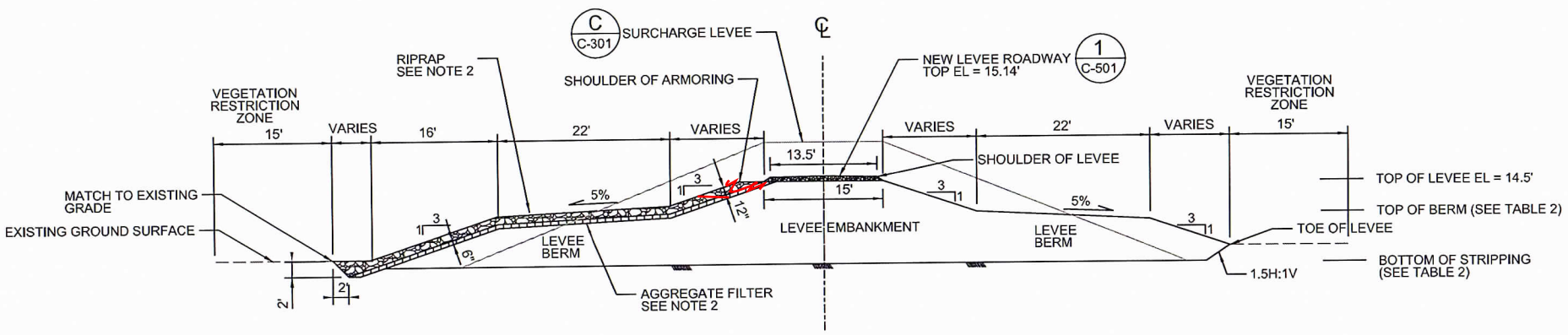


RFI 0040

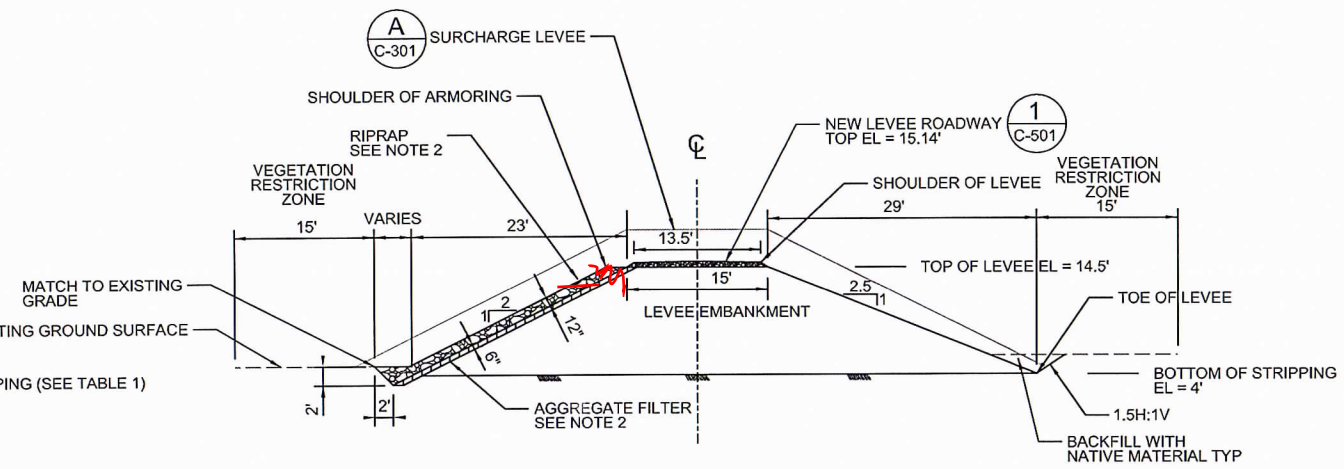
A C-108 TYPICAL SECTION - FINAL LEVEE (STA 0+00 TO 5+40)
NTS



C C-109 TYPICAL SECTION - FINAL LEVEE (STA 9+10 TO 36+00)
NTS
C-112



D C-112 TYPICAL SECTION - FINAL LEVEE (STA 36+00 TO 39+57)
NTS



B C-108 TYPICAL SECTION - FINAL LEVEE (STA 5+40 TO 9+10)
NTS
C-109

NOTES:

1. VERTICAL DATUM FOR ELEVATION CALL-OUTS IS NAVD 88 IN FEET.
2. SEE SPECIFICATION SECTION 35 31 19 STONE SLOPE PROTECTION FOR STRUCTURES FOR ROCK GRADATION.
3. SEE SPECIFICATION 32 92 19 SEEDING FOR ADDITIONAL SURFACE COVERAGE REQUIREMENTS

Note 4. Rip rap to EL 9' & 2-4" from EL 9' to 12', Seed from 12' to 14.5'.

TABLE 1. SECTION A STRIPPING DEPTH

STATION	STRIPPING DEPTH
0+00 - 0+25	EL ~~11.5'~~ 3.5
0+25 - 0+50	EL ~~9.5'~~ 3.5
0+50 - 0+75	EL ~~7.5'~~ 3.5
0+75 - 1+00	EL ~~5.5'~~ 3.5
1+00 - 1+25	EL 3.5'
1+25 - 1+50	EL 5.5'
1+50 - 3+00	2' BELOW EXISTING
3+00 - 9+10	EL 4'

TABLE 2. SECTION D STRIPPING DEPTH AND BERM EL.

STATION	STRIPPING DEPTH	TOP OF BERM EL.
36+00 - 36+50	EL 4'	EL 10.5'
36+50 - 37+00	EL 2'	EL 8.5'
37+00 - 38+00	EL ~~0'~~ -5'	EL 6.5'
38+00 - 38+50	EL ~~2'~~ -5'	EL 8.5'
38+50 - 39+07	EL ~~4'~~ -2.5'	EL 10.5'
39+07 - 39+17	EL 5.5'	EL 10.5'
39+17 - 39+27	EL 7'	EL 10.5'
39+27 - 39+37	EL 8.5'	EL 10.5'
39+37 - 39+47	EL 10'	EL 10.5'
39+47 - 39+57	EL 11.5'	

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MDP
CKD BY: GKK
SUBMITTED BY: NEVER
PLOT DATE:
PLOT TIME: 8:47:49 AM
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-302PR2.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

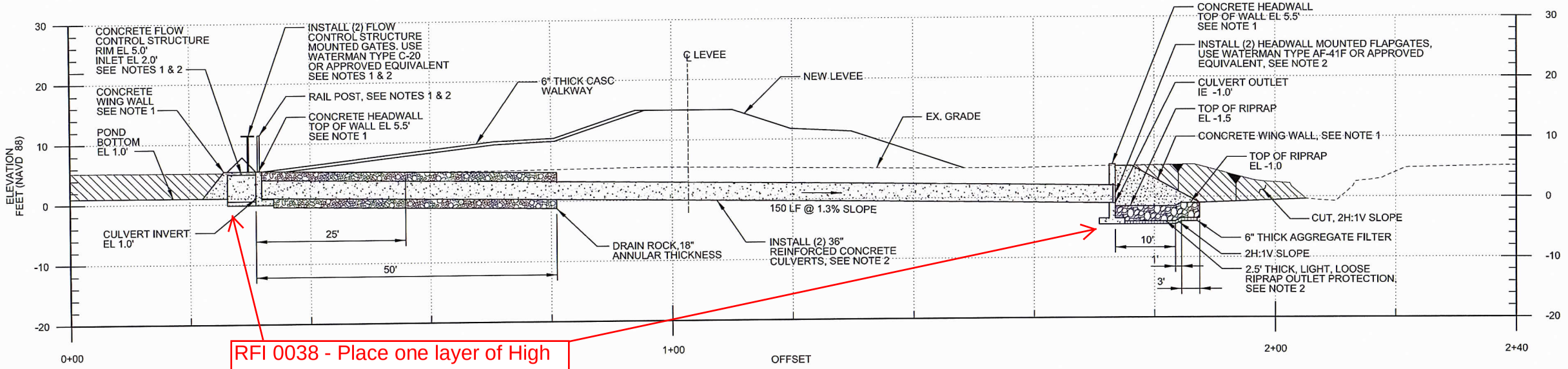
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

FINAL LEVEE TYPICAL SECTIONS

SHEET IDENTIFICATION
C-302
SHEET 28 OF 49

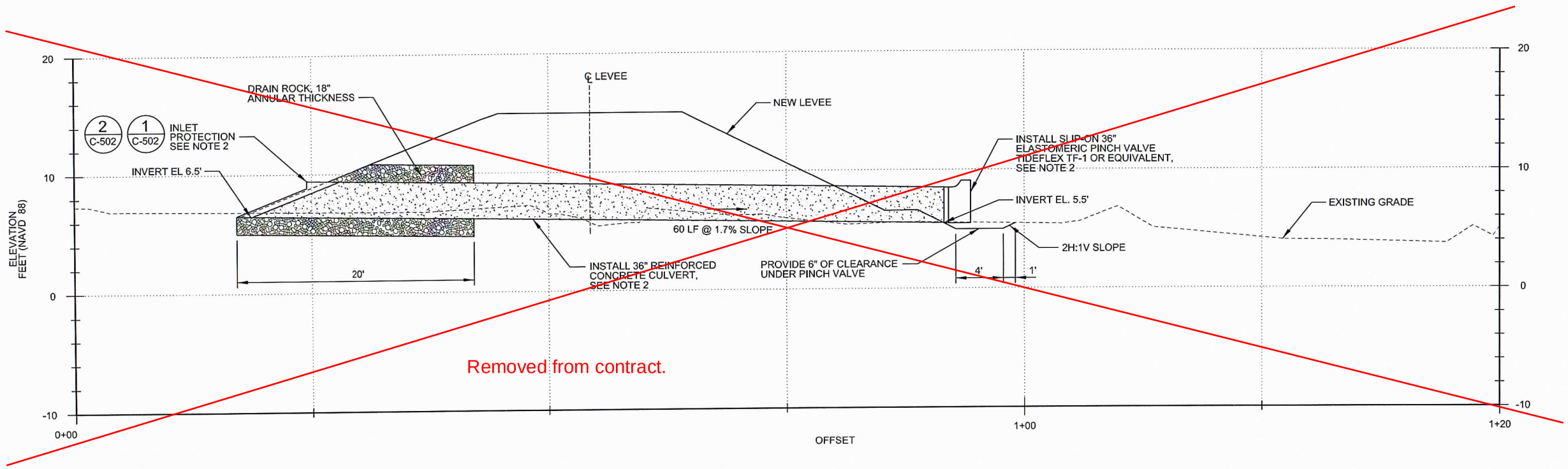
DESIGN FILE: c:\users\g3edf9\documents\cenws01\dms51223\PN142460_QTWR-C-302PR2.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



RFI 0038 - Place one layer of High Strength Geotextile and 3 feet of rip rap under both east and west head & wing walls. (Draw)

1 C-111 STORMWATER CULVERTS
1H:1V
1" = 10'
0 5' 10' 20'



Removed from contract.

2 C-108 NORTH CULVERT
1H:1V
1" = 5'
0 2.5' 5' 10'

NOTES:

1. SEE STRUCTURAL SHEETS FOR DETAIL OF CONCRETE STRUCTURES.
2. SEE 33 40 00 STORM DRAIN UTILITIES FOR ADDITIONAL REQUIREMENTS FOR TRASHRACKS, FLAP GATES, PINCH VALVE, OUTLET PROTECTION RIPRAP, AND FLOW CONTROL STRUCTURES.

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

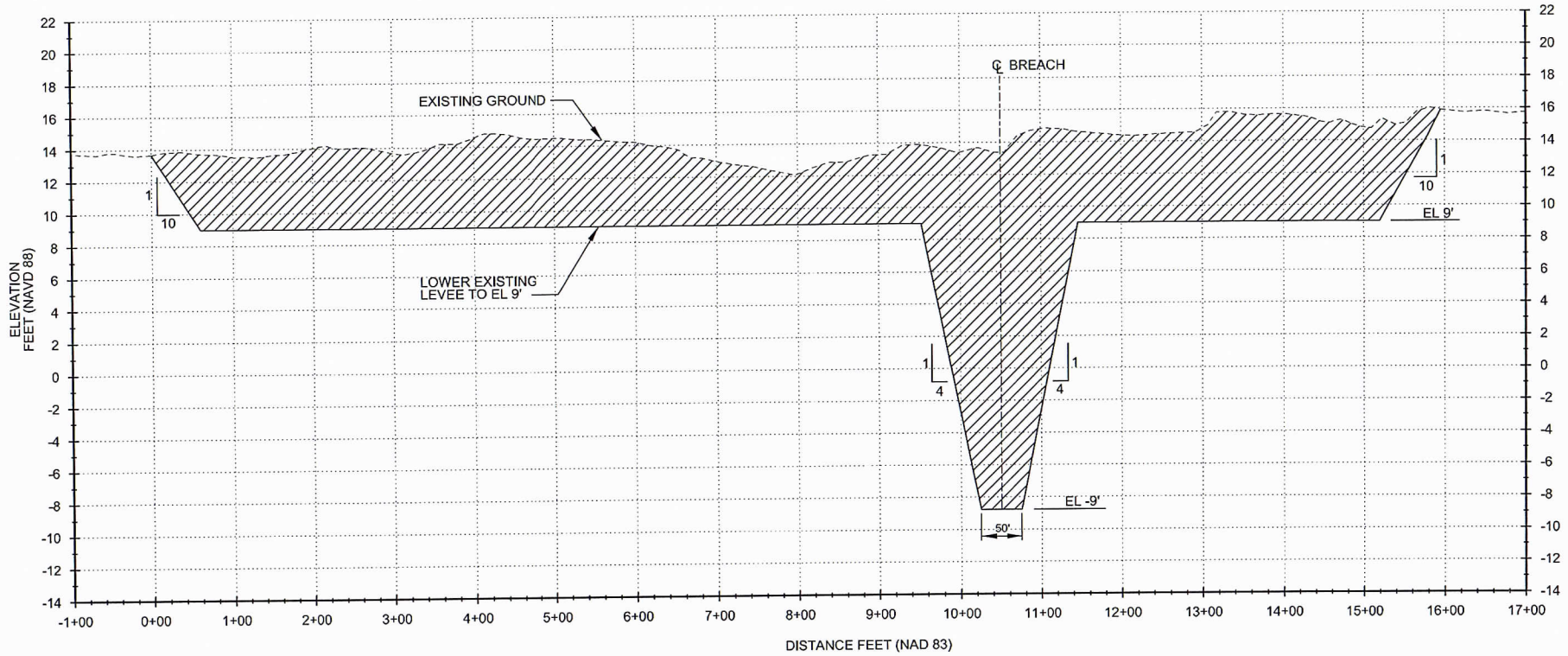
DESIGNED BY: LEF, KAR, ZPC
DWN BY: JAL
SUBMITTED BY: KEITH
PLOT DATE:
PLOT TIME: 2:49:08 PM
SIZE: ANSI D
DATE: 13 JULY 2012
CKD BY: GKK
FILE NAME: PN142460_QTWR-C-303PR3.DGN
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

CULVERT SECTIONS

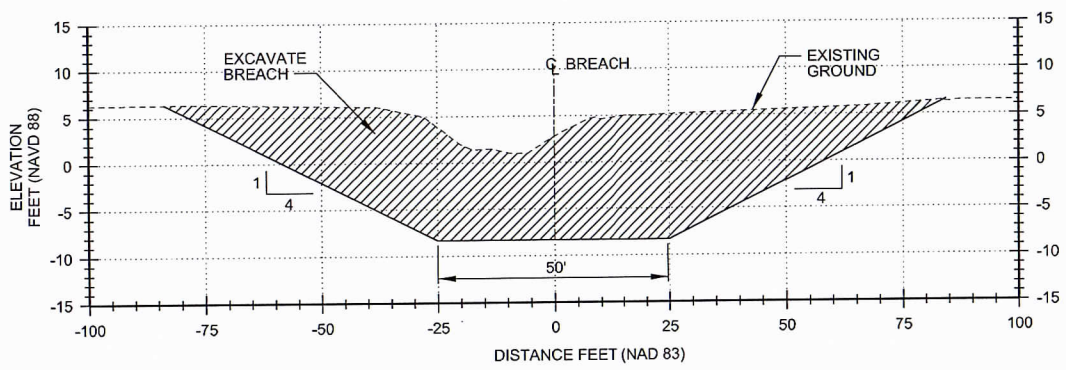
SHEET IDENTIFICATION
C-303
SHEET 29 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-303PR3.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$



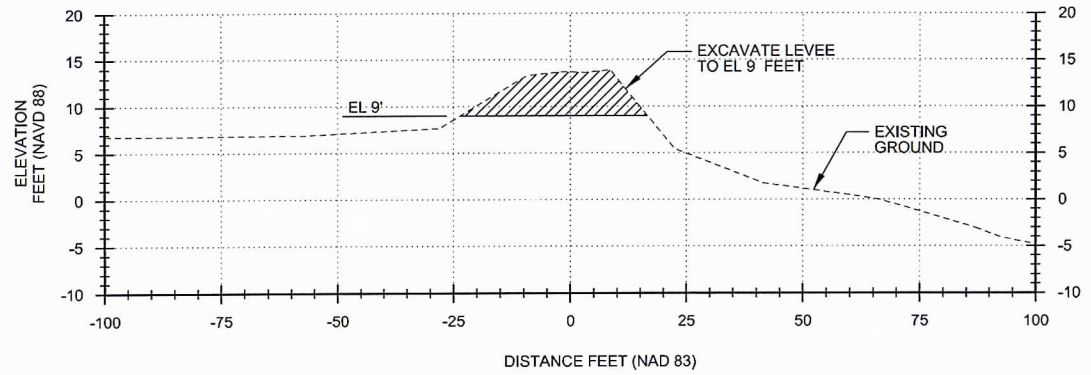
D C-115 LEVEE LOWERING & BREACH SECTION

HORZ SCALE IN FEET
0 100' 200'
0 5' 10'
VERT SCALE IN FEET
VERT EXAGGERATION x20



E C-115 BREACH SECTION

HORZ SCALE IN FEET
0 20' 40'
0 10' 20'
VERT SCALE IN FEET
VERT EXAGGERATION x2



F C-115 LEVEE LOWERING TYPICAL SECTION

HORZ SCALE IN FEET
0 20' 40'
0 10' 20'
VERT SCALE IN FEET
VERT EXAGGERATION x2

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

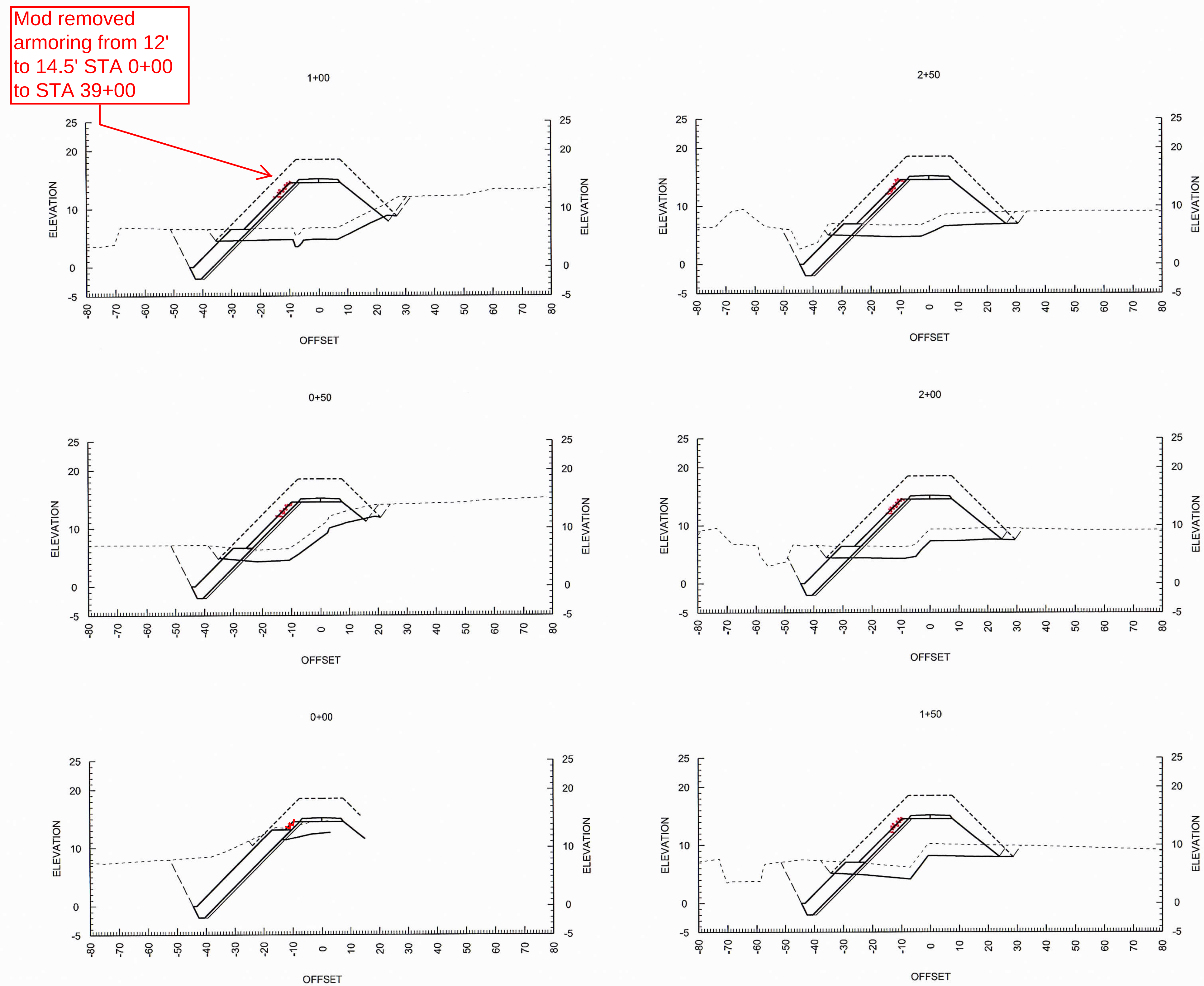
DESIGNED BY: LEF, KAR, ZPC
DRWN BY: MCF
CKD BY: GMK
SUBMITTED BY: WETZLER
PLOT DATE:
PLOT TIME: 4:55:08 PM
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-304PRLOGN

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE LOWERING & BREACH PROFILES & SECTIONS (OPTION)

SHEET IDENTIFICATION
C-304
SHEET 30 OF 49

DESIGN FILE: c:\users\g3eodlf9\documents\cenws01\dms51223\PN142460_QTWR-C-304PR4.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-305 CROSS SECTIONS 1

HORZ SCALE IN FEET 0 20 40

VERT SCALE IN FEET 0 10 20

VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- - - - EXISTING GRADE
-------- SURCHARGE
— — — DAYLIGHTS
——— FINAL LEVEE

US Army Corps of Engineers® SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:50:09 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-305.DGN	

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 1

SHEET IDENTIFICATION
C-305
SHEET 31 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-305.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

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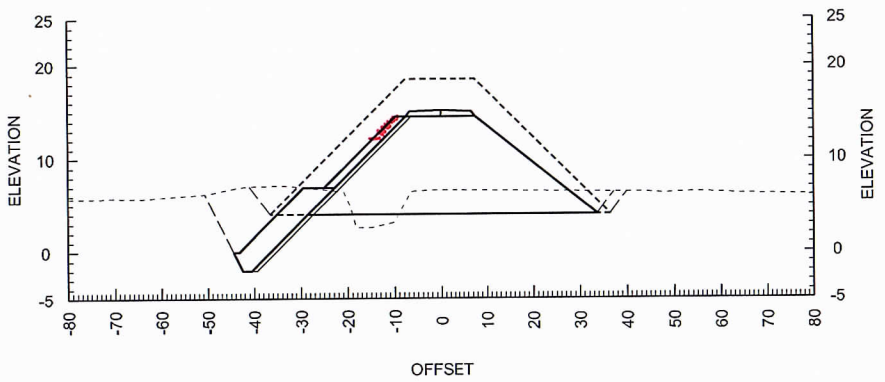

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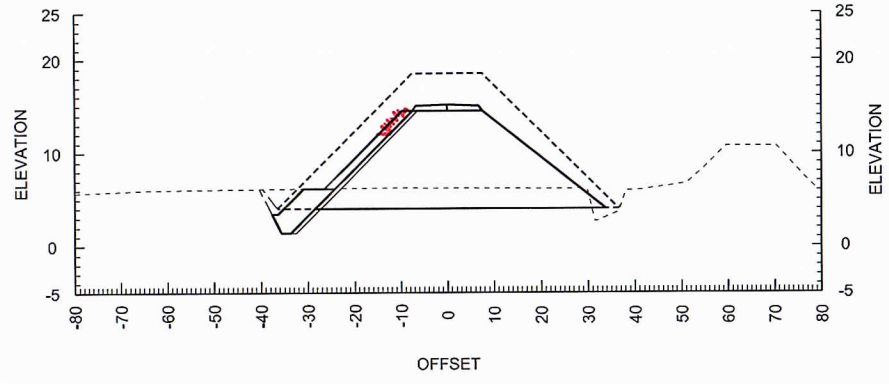

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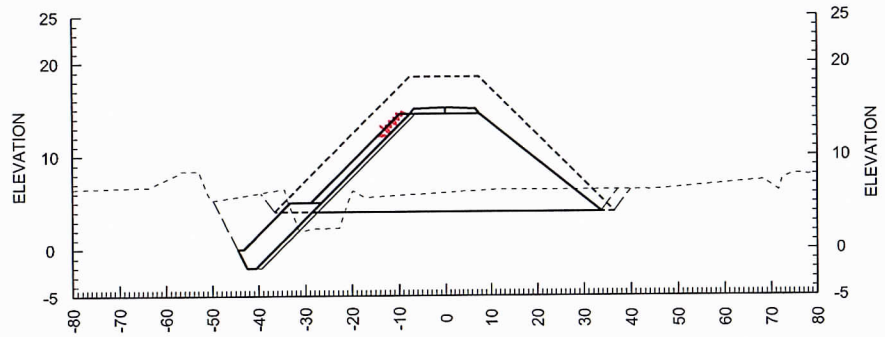

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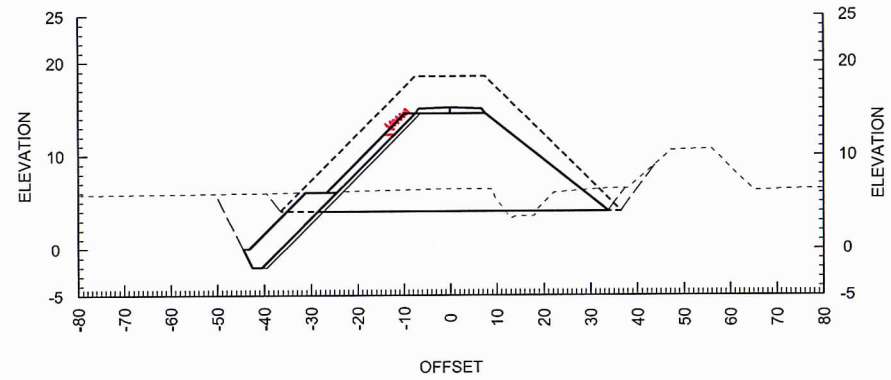

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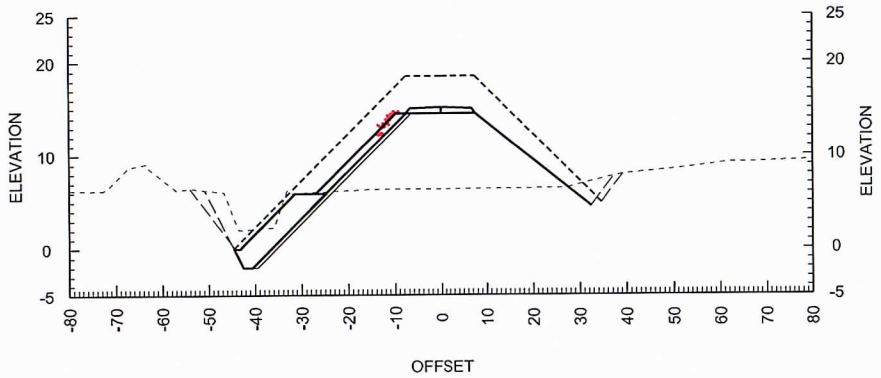

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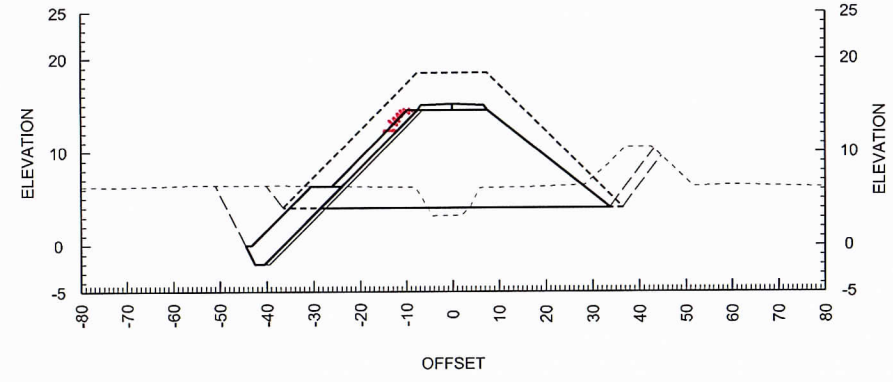


NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

1 / C-306 CROSS SECTIONS 2

HORZ SCALE IN FEET
0 20 40
0 10 20

VERT SCALE IN FEET
VERT EXAGGERATION x2

US Army Corps of Engineers
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DRN BY: MCP
SUBMITTED BY: R.FEILER
PLOT DATE:
SIZE: ANSI D
CKD BY: GRK
PLOT TIME: 2:50:38 PM
FILE NAME: PN142460_QTWR-C-306.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBERS:
TIME: 6 PM
ME: _QTWR-C-306.DGN

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

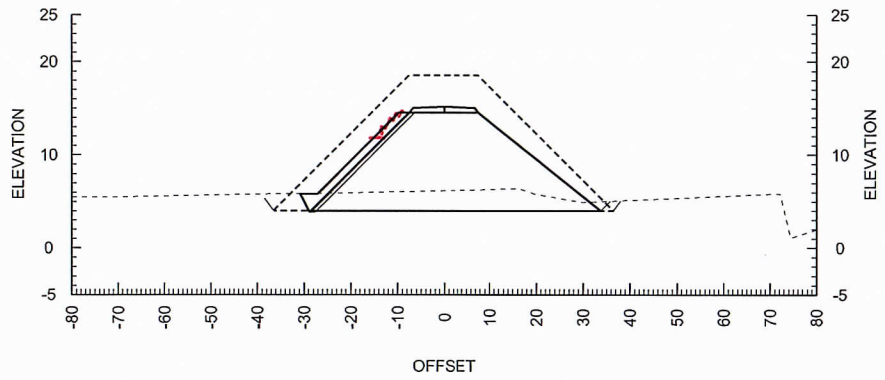
LEVEE CROSS SECTIONS 2

SHEET IDENTIFICATION
C-306
SHEET 32 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms512231\PN142460_QTWR-C-306.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

7+00



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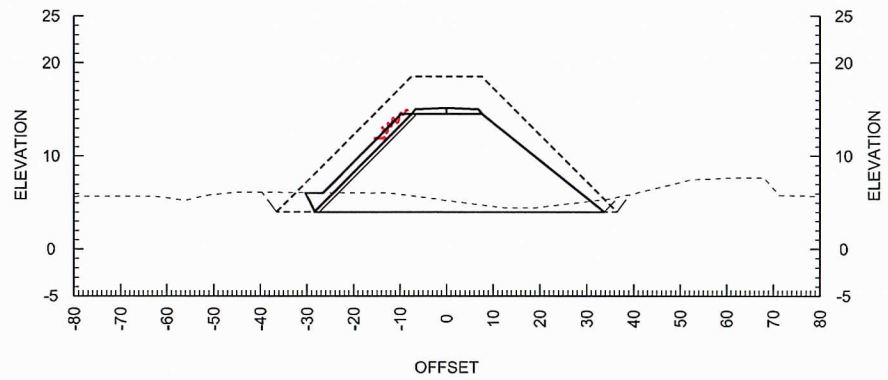

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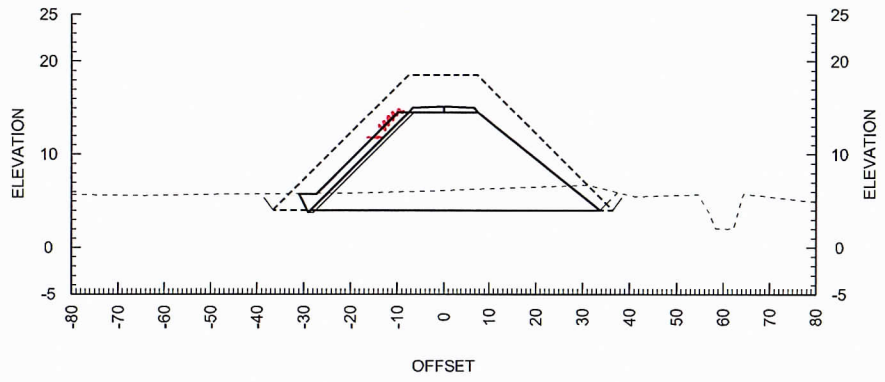

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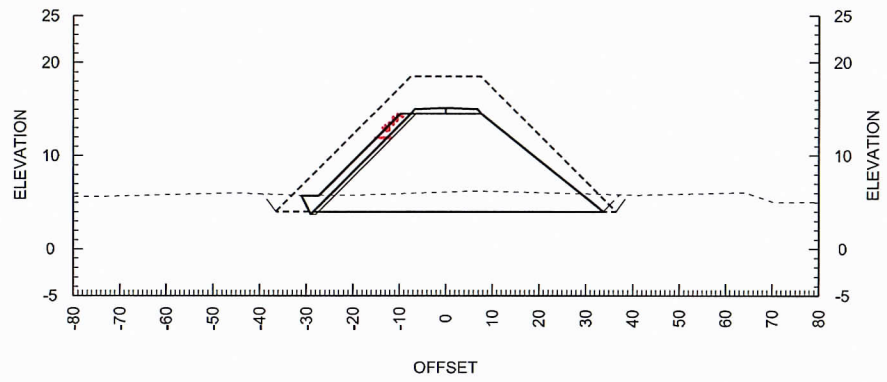

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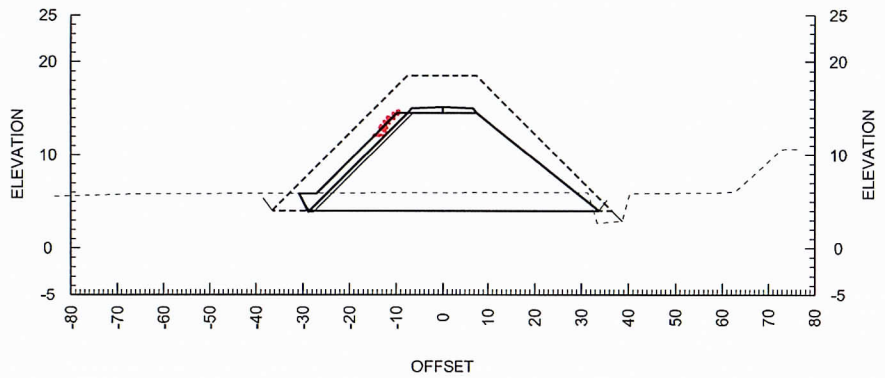

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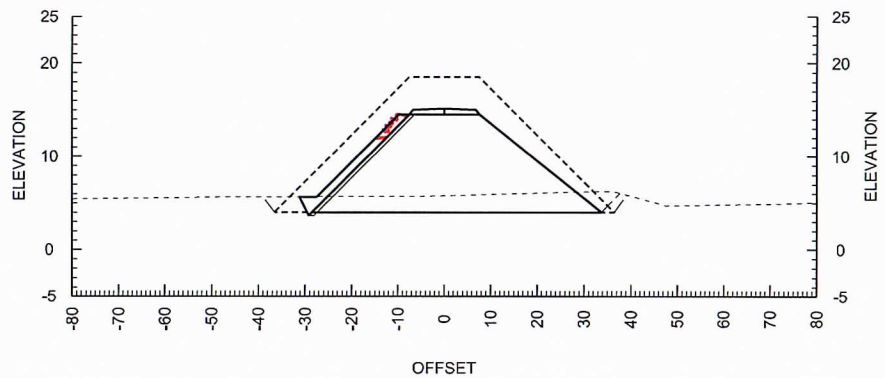


1 / C-307 CROSS SECTIONS 3

HORZ SCALE IN FEET
0 20 40
0 10 20
VERT SCALE IN FEET
VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
SUBMITTED BY: MCP
PLOT DATE:
SIZE: ANSI D
DATE: 13 JULY 2012
CHK'D BY: GKK
PLOT TIME: 2:51:03 PM
FILE NAME: PN142460_QTWR-C-307.DGN
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

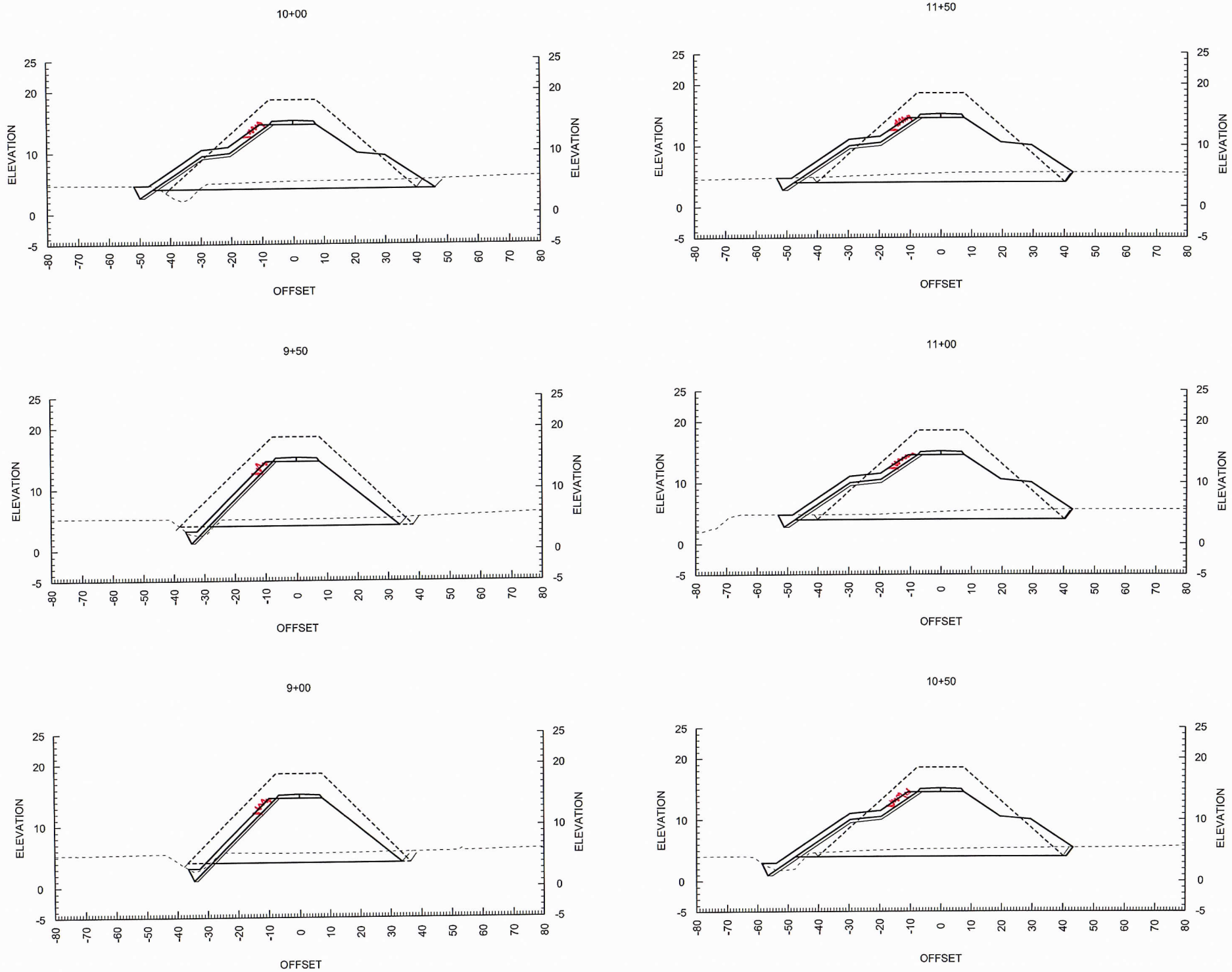
FY12 QWULLOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 3

SHEET IDENTIFICATION
C-307
SHEET 33 OF 49

DESIGN FILE: c:\documents and settings\g3acdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-307.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-308 CROSS SECTIONS 4

HORZ SCALE IN FEET
0 20 40
0 10 20
VERT SCALE IN FEET
VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
CKD BY: GKK
SUBMITTED BY: WETZLER
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT DATE:
PLOT TIME: 2:51:29 PM
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-308.DGN

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

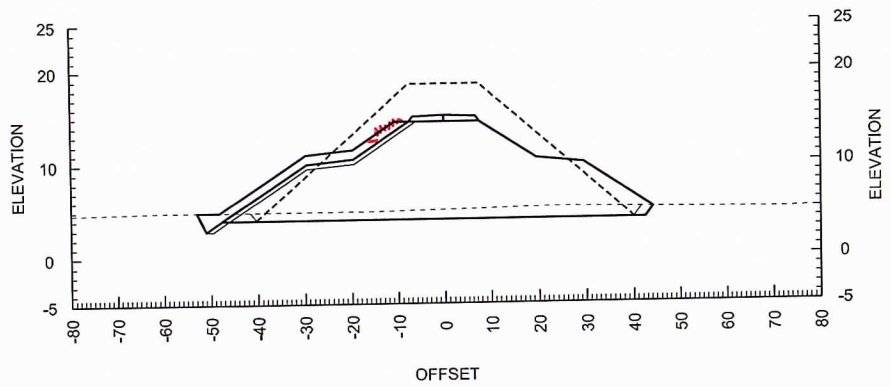
LEVEE CROSS SECTIONS 4

SHEET IDENTIFICATION
C-308
SHEET 34 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-308.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

13+00



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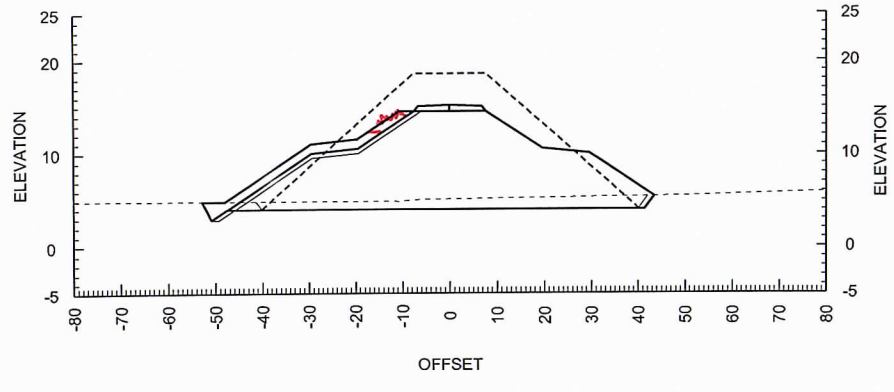

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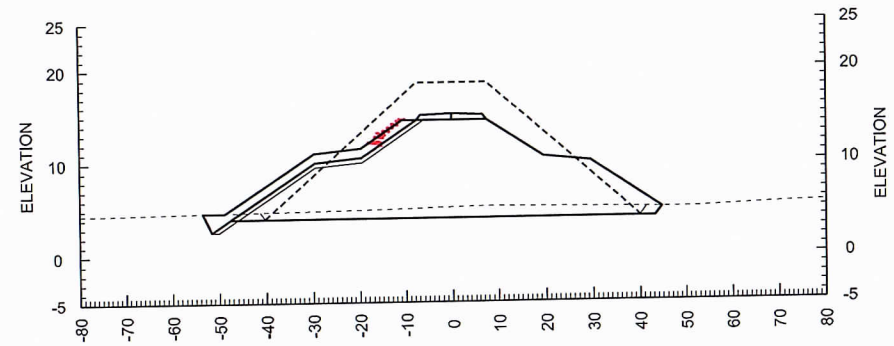

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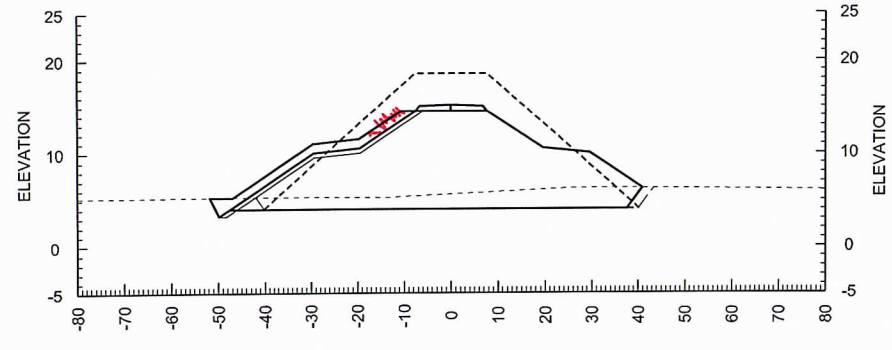

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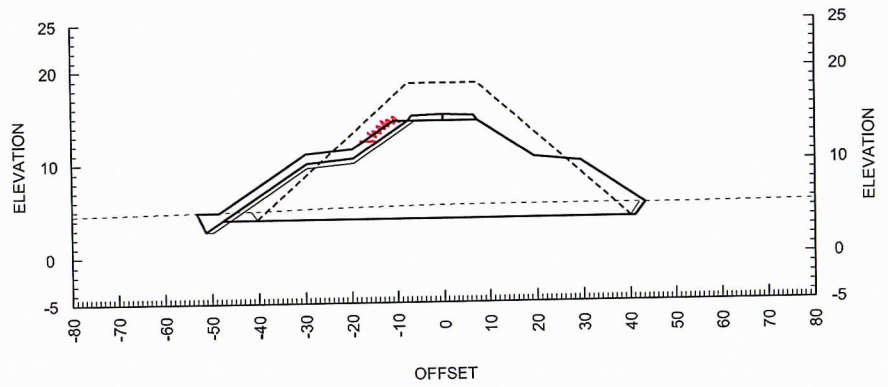

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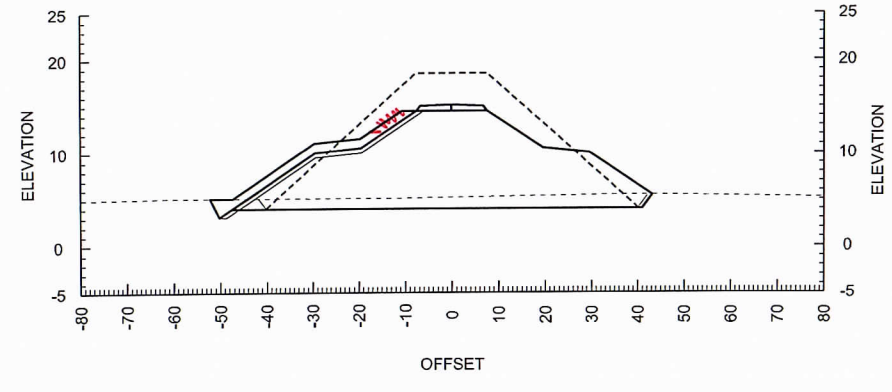


1 / C-309 CROSS SECTIONS 5

HORZ SCALE IN FEET
0 20 40
0 10 20

VERT SCALE IN FEET
VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DRN BY: MKP
CKD BY: DKK
SUBMITTED BY: WETZLER
PLOT DATE: PLOT TIME: 2:51:58 PM
SIZE: ANSI D
FILE NUMBER:
FILE NAME: PN142460_QTWR-C-309.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

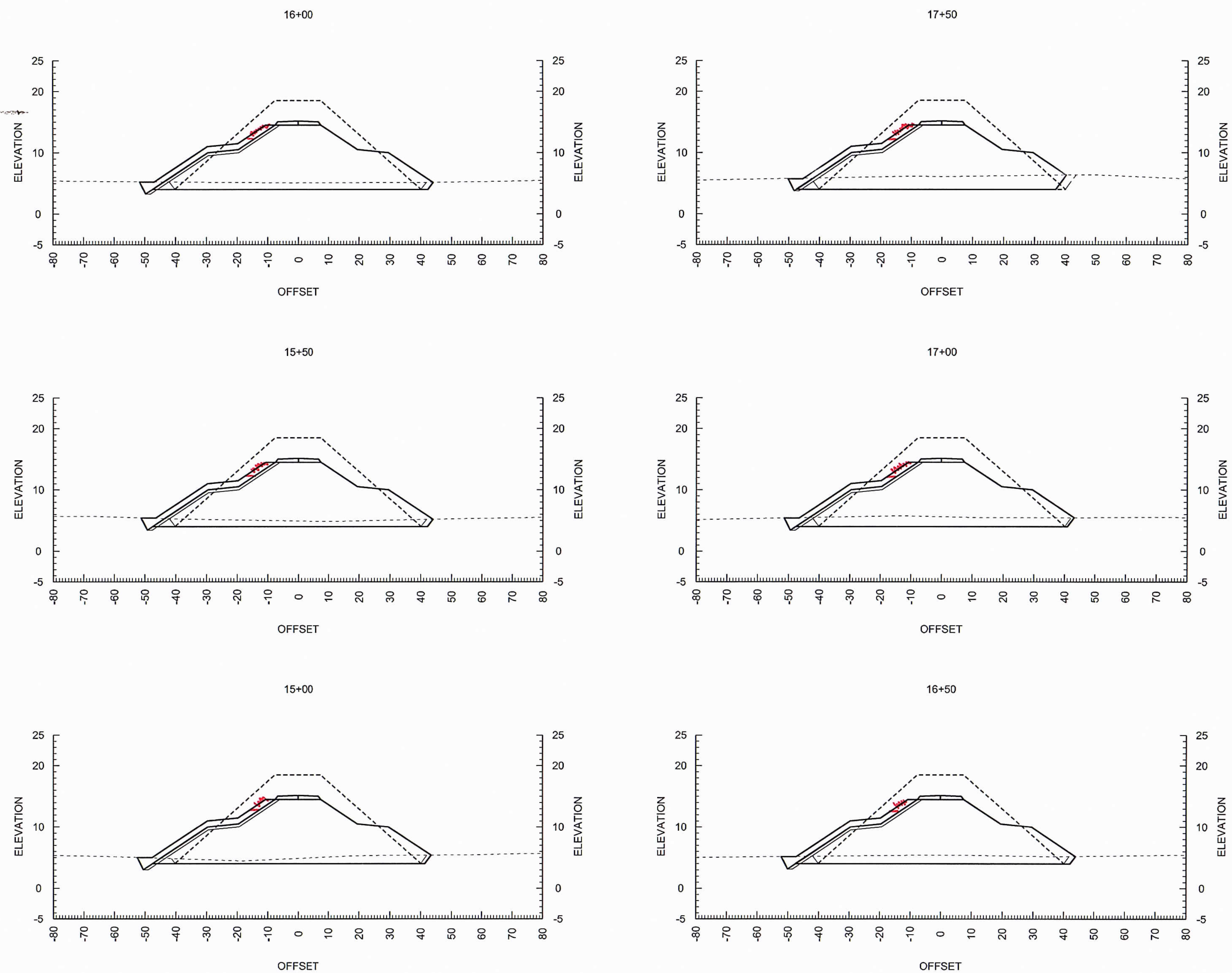
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 5

SHEET IDENTIFICATION
C-309
SHEET 35 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-309.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



1 C-310 CROSS SECTIONS 6

HORZ SCALE IN FEET 0 20 40

VERT SCALE IN FEET 0 10 20

VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers® SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:52:23 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-310.DGN	

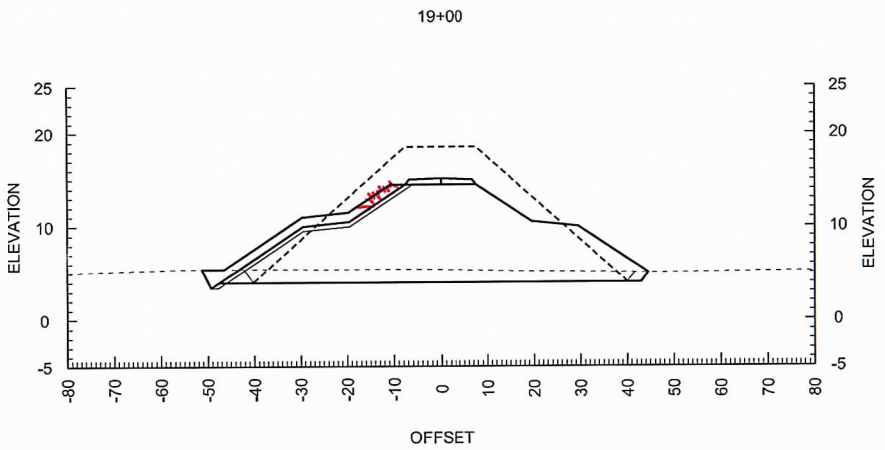
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

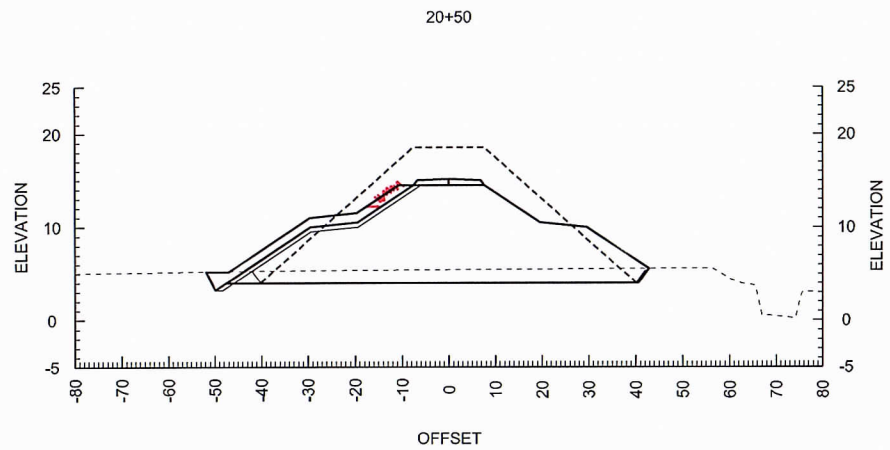
LEVEE CROSS SECTIONS 6

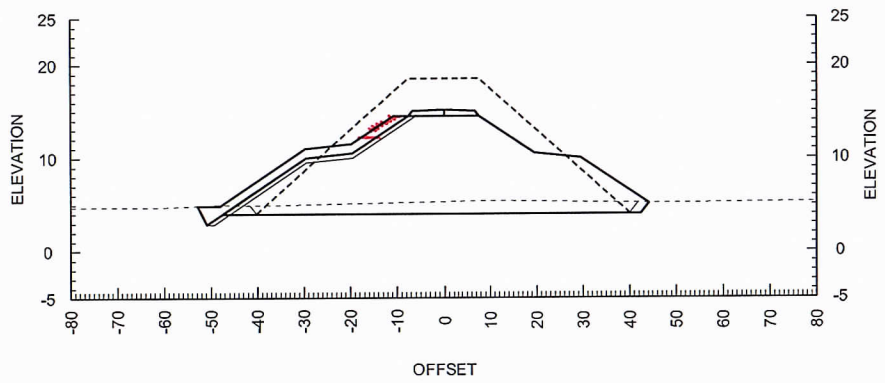
SHEET IDENTIFICATION
C-310
SHEET 36 OF 49

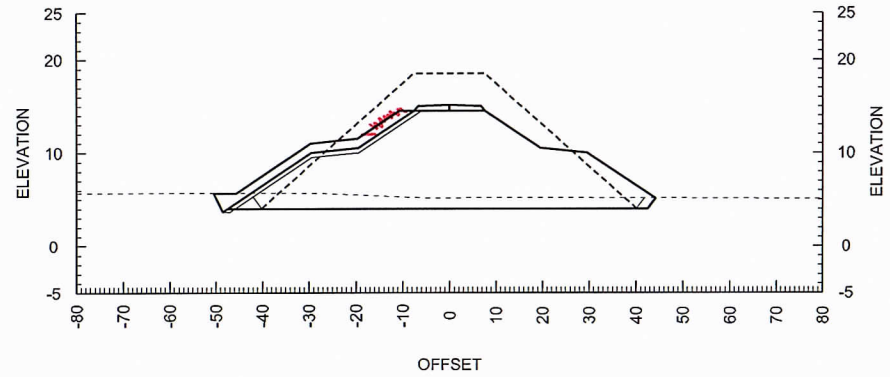
DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-310.DGN

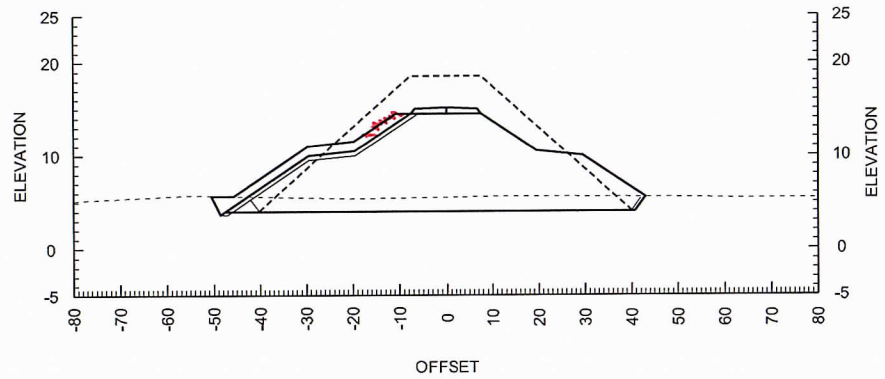
DATE AND TIME PLOTTED: $$$DATE$$$$

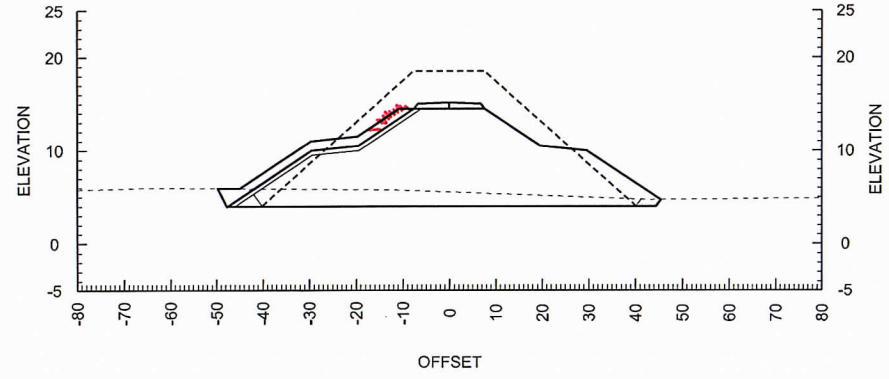












NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

1 / C-311 CROSS SECTIONS 7

HORZ SCALE IN FEET
0 20 40
0 10 20

VERT SCALE IN FEET
VERT EXAGGERATION x2

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DRAWN BY: MDP
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI b
CKD BY: DRK
PLOT TIME: 2:52:50 PM
FILE NAME: PN142460_QTWR-C311.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULLOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN:142460

LEVEE CROSS SECTIONS 7

SHEET IDENTIFICATION
C-311
SHEET 37 OF 49

DESIGN FILE: c:\documents and settings\g3aecdmp\my documents\pwwork\dms51223\PN142460_QTWR-C311.DGN

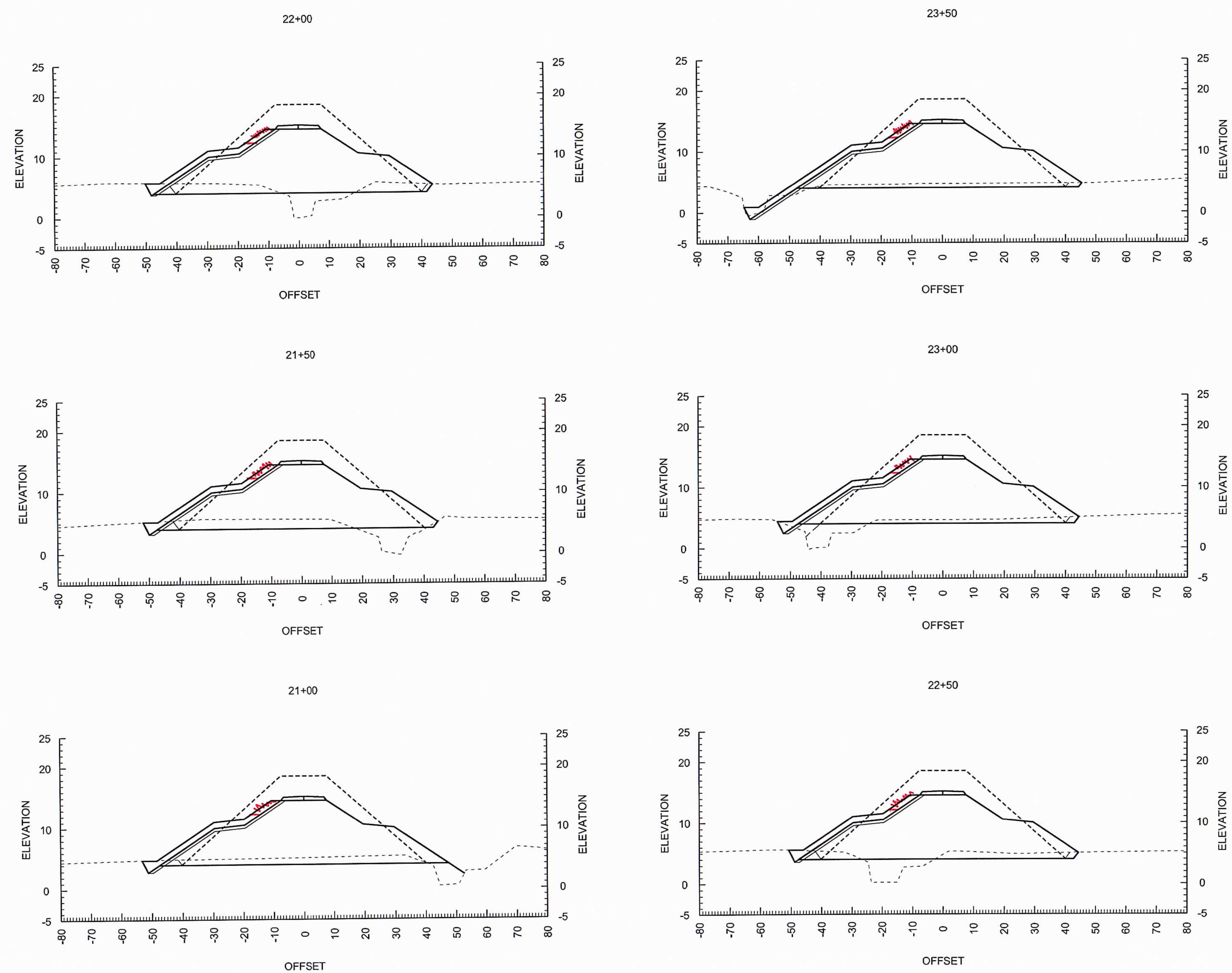
DATE AND TIME PLOTTED: $$$DATE$$$$

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE (short dashed line)
- SURCHARGE (dashed line)
- DAYLIGHTS (long dashed line)
- FINAL LEVEE (solid line)



1 C-312 CROSS SECTIONS 8

HORZ SCALE IN FEET 0 20 40

VERT SCALE IN FEET 0 10 20

VERT EXAGGERATION x2

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC | DATE: 13 JULY 2012
DWN BY: MCP | CKD BY: GKK | SOLICITATION NO.:
SUBMITTED BY: WETZLER | CONTRACT NO.:
PLOT DATE: | PLOT TIME: 2:53:17 PM | FILE NUMBER:
SIZE: ANSI D | FILE NAME: PN142460_QTWR-C-312.DGN

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 8

SHEET IDENTIFICATION
C-312
SHEET 38 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-312.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

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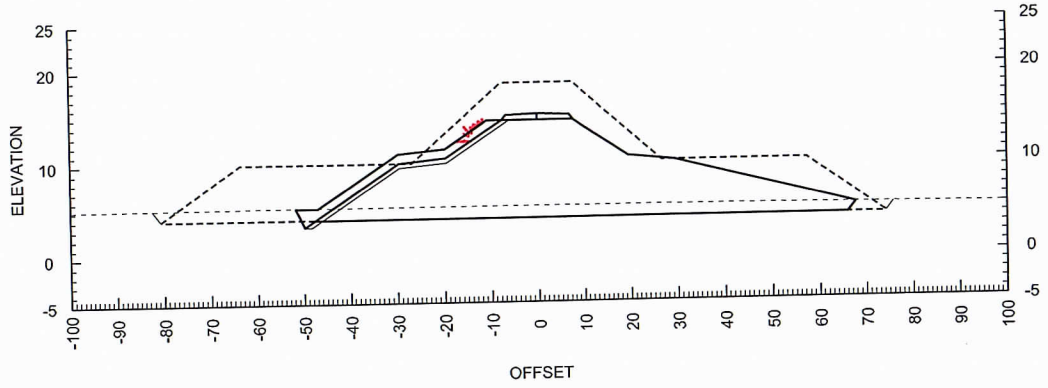

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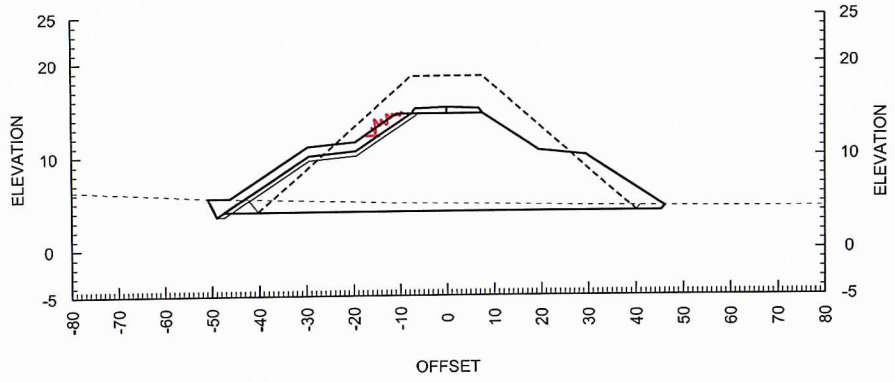

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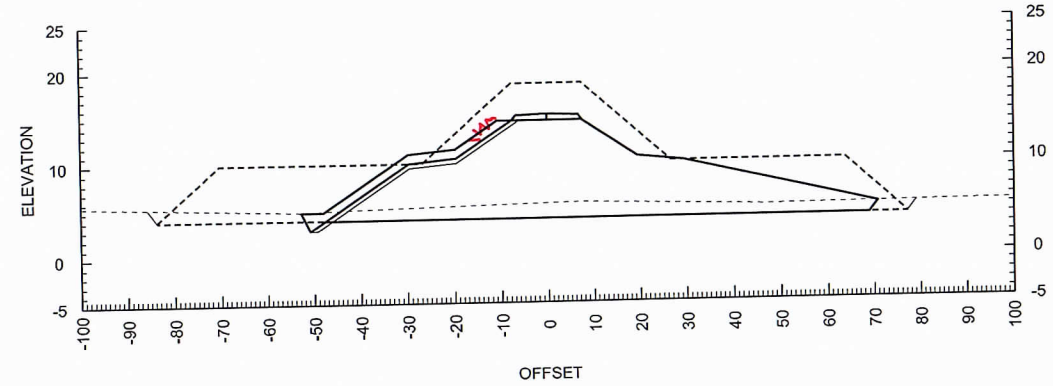

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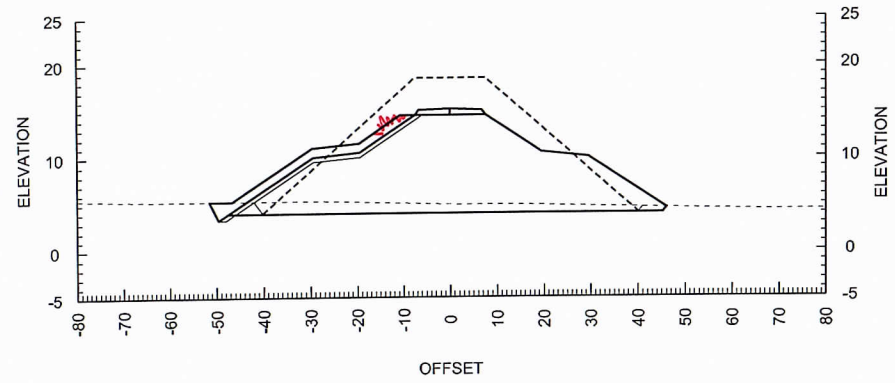

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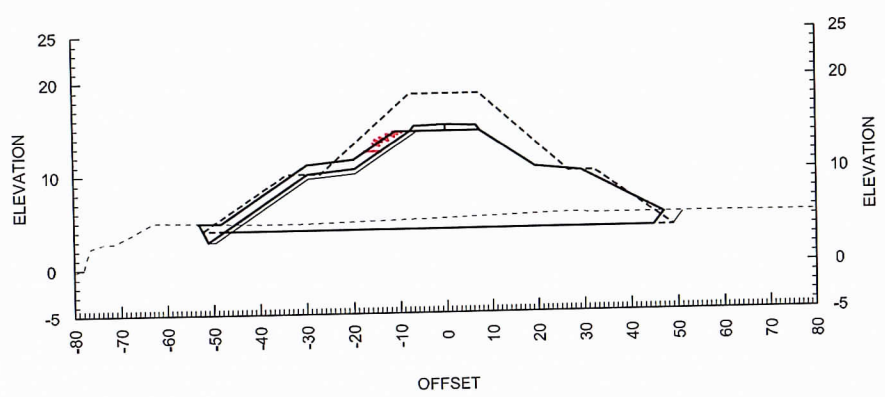

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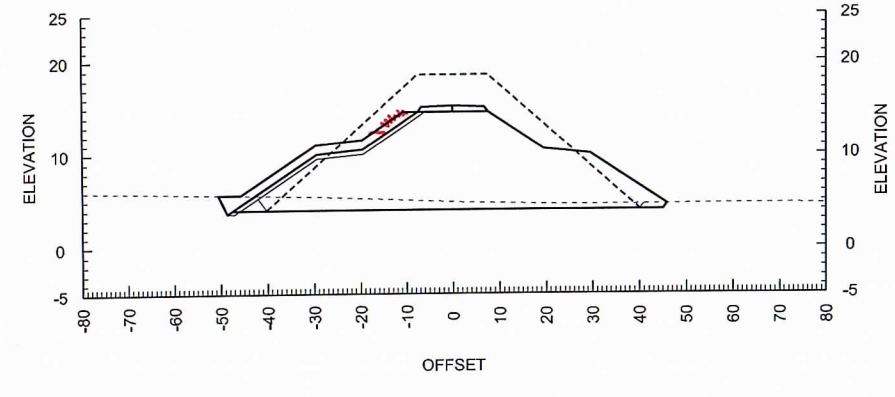

1 C-313 CROSS SECTIONS 9

HORZ SCALE IN FEET
0 20 40
0 10 20

VERT SCALE IN FEET
VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DRAWN BY: MSP
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI D
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT TIME: 2:53:44 PM
FILE NAME: PN142460_QTWR-C313.DGN

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULLOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 9

SHEET IDENTIFICATION
C-313
SHEET 39 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmop\my documents\pwwork\dms51223\PN142460_QTWR-C313.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

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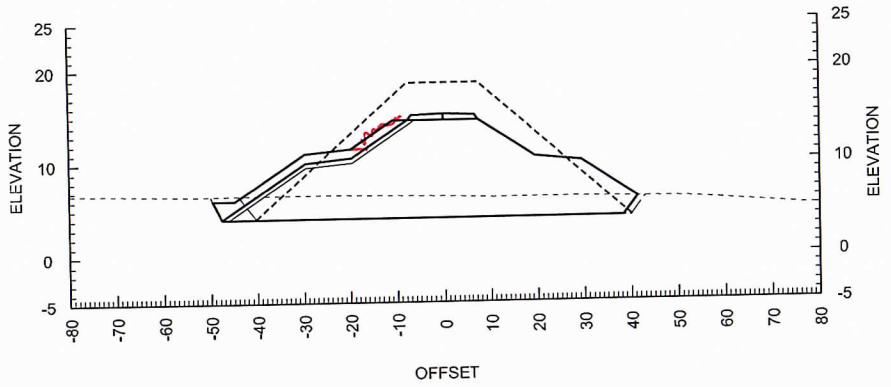

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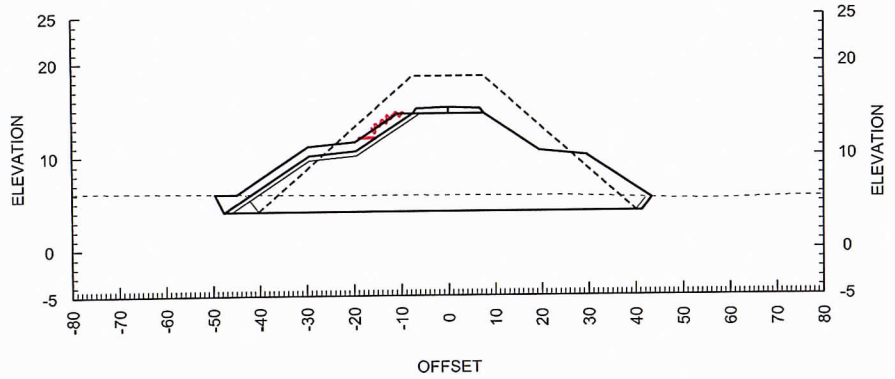

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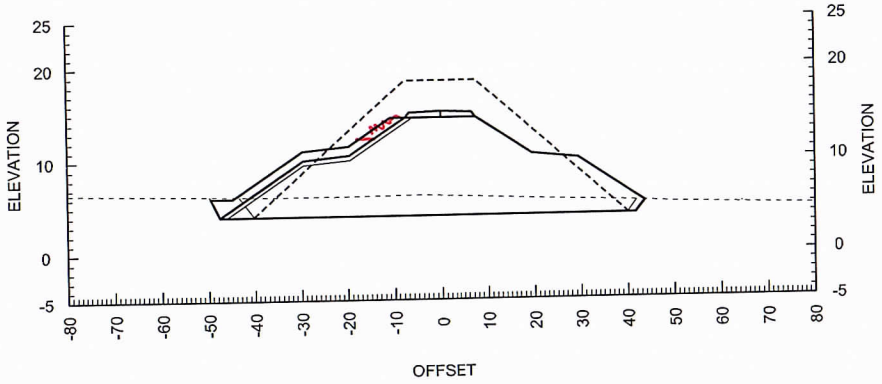

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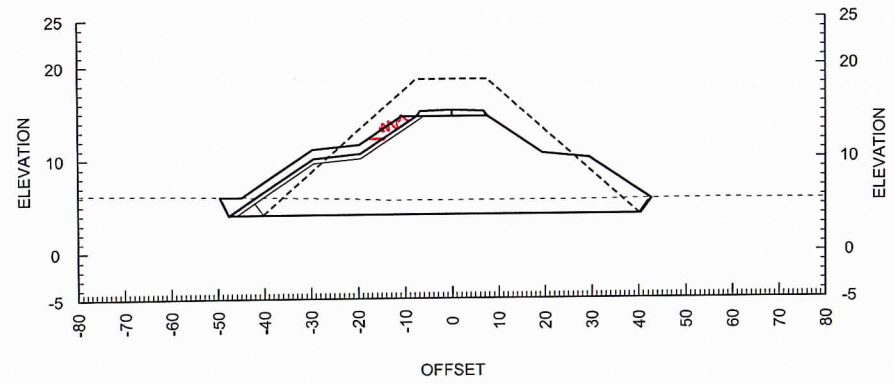

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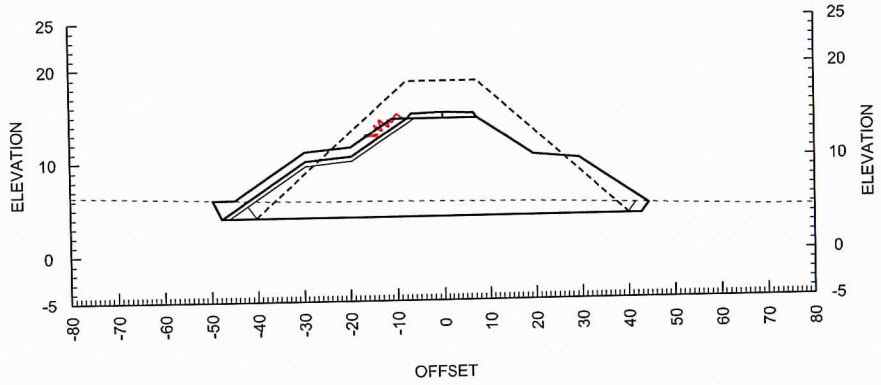

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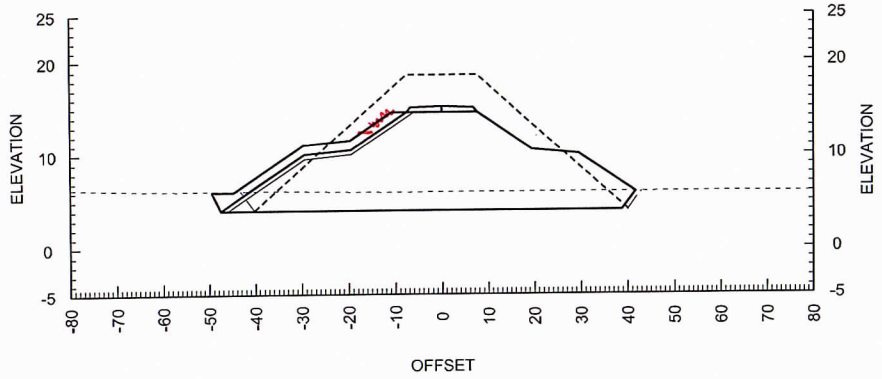


1 C-314 CROSS SECTIONS 10

HORZ SCALE IN FEET
0 20 40
0 10 20

VERT SCALE IN FEET
VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR	MARK	DESCRIPTION	DATE	APPR

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
CKD BY: DSK
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI D
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
PLOT TIME: 2:54:11 PM
FILE NUMBER:
FILE NAME: PN142460_QTWR-C-314.DGN

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

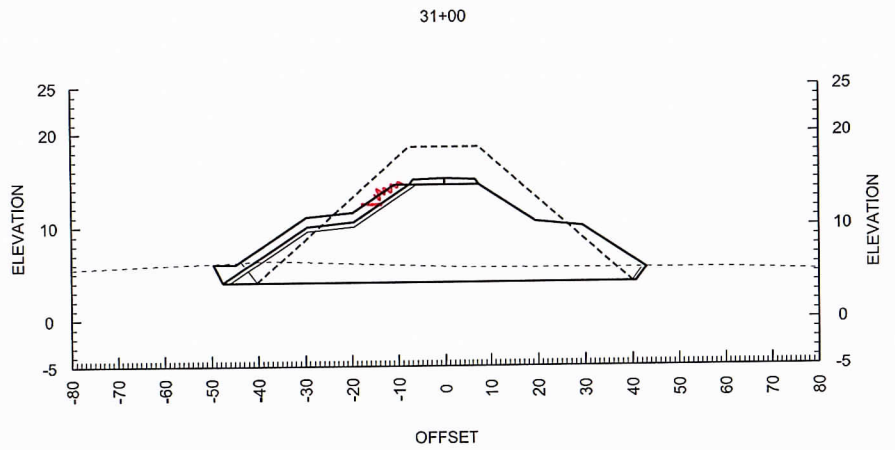
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

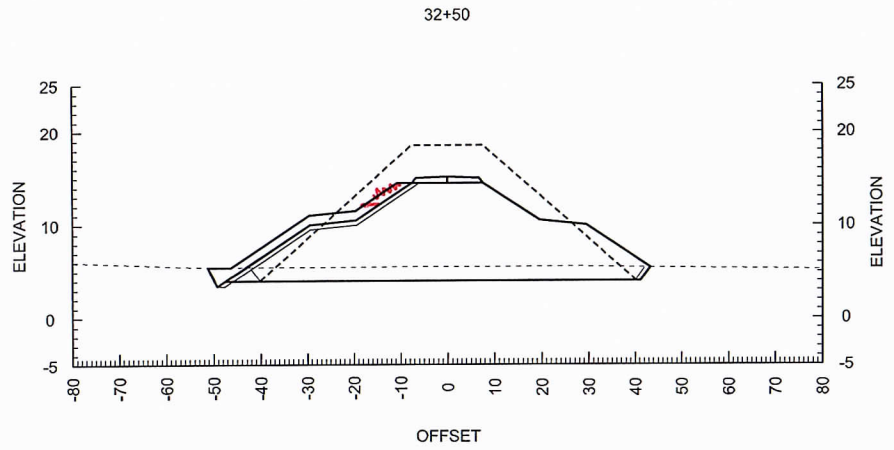
LEVEE CROSS SECTIONS 10

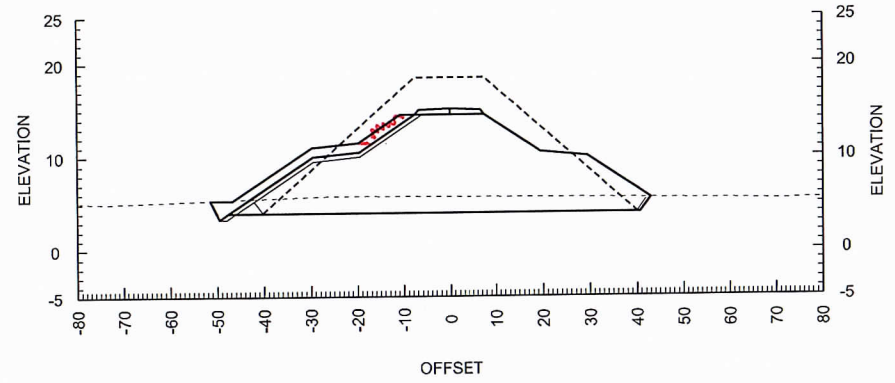
SHEET IDENTIFICATION
C-314
SHEET 40 OF 49

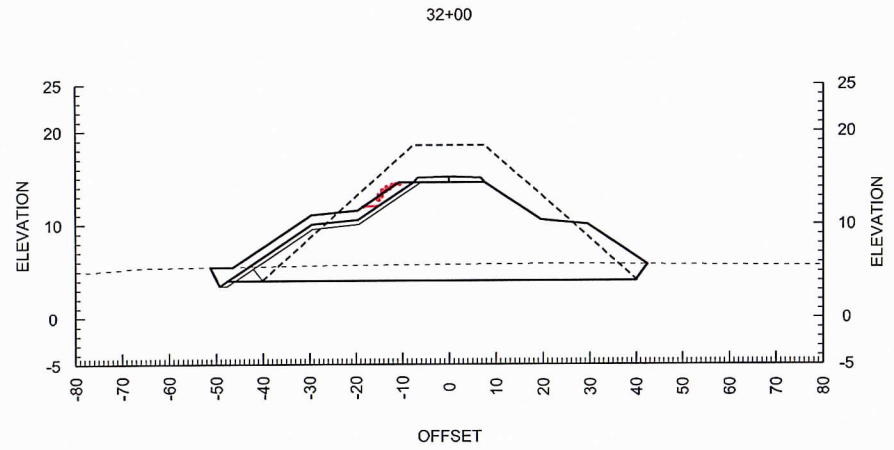
DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms512231\PN142460_QTWR-C-314.DGN

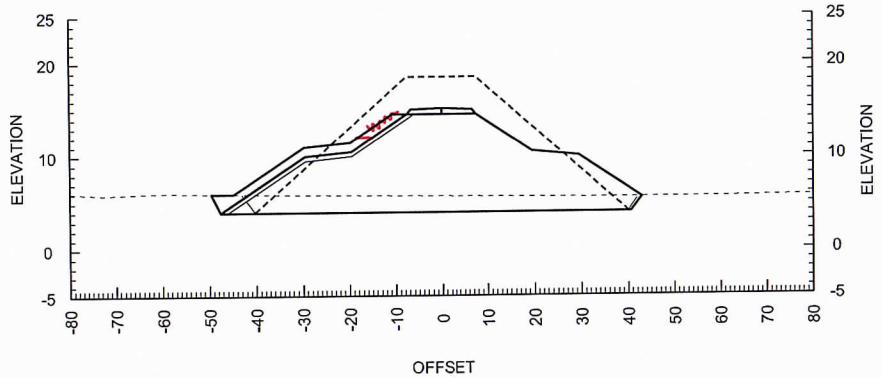
DATE AND TIME PLOTTED: $$$DATE$$$$

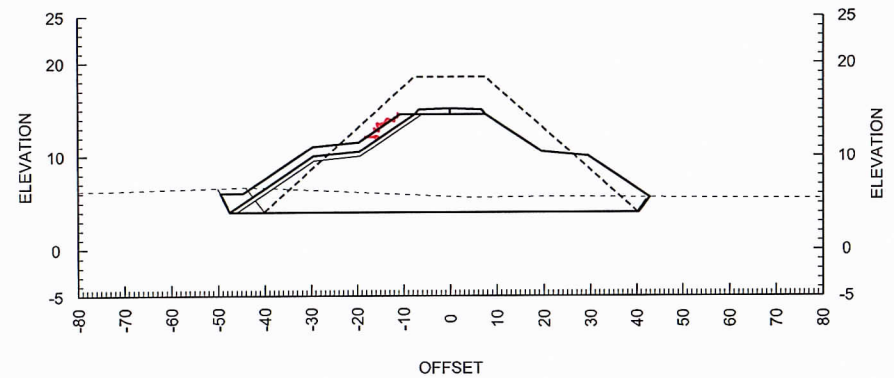












1 C-315 CROSS SECTIONS 11

HORZ SCALE IN FEET
0 20 40
0 10 20
VERT SCALE IN FEET
VERT EXAGGERATION x2

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
CKD BY: DMK
SUBMITTED BY: WETZLER
PLOT DATE: 13 JULY 2012
PLOT TIME: 2:54:39 PM
FILE NUMBER:
CONTRACT NO.:
SOLICITATION NO.:
SIZE: ANSI D
FILE NAME: PN142460_QTWR-C-315.DGN

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

FY12 QWULLOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 11

SHEET IDENTIFICATION
C-315
SHEET 41 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwworkldms\51223\PN142460_QTWR-C-315.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

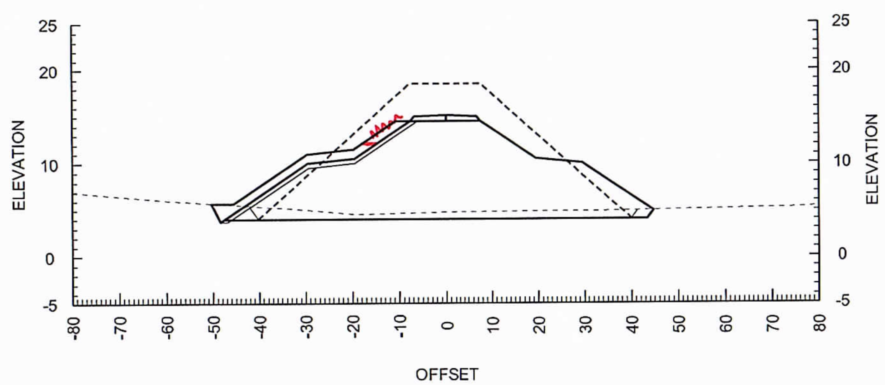
NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

34+00



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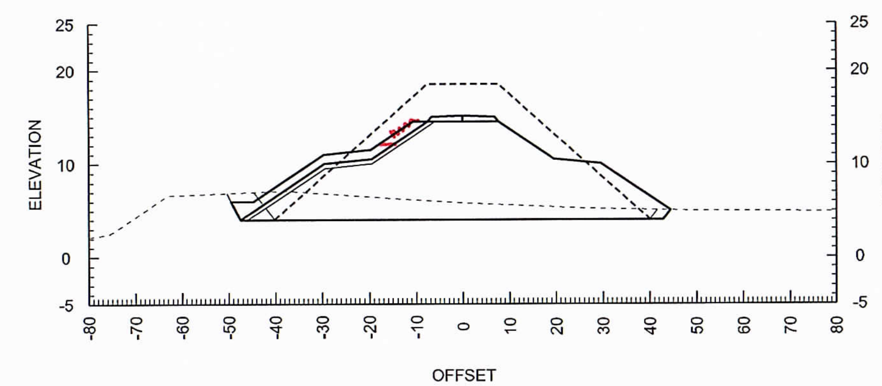

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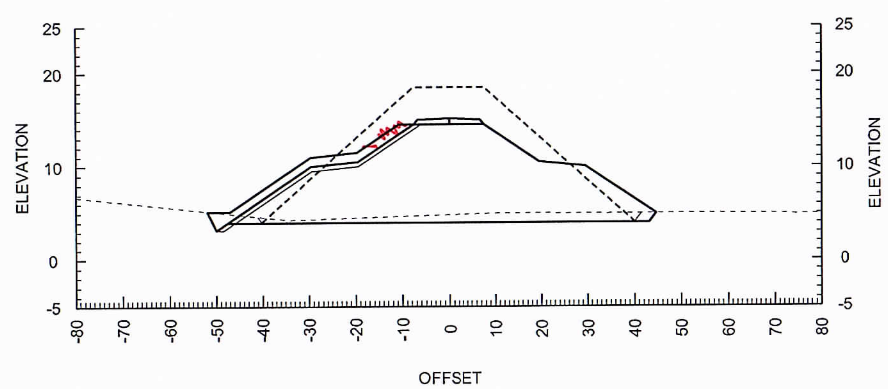

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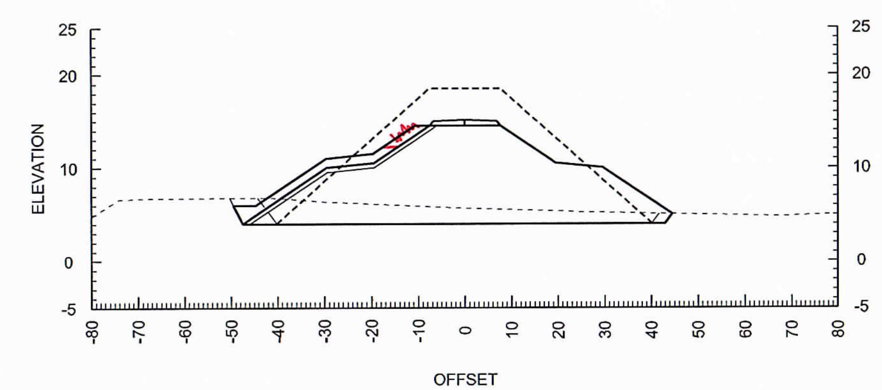

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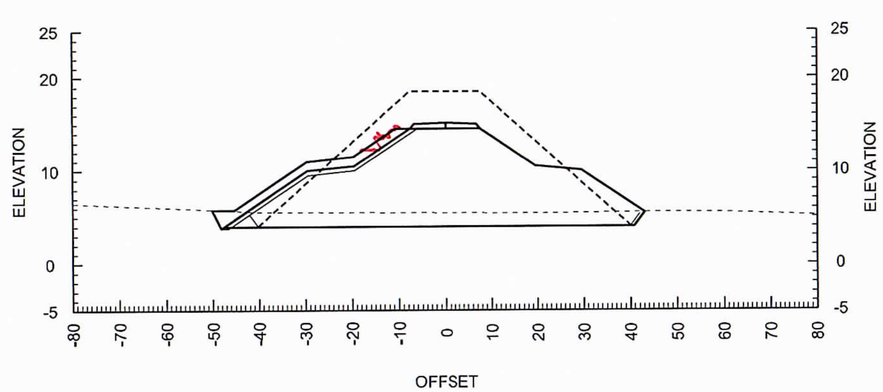

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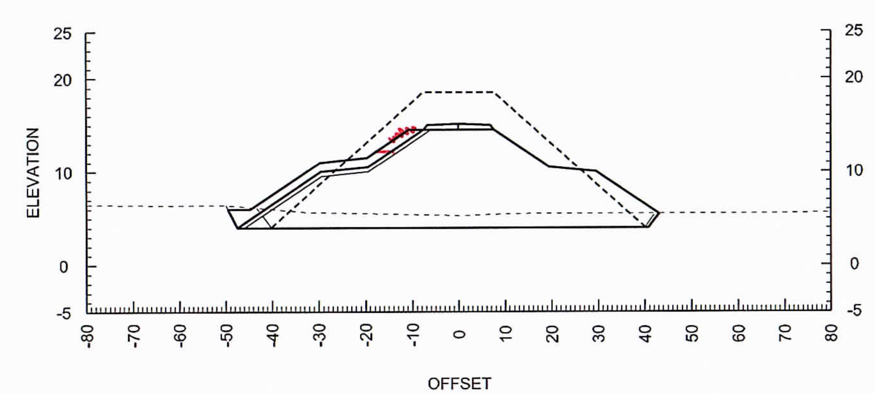

1 / C-316 CROSS SECTIONS 12

HORZ SCALE IN FEET 0 20 40

VERT SCALE IN FEET 0 10 20

VERT EXAGGERATION x2

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC		DATE: 13 JULY 2012
DWN BY: MCP	CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER		CONTRACT NO.:
PLOT DATE:	PLOT TIME: 2:55:05 PM	FILE NUMBER:
SIZE: ANSI D	FILE NAME: PN142460_QTWR-C-316.DGN	

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 12

SHEET IDENTIFICATION
C-316
SHEET 42 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-316.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$

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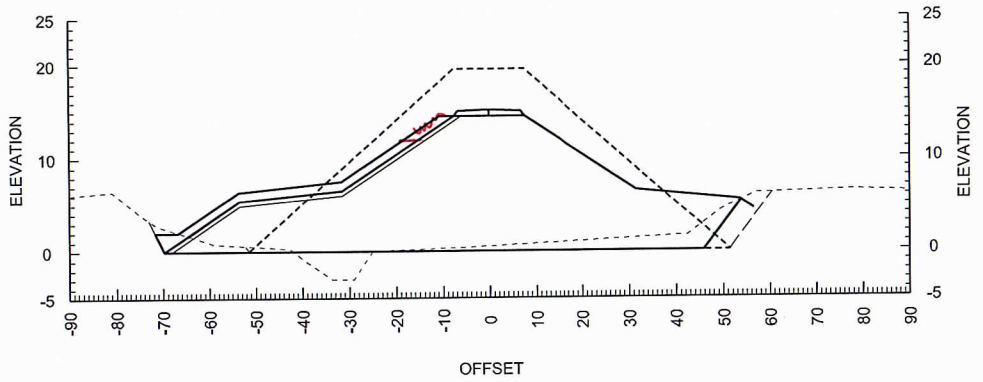

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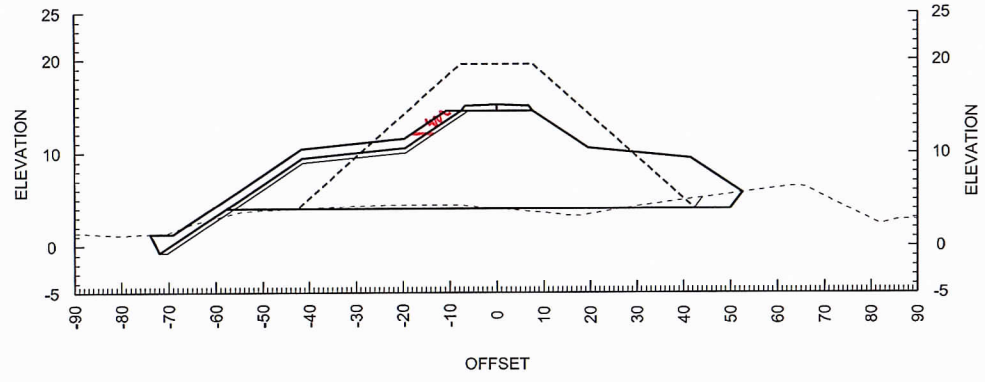

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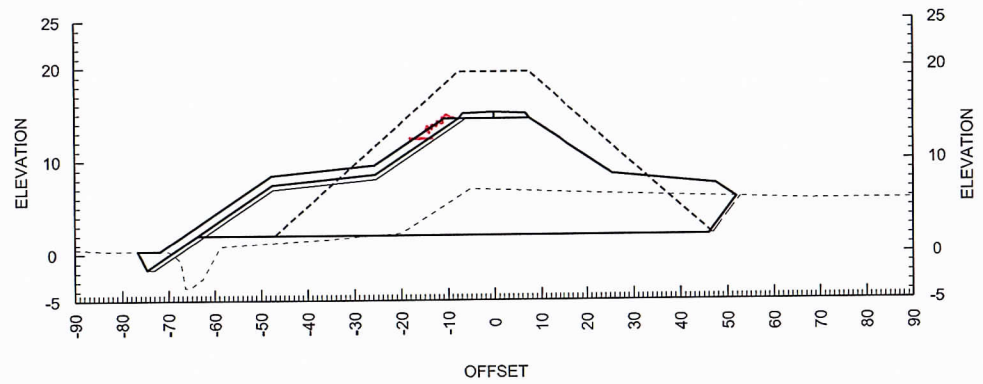

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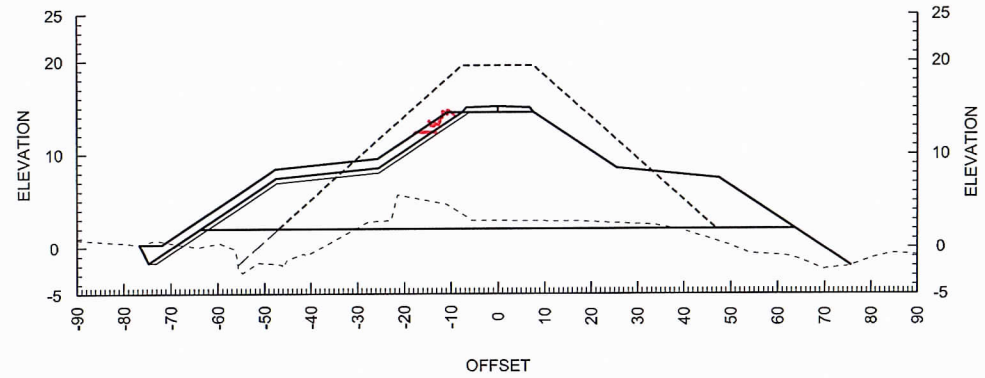

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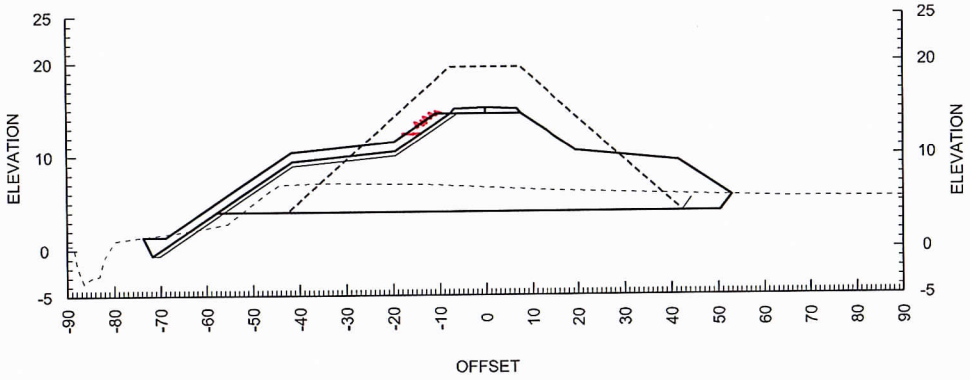

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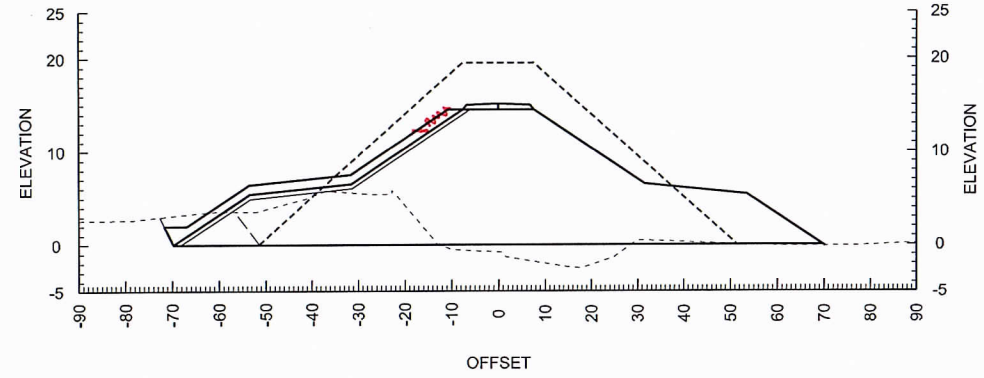


NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

1 C-317 CROSS SECTIONS 13

HORZ SCALE IN FEET
0 20 40
0 10 20

VERT SCALE IN FEET
VERT EXAGGERATION x2

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LEF, KAR, ZPC
DWN BY: MCP
SUBMITTED BY: WILLIS
PLOT DATE: $$$DATE$$$$
SIZE: ANSI D
DATE: 13 JULY 2012
CKD BY: GKK
PLOT TIME: 2:55:32 PM
FILE NAME: PN142460_QTWR-C-317.DGN
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

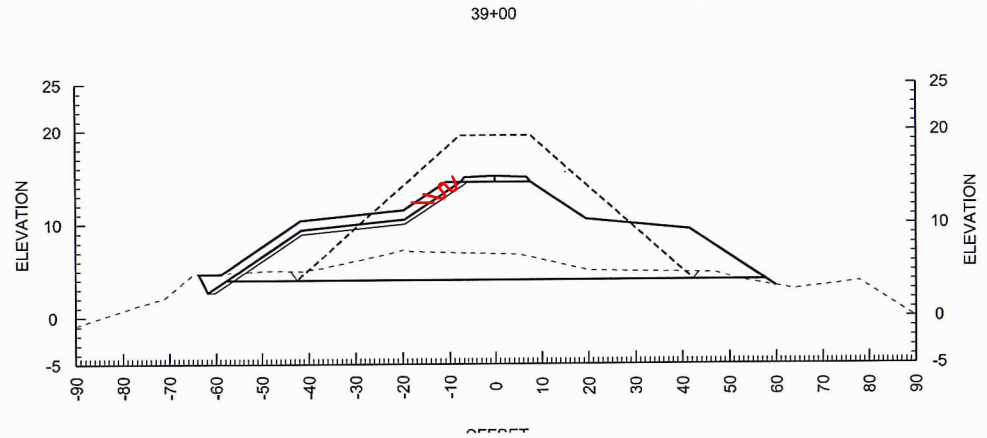
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 13

SHEET IDENTIFICATION
C-317
SHEET 43 OF 49

DESIGN FILE: c:\documents and settings\g3ecofmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-317.DGN

DATE AND TIME PLOTTED: $$$DATE$$$$



NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83 FEET.
2. VERTICAL DATUM: NAVD 88 FEET.
3. SEE SHEETS C-301 AND C-302 FOR ADDITIONAL SURFACE COVERAGE DETAIL.

LEGEND:

- EXISTING GRADE
- SURCHARGE
- DAYLIGHTS
- FINAL LEVEE

1 / C-318 CROSS SECTIONS 14

HORZ SCALE IN FEET
0 20 40
0 10 20
VERT SCALE IN FEET
VERT EXAGGERATION x2

US Army Corps of Engineers®
SEATTLE DISTRICT

MARK	DESCRIPTION	DATE	APPR

MARK	DESCRIPTION	DATE	APPR

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC
DRAWN BY: MCP
SUBMITTED BY: WETZLER
PLOT DATE:
SIZE: ANSI D
CKD BY: DAK
PLOT TIME: 2:55:59 PM
FILE NAME: PN142460_QTWR-C-318.DGN
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

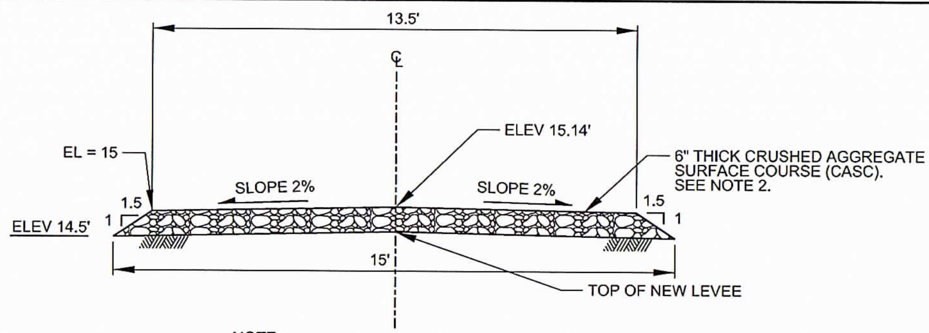
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE CROSS SECTIONS 14

SHEET IDENTIFICATION
C-318
SHEET 44 OF 49

DESIGN FILE: c:\documents and settings\g3ecdmcp\my documents\pwwork\dms51223\PN142460_QTWR-C-3181.DGN

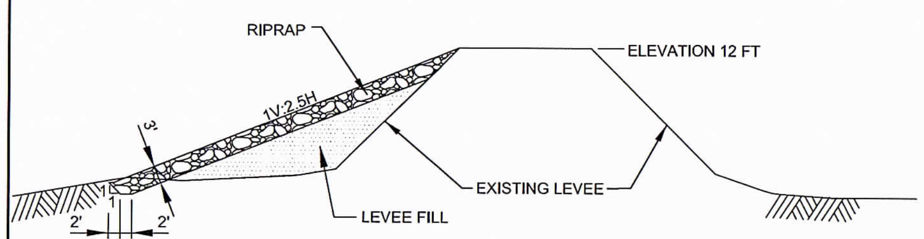
DATE AND TIME PLOTTED: $$$DATE$$$$



NOTE:

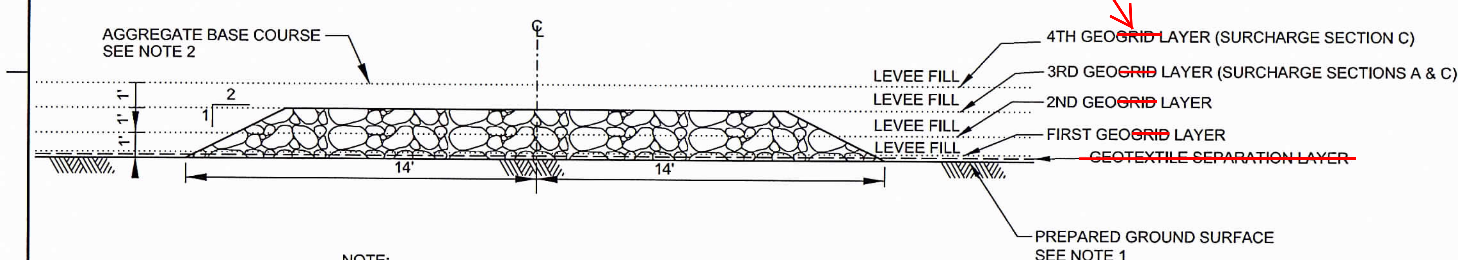
COMPACT 6" THICK CASC INTO TOP OF NEW LEVEE

1 C-302 TYPICAL SECTION NEW LEVEE ROADWAY
NTS



2 C-112 EXISTING LEVEE BACKSLOPE PROTECTION
NTS

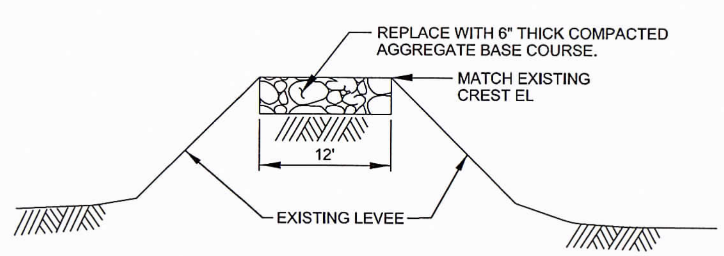
High Strength Geotextile all layers



NOTE:

SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR SEQUENCING AND COMPACTION REQUIREMENTS

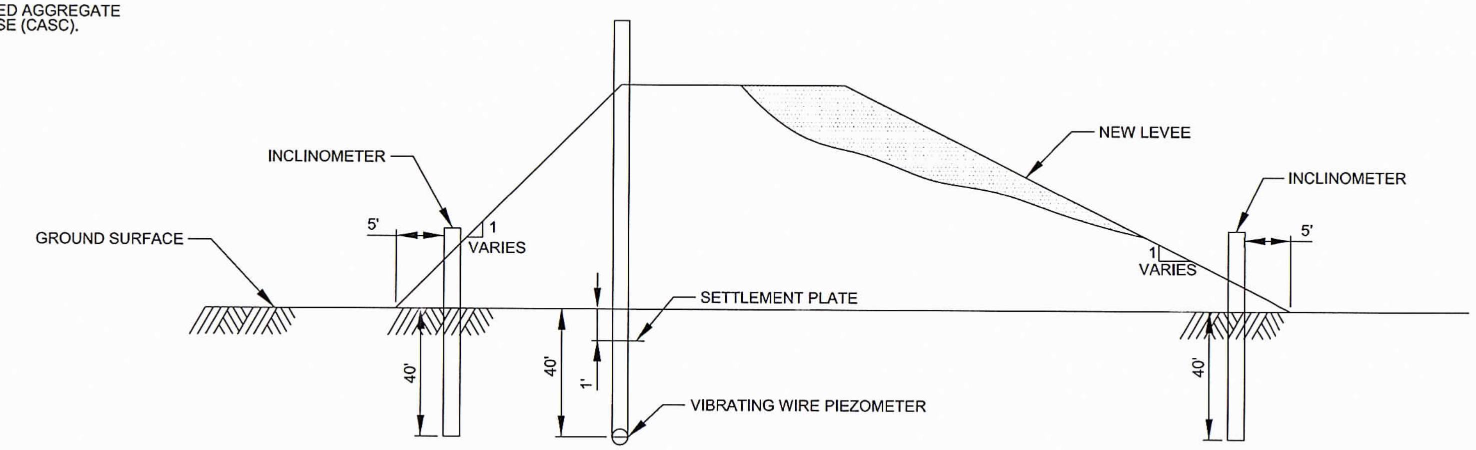
3 C-301 GEOGRID/TEXTILE PLACEMENT
NTS



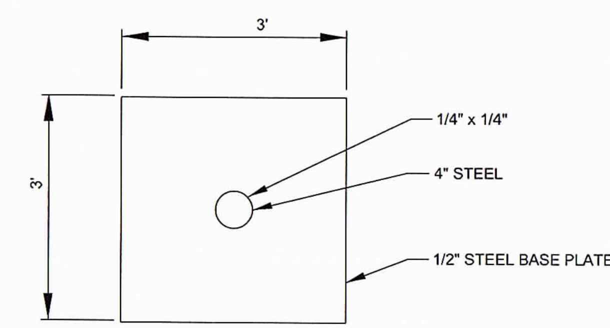
NOTE:

IF IN-SITU SURFACE MATERIALS ARE COARSER THAN SPECIFIED CONSULT ENGINEER TO ADJUST EXTENT OF EROSION CONTROL.

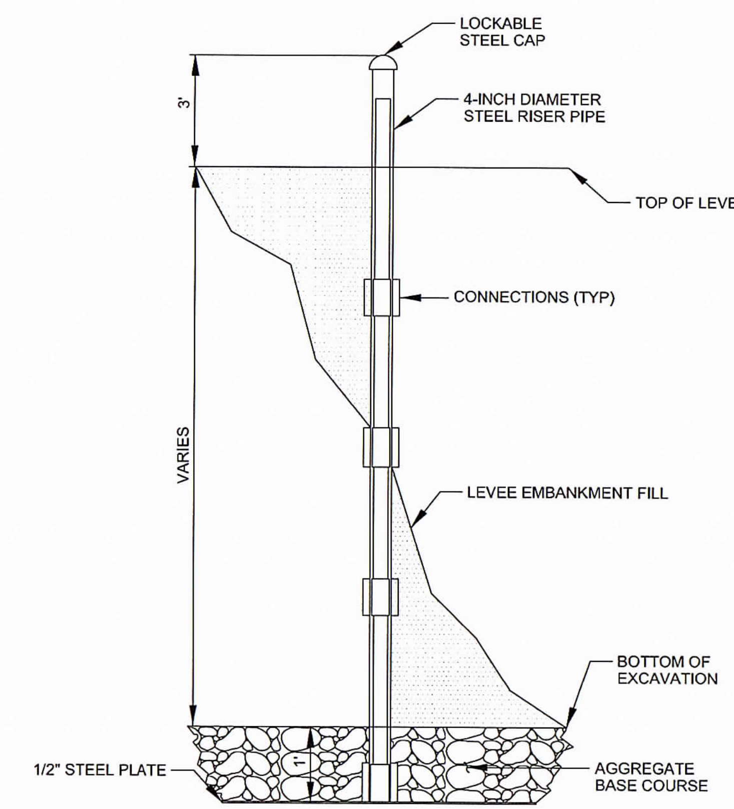
4 C-112 EXISTING LEVEE EROSION CONTROL
NTS



5 INSTRUMENTATION FOR NEW LEVEE
NTS
SEE NOTE 3



6 TYPICAL STEEL BASE PLATE
NTS
SEE NOTE 3



7 TYPICAL INSTRUMENT CASING
NTS
SEE NOTE 3

NOTES:

1. LEVEE EXCAVATION TO BE EXCAVATED WITH HYDRAULIC EXCAVATOR EQUIPPED WITH A SMOOTH MOLD BAR BUCKET. DISTURB BOTTOM OF LEVEE EXCAVATION AS LITTLE AS POSSIBLE DURING EXCAVATION. ENSURE EXCAVATION ISFREE OF WATER BEFORE AND DURING PLACEMENT OFGEOTEXTILE, GEOGRID, SELECT FILL AND BALAST.
2. SEE SPECIFICATION SECTION 35 31 19 STONE SLOPE PROTECTION FOR STRUCTURES FOR ROCK GRADATION.
3. SEE SPECIFICATION 35 41 00 LEVEE CONSTRUCTION FOR INSTRUMENTATION LOCATION SUBMITTAL REQUIREMENTS.

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

US Army Corps of Engineers
SEATTLE DISTRICT

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
SEATTLE, WASHINGTON

DESIGNED BY: LEF, KAR, ZPC	DATE: 13 JULY 2012
DWN BY: MCP / CKD BY: GKK	SOLICITATION NO.:
SUBMITTED BY: WETZLER	CONTRACT NO.:
PLOT DATE: / PLOT TIME: 3:33:50 PM	FILE NUMBER:
SIZE: ANSI D / FILE NAME: PN142460_QTWR-C-501DT1.DGN	

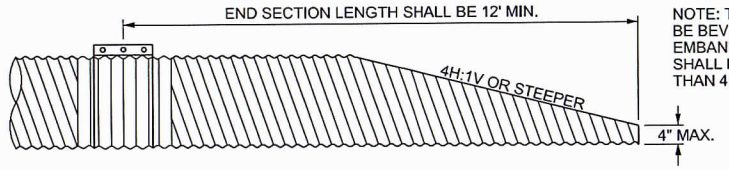
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

LEVEE DETAILS 1

SHEET IDENTIFICATION
C-501
SHEET 45 OF 49

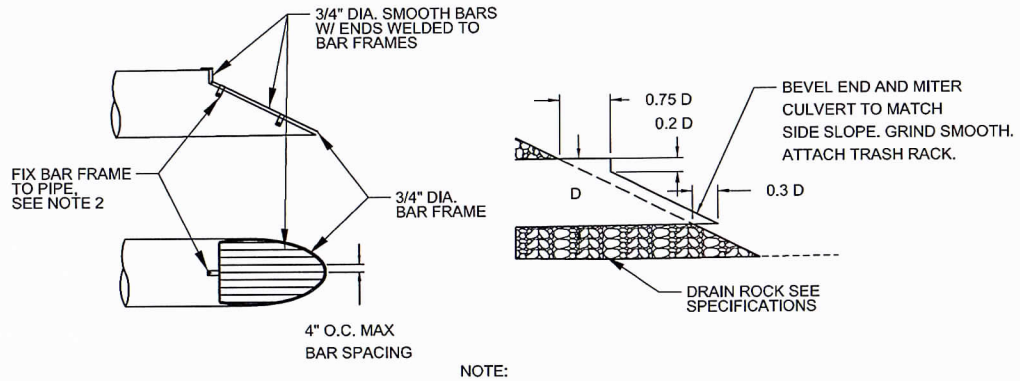
DATE AND TIME PLOTTED: $$$DATE$$$$

DESIGN FILE: c:\users\g3ecdlf9\documents\cenws01\dms51223\PN142460_QTWR-C-501DT1.DGN



NOTE: THE CULVERT ENDS SHALL BE BEVELED TO MATCH THE EMBANKMENT OR DITCH SLOPE AND SHALL NOT BE BEVELED FLATTER THAN 4H:1V.

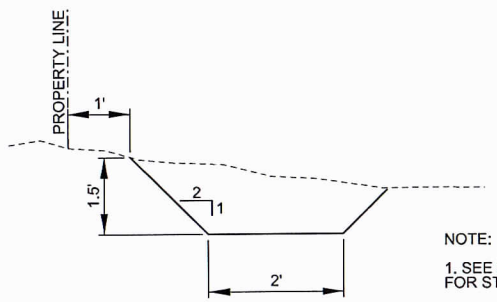
1 C-108 BEVELED END SECTION
NTS
C-112



NOTE:

FIX TRASH RACK TO CULVERT INLET USING 2" x 5" ANCHOR STRIPS WELDED TO 3/4" DIA. BAR FRAME AT 4 PLACES ON THE MITERED SECTION, AND ONE PLACE ON THE BEVELED SECTION. SPACED UNIFORMLY. FASTEN WITH 1/2 " GALVANIZED NUTS AND BOLTS.

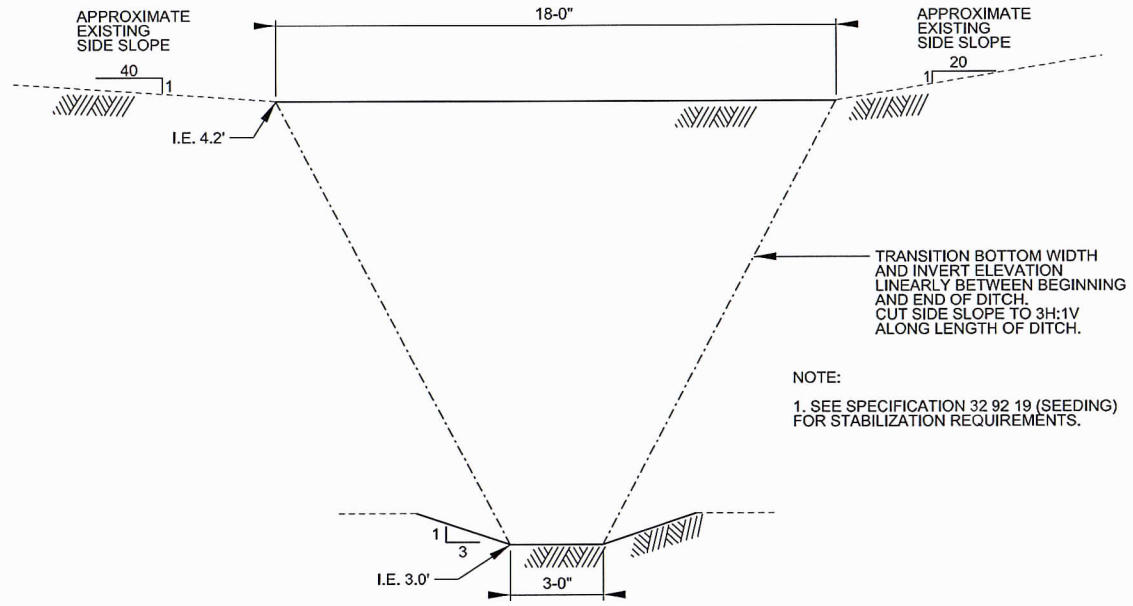
2 C-108 INLET PROTECTION
NTS
C-112



NOTE:

1. SEE SPECIFICATION 32 92 19 (SEEDING) FOR STABILIZATION REQUIREMENTS.

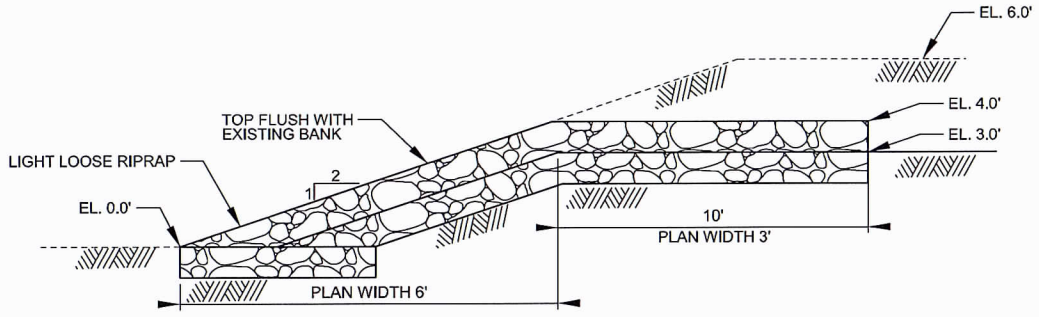
3 C-108 NORTH DRAINAGE DITCH
NTS



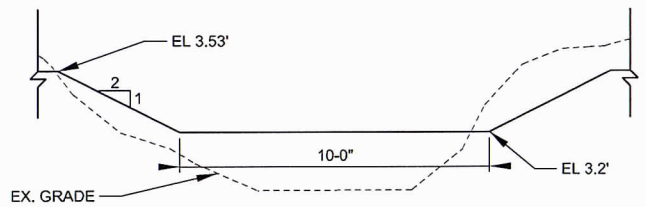
NOTE:

1. SEE SPECIFICATION 32 92 19 (SEEDING) FOR STABILIZATION REQUIREMENTS.

4 C-111 SOUTH DRAINAGE DITCH
NTS
C-112



SOUTH DRAINAGE DITCH RIPRAP ENERGY DISSIPATOR
5 C-112 NTS



NOTE:

1. SEE SPECIFICATION 32 92 19 SEEDING FOR STABILIZATION REQUIREMENTS.

6 C-113 WATER QUALITY BERM (NIC)
NTS
C-114

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SUBMITTED BY: WETZLER
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PLOT TIME: 2:57:20 PM
FILE NAME: PN142460_QTWR-C-504DT4.DGN
SIZE: ANSI D
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

U.S. ARMY CORPS OF ENGINEERS
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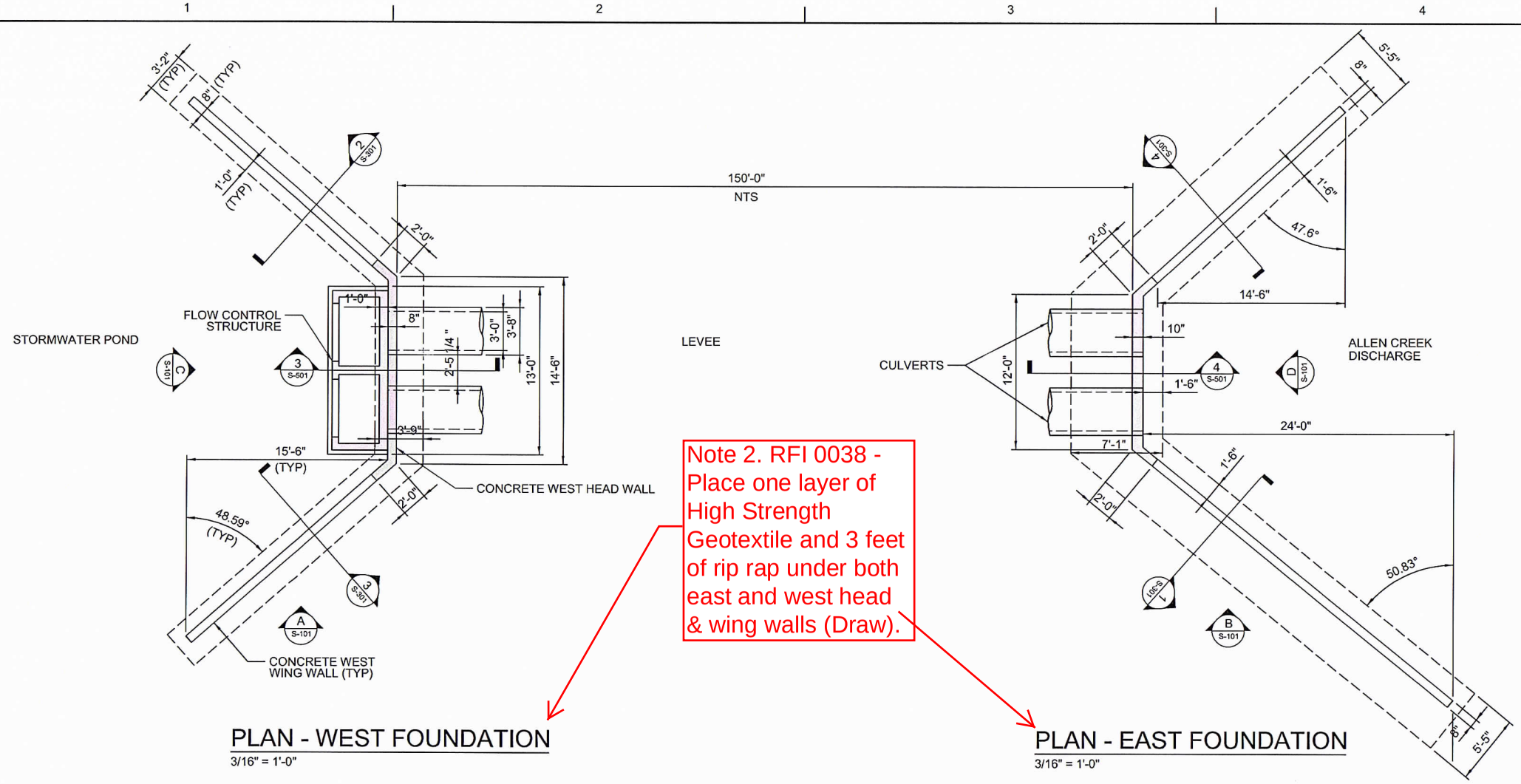
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

DRAINAGE DETAILS

SHEET IDENTIFICATION
C-502
SHEET 46 OF 49

DESIGN FILE: c:\documents and settings\g3aecdmcp\my documents\pwwork\dms512231\PN142460_QTWR-C-504DT4.DGN

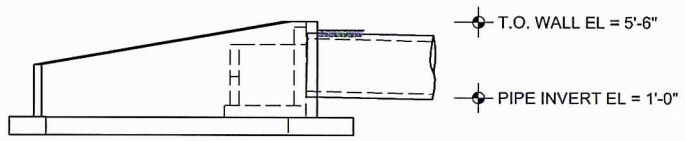
DATE AND TIME PLOTTED: $$$DATE$$$$



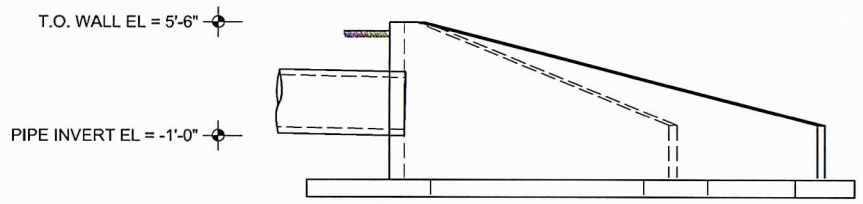
Note 2. RFI 0038 - Place one layer of High Strength Geotextile and 3 feet of rip rap under both east and west head & wing walls (Draw).

PLAN - WEST FOUNDATION
3/16" = 1'-0"

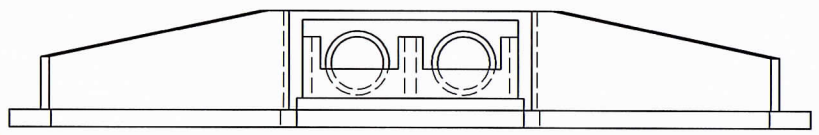
PLAN - EAST FOUNDATION
3/16" = 1'-0"



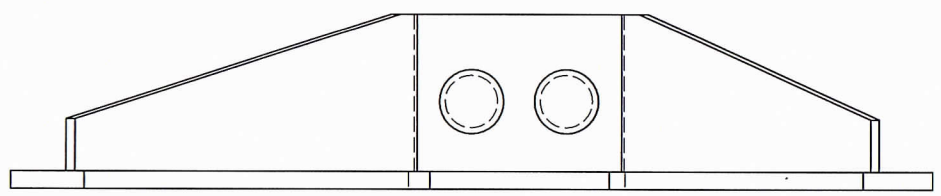
A S-101 SOUTH ELEVATION - WEST WING & HEAD WALL
3/16" = 1'-0"



B S-101 SOUTH ELEVATION - EAST WING & HEAD WALL
3/16" = 1'-0"



C S-101 WEST ELEVATION - WEST WING & HEAD WALL
3/16" = 1'-0"



D S-101 EAST ELEVATION - EAST WING & HEAD WALL
3/16" = 1'-0"

NOTE: SEE SHEET S-501 AND S-502 FOR WING AND HEAD WALL DETAILS AND SECTIONS

2' 1' 0 4' 8'
SCALE: 3/16" = 1'-0"

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MARK	DESCRIPTION	DATE	APPR

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SEATTLE, WASHINGTON

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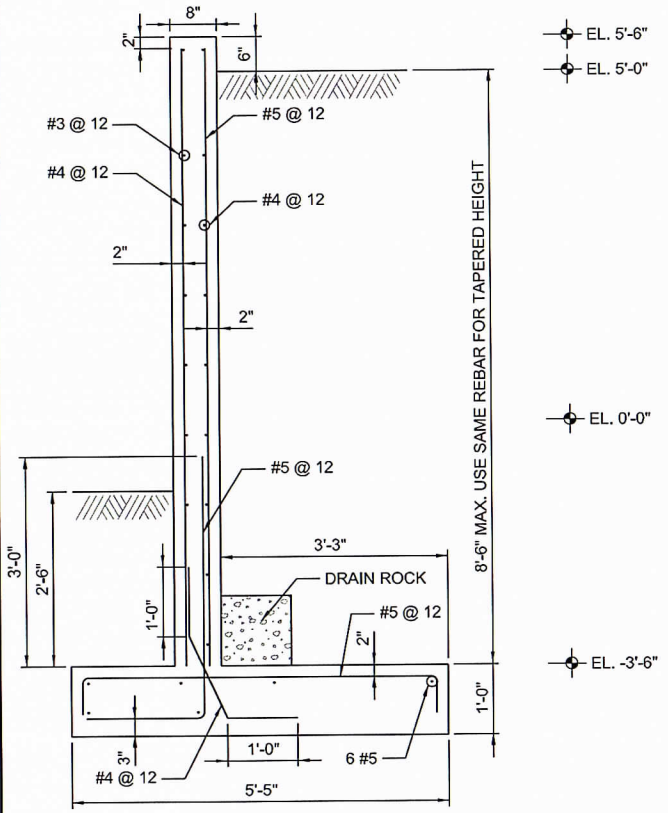
SUBMITTED BY: WEITZLER
DATE: 13 JULY 2012
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT TIME: 24 HOUR
PLOT DATE:
SIZE: ANSI D
FILE NAME: PN142460_QTWR-S-101SP.DGN

FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

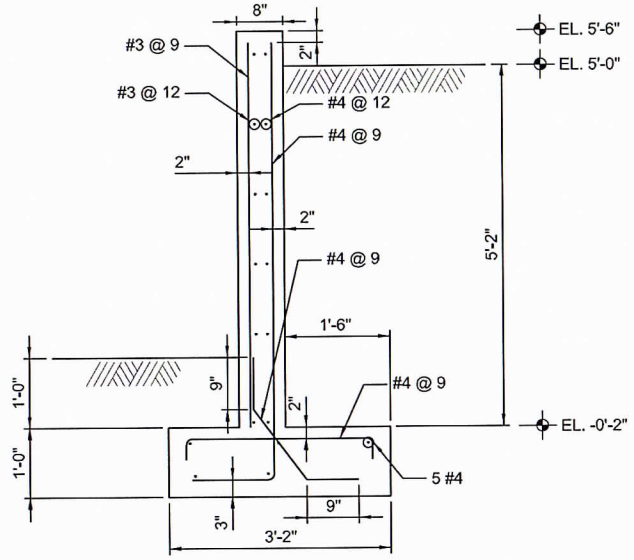
HEAD AND WING WALL STRUCTURAL PLANS

SHEET IDENTIFICATION
S-101
SHEET 47 OF 49

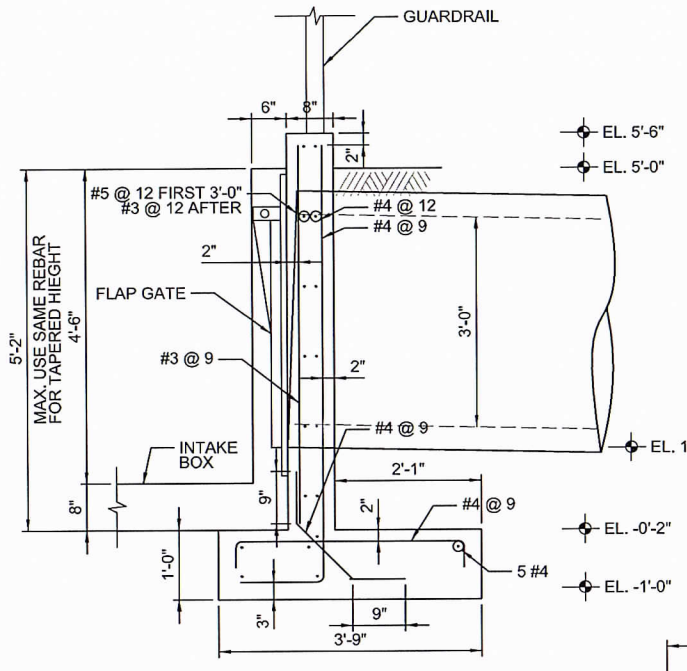
DESIGN FILE: c:\temp\cenws01\dms57438\PN142460_QTWR-S-101SP.DGN
DATE AND TIME PLOTTED: $$$DATE$$$$



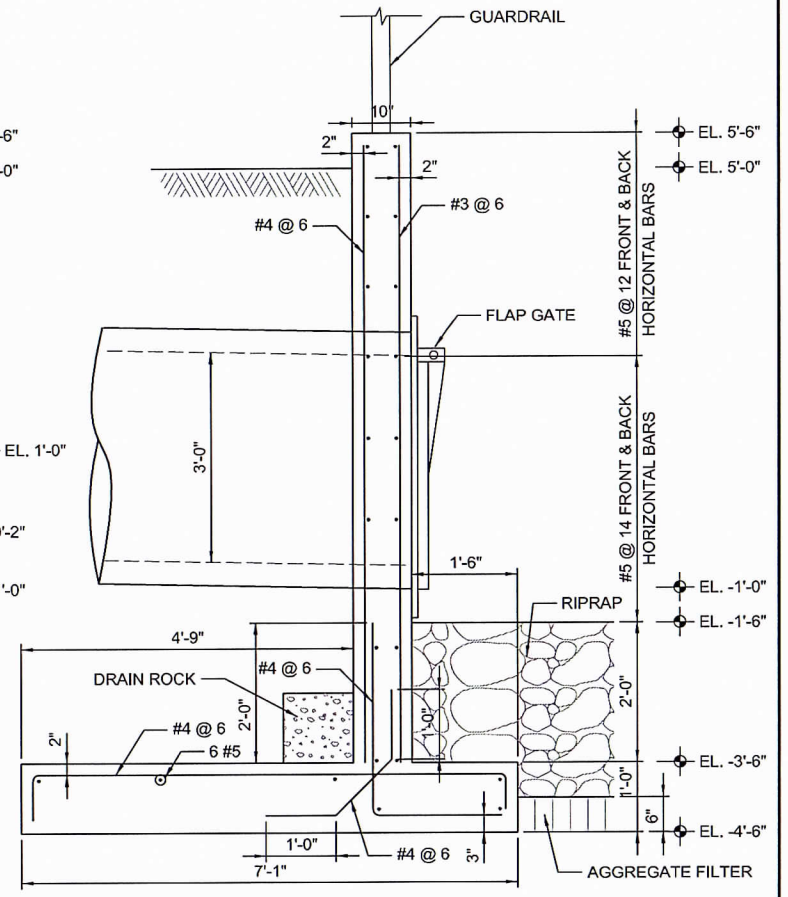
1 EAST WING WALL SECTION
3/4' = 1'-0"



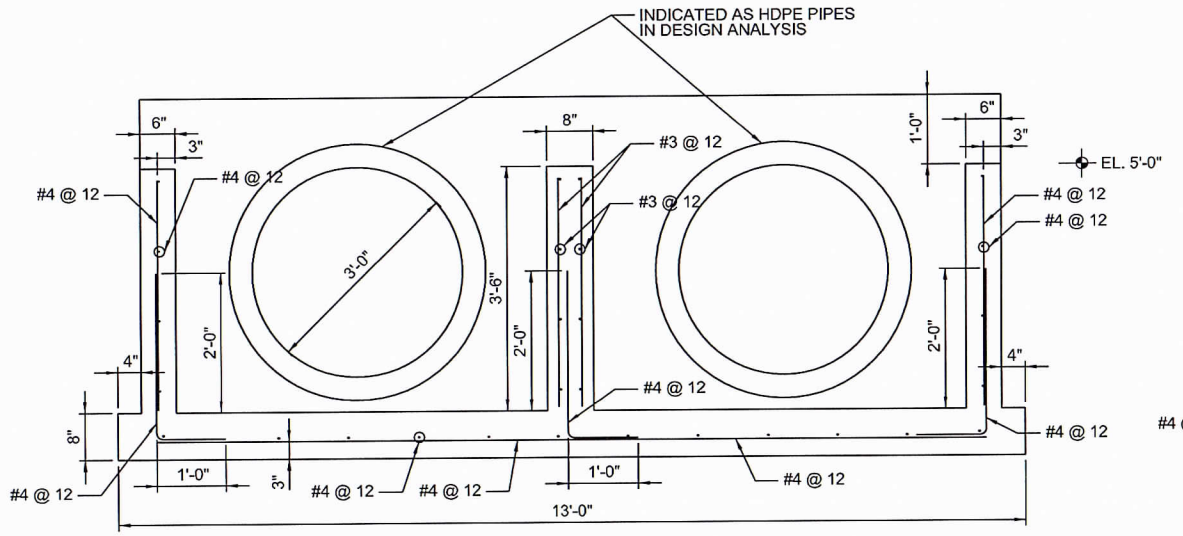
2 WEST WING WALL SECTION
3/4' = 1'-0"



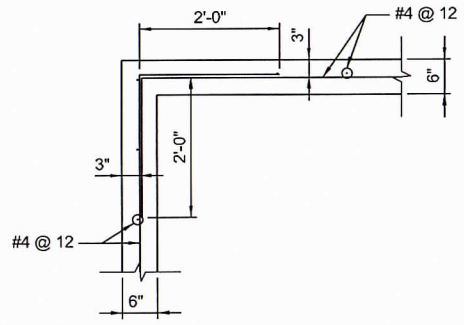
3 WEST HEAD WALL SECTION
3/4' = 1'-0"



4 EAST HEAD WALL SECTION
3/4' = 1'-0"



ELEVATION



CORNER PLAN

NOTES:

1. ALL REBARS MUST STOP 2" FROM HOLE FOR THE CULVERT PIPE. ADD 2 #3 BARS 3'-0" LONG AROUND THE 3'-0" CULVERT OPENING, 2" FROM THE HOLE AS SHOWN IN THIS FIGURE IN HEAD WALL AND INTAKE BOX:

2. ADD BOND BREAKER BETWEEN PRECAST PIPES AND CAST IN PLACE HEAD WALLS.

5 INTAKE BOX STRUCTURE CAST IN PLACE - OPTION
3/4' = 1'-0"

STRUCTURAL NOTES:

1. CONCRETE COMPRESSION STRENGTH = 3000 PSI.
2. REINFORCING STEEL YIELD STRENGTH = 60,000 PSI
3. PROVIDE PIPE AND HEAD WALL CONNECTION DETAIL FOR ENGINEER APPROVAL.

2' 1' 0 2'

SCALE: ¾"= 1'-0"

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PLOT DATE:
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DATE: 13 JULY 2012
CKD BY: CAK
PLOT TIME: 8:14:28 AM
FILE NAME: PN142460_QTWR-S-301SC1.DGN
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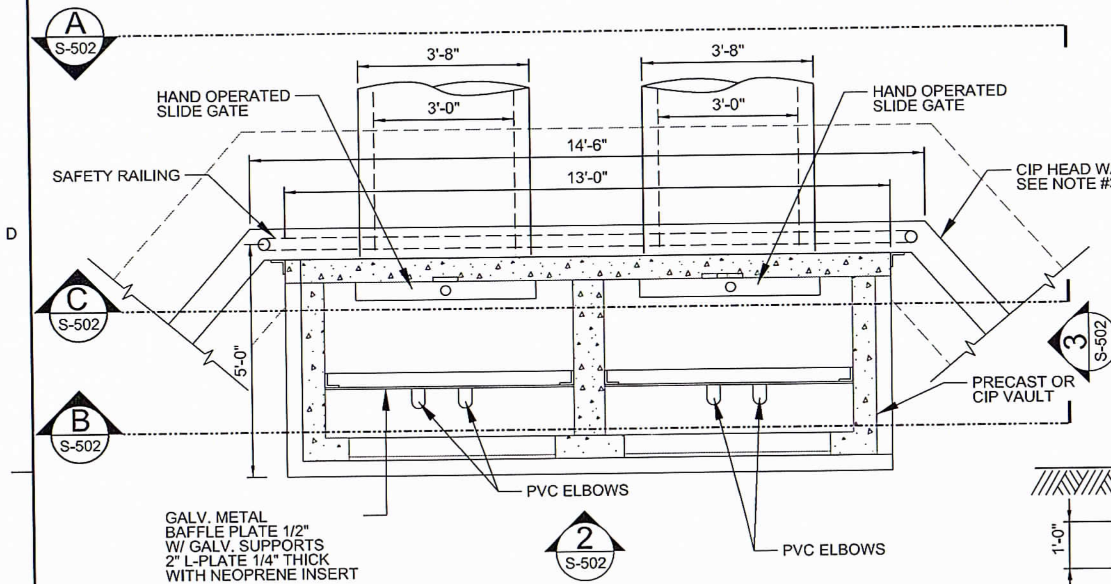
FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

STRUCTURAL SECTIONS 1
HEAD AND WING WALLS

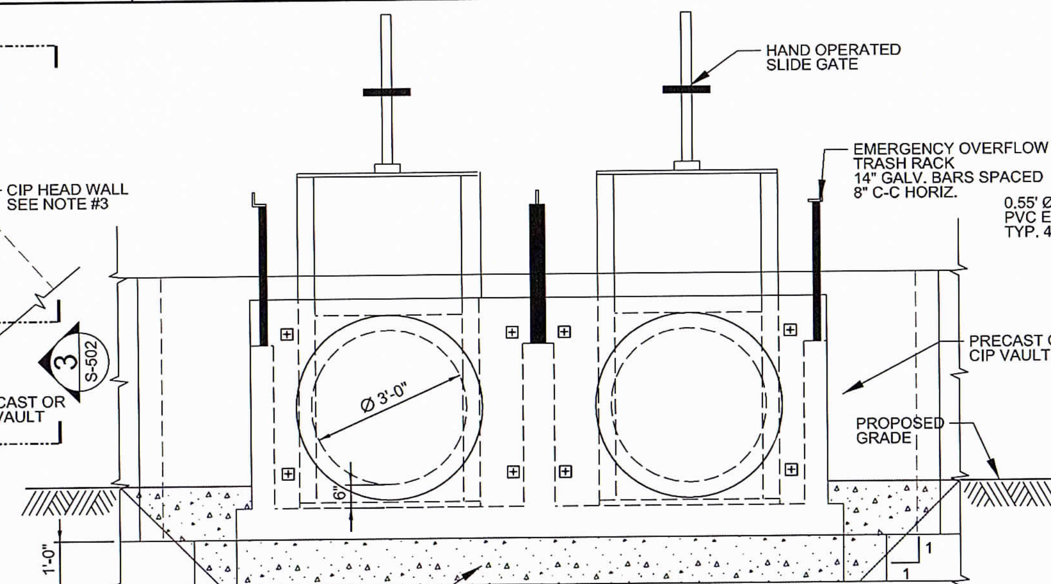
SHEET IDENTIFICATION
S-301
SHEET 48 OF 49

DESIGN FILE: c:\temp\cenwe01\dms574380\PN142460_QTWR-S-301SC1.DGN

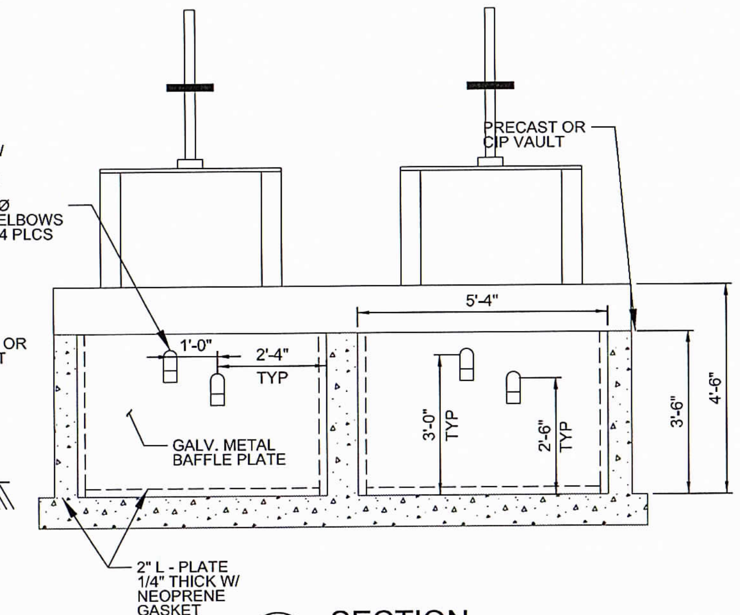
DATE AND TIME PLOTTED: $$$DATE$$$$



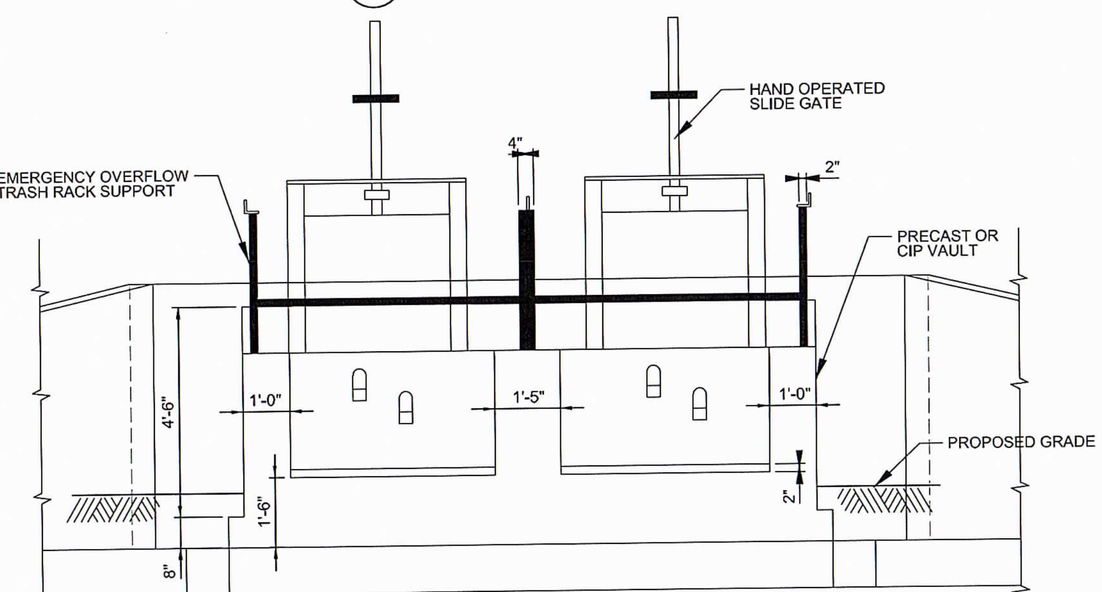
1 S-502 PLAN
SCALE: 1/2" = 1'-0"



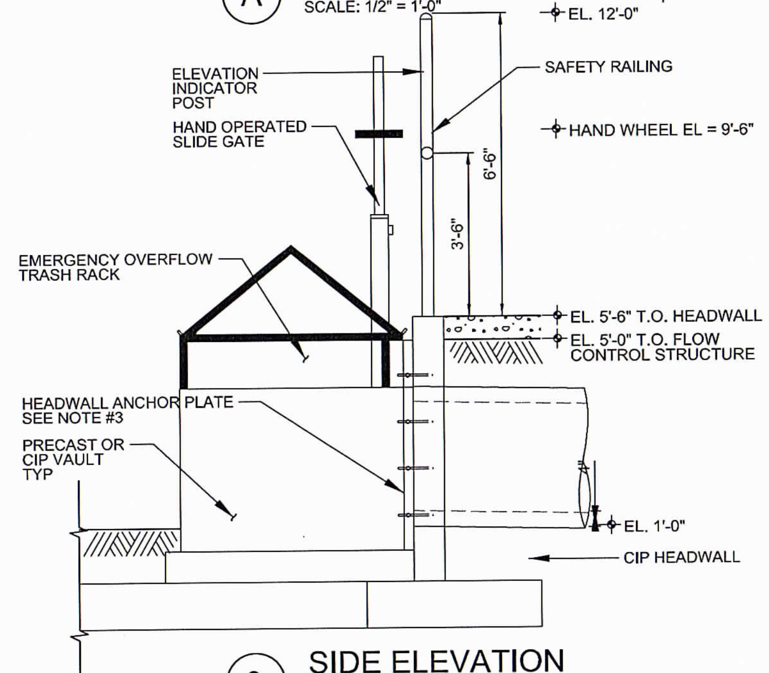
A SECTION
SCALE: 1/2" = 1'-0"



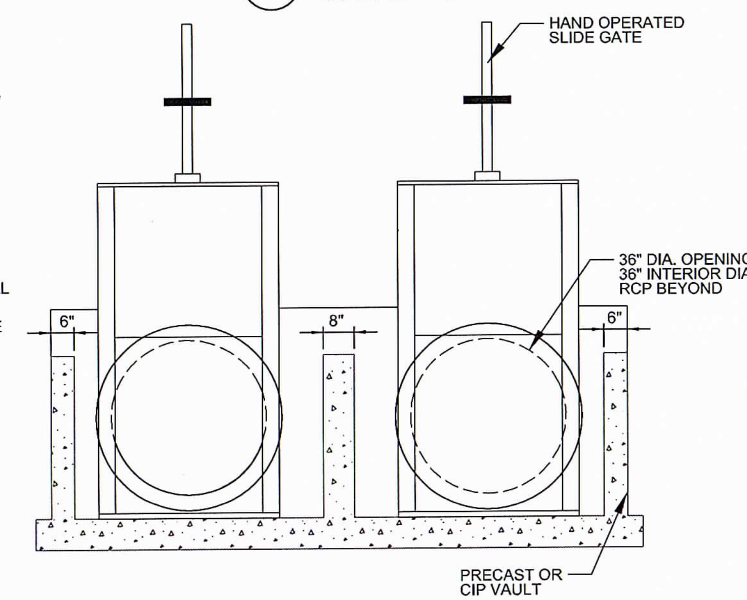
B SECTION
SCALE: 1/2" = 1'-0"



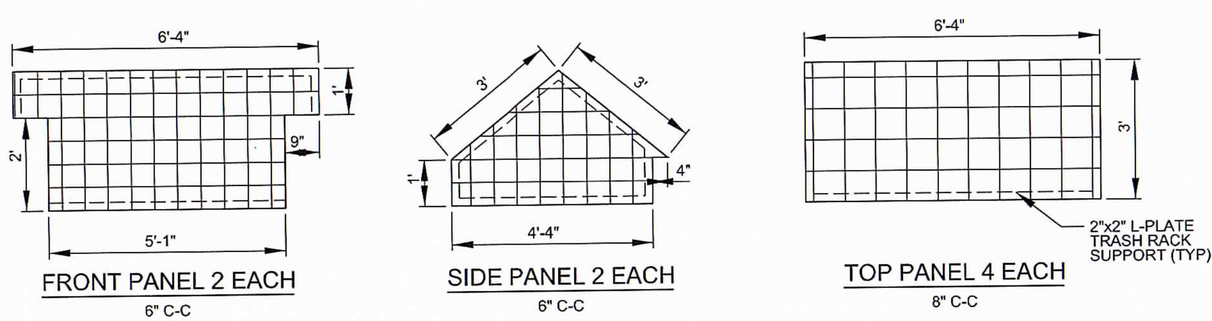
2 ELEVATION
SCALE: 1/2" = 1'-0"



3 SIDE ELEVATION
SCALE: 1/2" = 1'-0"

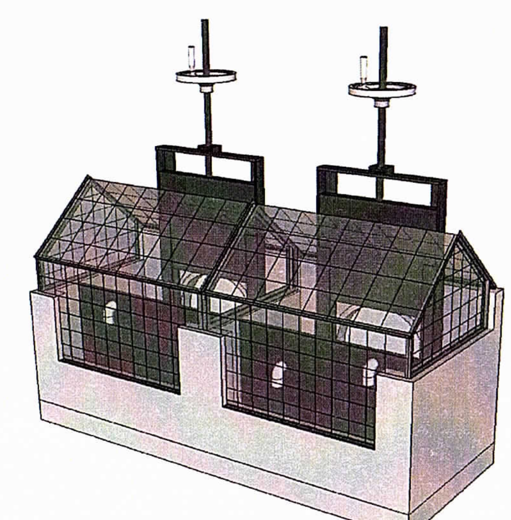


C SECTION
SCALE: 1/2" = 1'-0"



4 TRASH RACK STRUCTURE
SCALE: 1/2" = 1'-0"

NOTE: 1/2" GALVANIZED STEEL ROUND BAR, ALL PANELS, SPACING AS SHOWN.



NOTES:

1. PROVIDE SHOP DRAWINGS TO STRUCTURAL ENGINEER 30 DAYS PRIOR TO FABRICATION.
2. SEE SHEET C-504 FOR REINFORCEMENT REQUIREMENTS IF PRECAST.
3. ATTACH STRUCTURE TO HEADWALL WITH GALVANIZED STEEL ANCHOR PLATE USING 1/2" BOLTS EMBEDDED 5" INTO HEADWALL AND 4" INTO FLOW CONTROL STRUCTURE.
4. ALL TRASH RACK AND BAFFLE PLATE SUPPORT BARS TO BE 2"x2"x1/4" ANGLE. MOUNT TO CONCRETE WITH EMBEDDED SLEEVES AND STAINLESS STEEL BOLTS TO ALLOW FOR PERIODIC REMOVAL.
5. ALTERNATE DESIGNS MAY BE PROPOSED FOR OUTLET CONTROL STRUCTURE PROVIDED BAFFLE PLATE HEIGHT, AND ORIFICES ARE UNCHANGED, AND TRASH RACK AREA AT A GIVEN ELEVATION SAME OR GREATER, AND EMERGENCY CLOSURE GATES MEET ALL REQUIREMENTS.
6. TRASH RACK PANELS ARE REMOVABLE. SECURE TO SUPPORT FRAME WITH CHAIN AND PADLOCK.
7. SEE 33 40 00 FOR ADDITIONAL REQUIREMENTS.

SCALE: ½"= 1'-0"

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FY12 QWULOOLT ECOSYSTEM RESTORATION
MARYSVILLE, WASHINGTON
PN142460

STRUCTURAL SECTIONS 2
FLOW CONTROL STRUCTURE

SHEET IDENTIFICATION
S-302
SHEET 49 OF 49