



# Public Notice

**U S Army Corps  
of Engineers**  
Huntington District

In reply refer to Public Notice No.

Issuance Date:

**MAY 22 2008**

2006-2200-CHA

Stream:

Closing Date:

**JUN 21 2008**

Chagrin River

Please address all comments and inquiries to:

U.S. Army Corps of Engineers, Huntington District, Ohio Transportation Office

**ATTN: CELRH-OR-FN-OT** Public Notice No. (reference above)

3990 East Broad Street

Building 10, Section 10

Columbus, Ohio 43218-3990

Phone: (614) 692-4654

**PUBLIC NOTICE:** The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

**REGULATORY PROGRAM:** Since its early history, the U.S. Army Corps of Engineers (Corps) has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

**SECTION 10:** The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the United States (U.S.). The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

**SECTION 404:** The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the United States, including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

**TO WHOM IT MAY CONCERN:** The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act. This notice serves as the Corps of Engineers' request to the Ohio Environmental Protection Agency (OEPA) to act on Section 401 Water Quality Certification for the following application:

**APPLICANT:** Ohio Department of Transportation  
1980 West Broad Street  
Columbus, Ohio 43223

**LOCATION:** The proposed project is located in fourteen jurisdictional streams and six jurisdictional wetlands along State Route (SR) 2 between SR 91 on the west and SR 44 on the east, near the municipalities of Eastlake, Willoughby and Mentor in Lake County, Ohio.

**DESCRIPTION OF THE PROPOSED WORK:** The applicant proposes to place fill material in waters of the United States to construct a fourth lane in both east and west bound directions of SR 2 between SR 91 and SR 640 (Vine Street), and between SR 44 N (Heisley Road) and SR 44 S. In addition, the applicant proposes to construct a third lane in both east and west bound directions of SR 2 between SR 640 and SR 44 N. The applicant also proposes to reconfigure seven interchanges along SR 2 (SR 91, SR 640, Lost Nation Road, SR 306, SR 615, SR 44 north and SR 44 south), widen existing bridges over Newell Creek (Stream 10) and the Chagrin River, replace the existing bridge over Heisley Creek (Stream 15), construct a new 37-foot wide bridge over the Chagrin River for proposed Ramp D, replace existing culverts, and patch and waterproof concrete slab structures within this section of the SR 2 corridor.

Work associated with the proposed project would involve the permanent placement of approximately 4,285 cubic yards of fill material into 3,547 linear feet of fourteen jurisdictional streams and approximately 32,295 cubic yards of fill material into 3.53 acres of six jurisdictional wetlands to complete the construction activities mentioned above. The proposed project would also involve the temporary placement of approximately 444 cubic yards of fill material into 0.07 acre of the Chagrin River for construction access. Plans of the proposal are attached to this notice.

**ALTERNATIVE ANALYSIS:** A total of 3.53 acres of six jurisdictional wetlands would be impacted as a result of the proposal. The project does not require access to or siting within a special aquatic site to fulfill its basic purpose and is considered a non-water dependent activity. The Clean Water Action Section 404(b)(1) Guidelines state that for non-water dependent activities, practicable alternatives that do not involve special aquatic sites are presumed to be available unless clearly demonstrated otherwise. Therefore, the applicant is required to provide an alternatives analysis which must overcome that presumption prior to receiving authorization for the placement of fill in the wetlands. The applicant has submitted an alternatives analysis for review. No permit will be issued until our review of the alternative analysis clearly shows that upland alternatives are not available to achieve the applicant's goal.

**MITIGATION PLAN:** To compensate for 3,547 linear feet of unavoidable stream impacts, the applicant proposes to place a conservation easement on a 34-acre property identified as the Gully Brook property and to purchase a separate conservation easement to protect high quality streams on a property in the Grand River watershed in Trumbull County. To compensate for 3.53 acres of unavoidable wetland impacts, the applicant proposes to purchase a total of 5.4 acres of wetland credit from the Trumbull Creek Wetland Mitigation Bank located on SR 166 along the Ashtabula-Geauga County line. The proposed mitigation plan is available for review upon request.

**WATER QUALITY CERTIFICATION:** A section 401 Water Quality Certification is required for this project. It is the applicant's responsibility to obtain the certification from the Ohio Environmental Protection Agency.

**HISTORIC AND CULTURAL RESOURCES:** The Federal Highways Administration (FHWA) is the lead Federal agency for this project. As such, FHWA is responsible for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act. The National Register of Historic Places (NRHP) has been consulted and it has been determined the proposed project would have no effect on any property listed on the Register. The applicant received concurrence on the "no effect" determination regarding cultural resource issues from the Ohio State Historic Preservation Office on May 15, 2006. A copy of this public notice will be sent to the Ohio Historic Preservation Office for their review. Comments concerning archeological sensitivity of a project area should be based upon collected data.

**ENDANGERED/THREATENED SPECIES REVIEW:** The project is located within the known or historic range of the following endangered (E), threatened (T) or candidate (C) species or species of concern (SC):

Indiana bat (E)  
Piping plover (E)  
Bald eagle (SC)  
Snuffbox (SC)

FHWA is the lead federal agency and is responsible for compliance with the NEPA and Section 7 of the Endangered Species Act. This public notice serves as a request to the USFWS for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

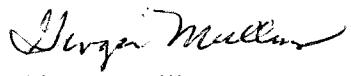
**PUBLIC INTEREST REVIEW AND COMMENT:** Any person who has an interest that may be adversely affected by the issuance of a permit may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity. This application will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b) (1) of the CWA. Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered including the cumulative effects thereof; of those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination. A permit will be granted unless its issuance is found to be contrary to the public interest.

**SOLICITATION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. For accuracy and completeness of the administrative record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

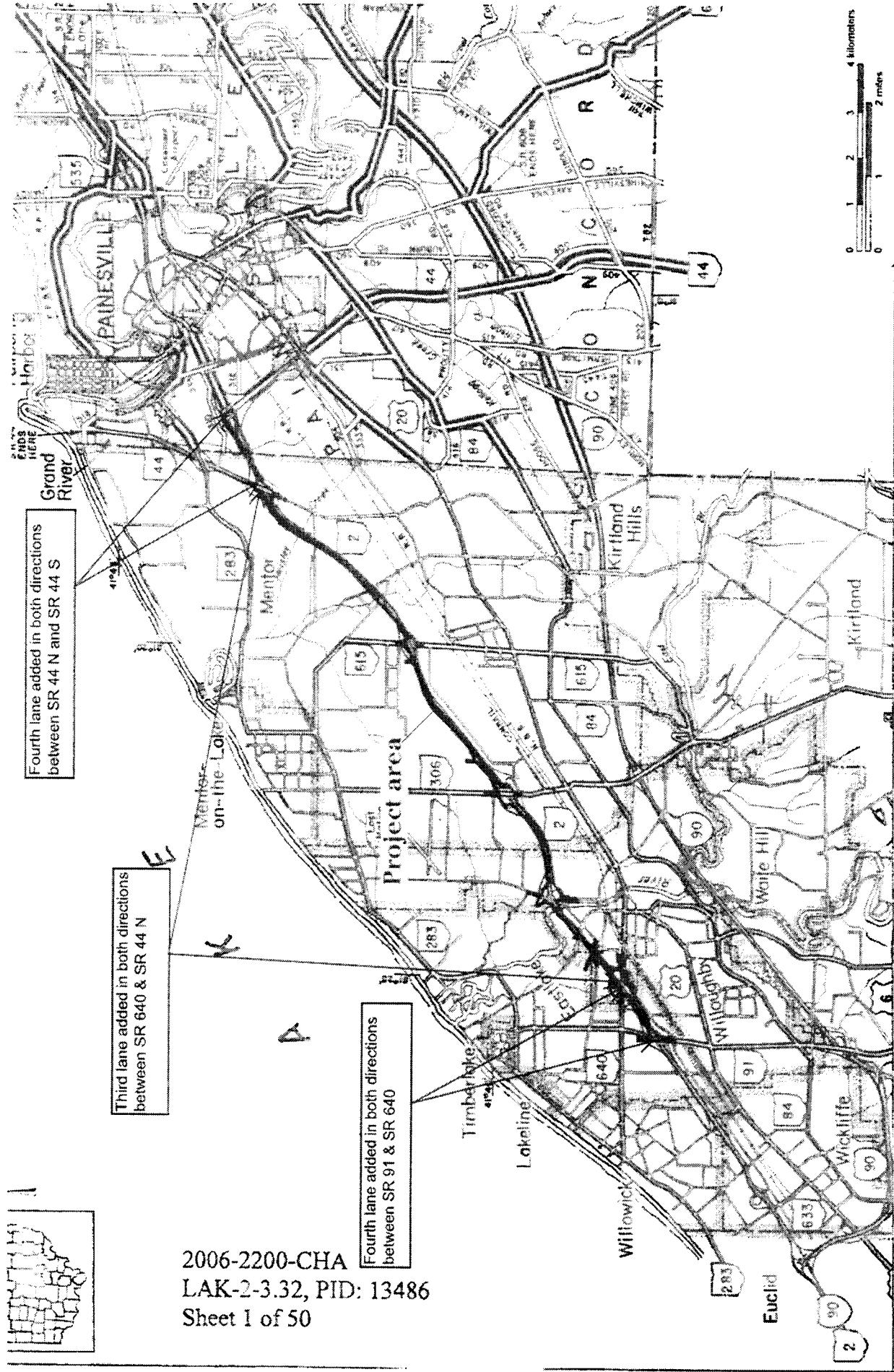
**CLOSE OF COMMENT PERIOD:** All comments pertaining to this Public Notice must reach this office on or before the close of the comment period listed on page one of this Public Notice. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to:

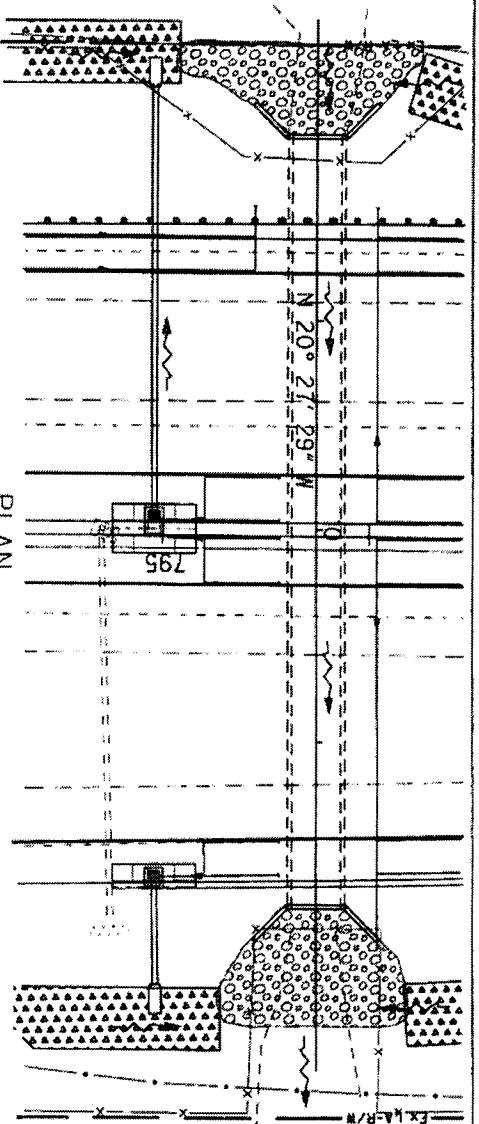
North Regulatory Section, Ohio Regulatory Transportation Office  
U.S. Army Corps of Engineers Huntington District  
3990 East Broad Street  
Building 10, Section 10  
Columbus, Ohio 43218-3990

Please note names and addresses of those who submit comments in response to this public notice may be made publicly available. Thank you for your interest in our nation's water resources. If you have any questions concerning this public notice, please contact Peter Clingan of the North Regulatory Section at (614) 692-4654.

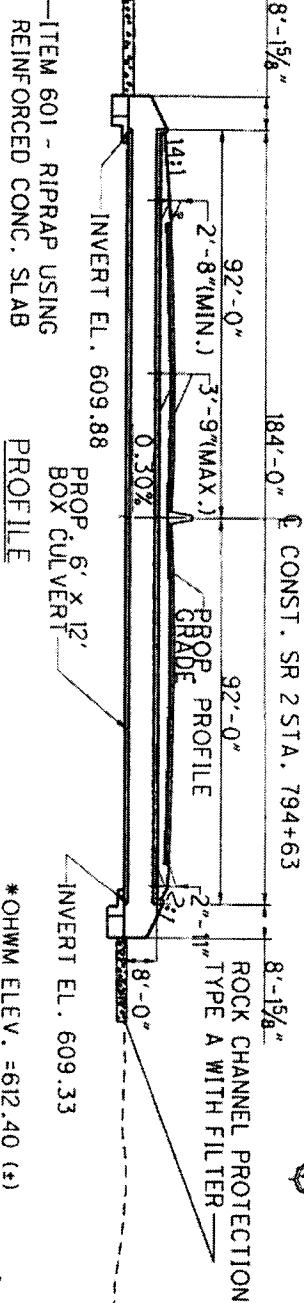
  
Ginger Mullins  
Chief, Regulatory Branch

(O, B)





PLAN



ITEM 601 - RIPRAP USING  
REINFORCED CONC. SLAB

PROFILE

\*OHWM ELEV. = 612.40 (+)

PROP. I-3B, TYPE B1 STA. 793+10, 2.75' RT.	€ 58"X91" RCP STA. 794+63 TO BE REMOVED	PROP. I-3B, TYPE B1 STA. 795+02, 2.75' RT.
PROP. I-3B, TYPE D STA. 793+10, 78.48' LT.		PROP. I-3B, TYPE D STA. 795+02, 82.25' LT.
		620
EX. CB 793+13 0.8' LT. TO BE REMOVED		610

794

795

796

600

793

CROSS SECTION

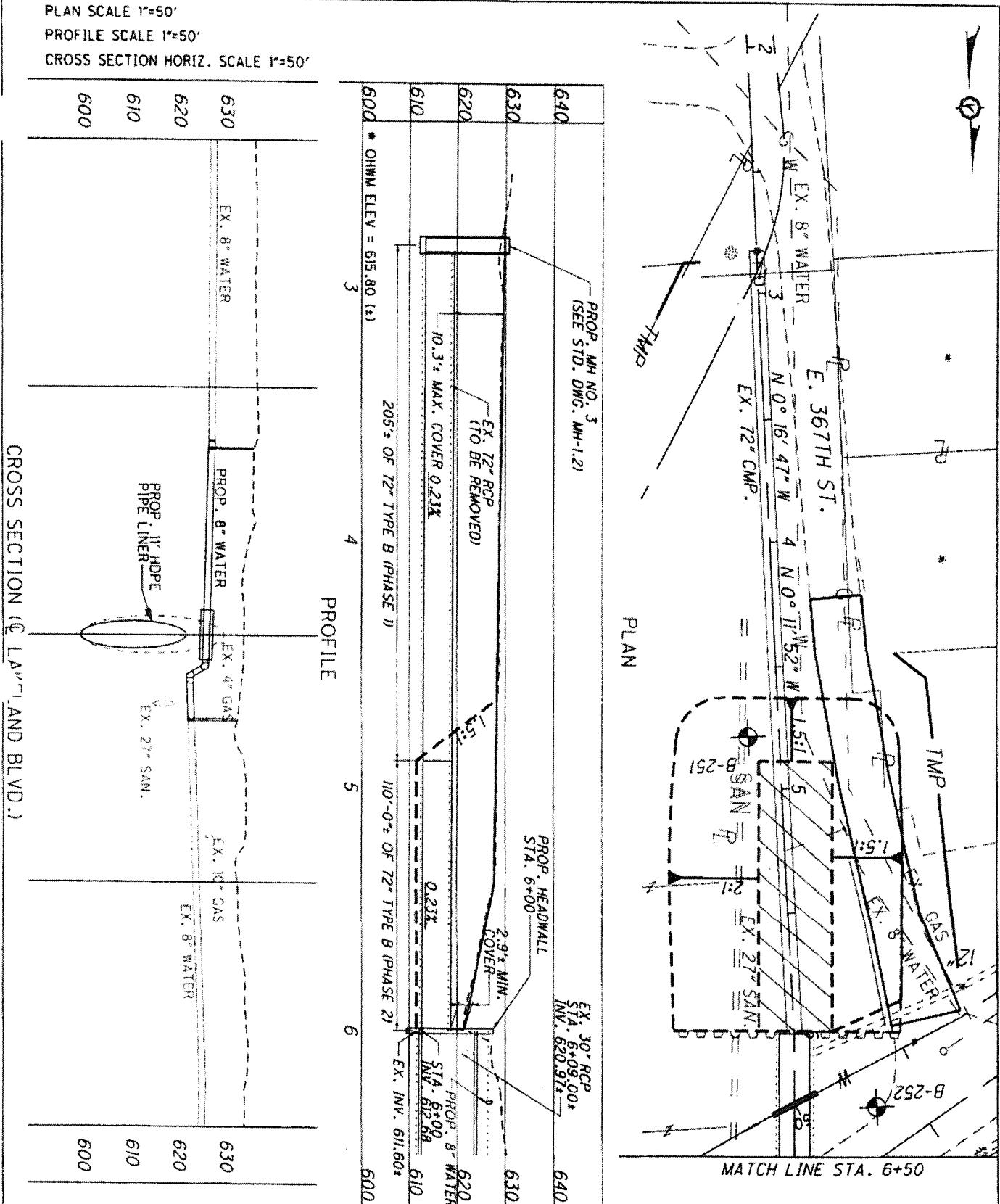
PLAN SCALE 1"=40'

PROFILE SCALE 1"=40'

CROSS SECTION HORIZ. SCALE 1"=40'

LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 1  
UNNAMED STREAM  
STA. 794+63

PLAN SCALE 1"=50'  
PROFILE SCALE 1"=50'  
CROSS SECTION HORIZ. SCALE 1"=50'

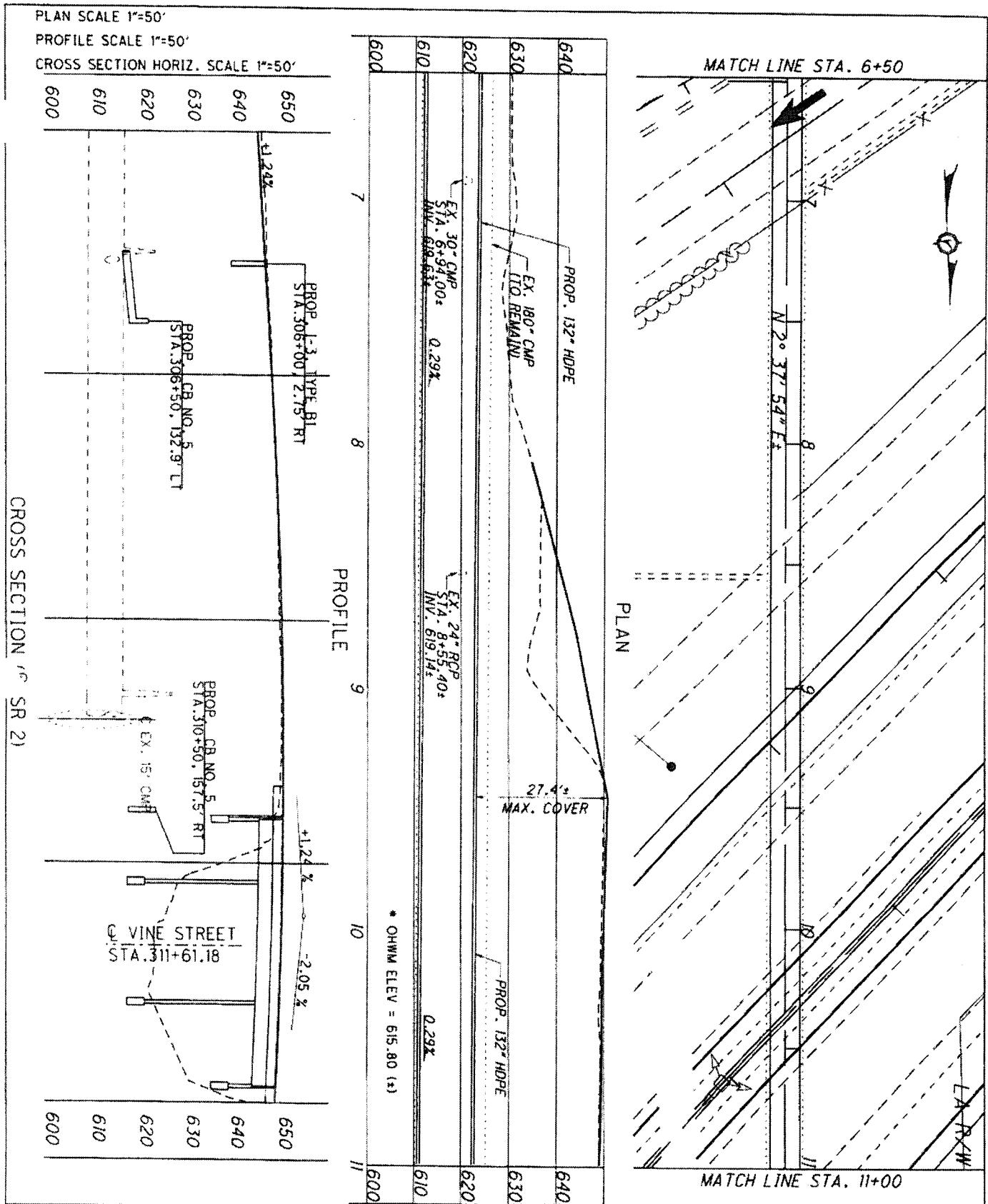


LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545  
PROPOSED IMPACTS FOR STREAM NO. 2

UNNAMED STREAM STA. 308+66  
STA. 2+00 TO STA. 6+50

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 3 of 50

SHEET 1 OF 4



LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545  
PROPOSED IMPACTS FOR STREAM NO. 2

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 4 of 50

UNNAMED STREAM STA. 308+66  
STA. 6+50 TO STA. 11+00

SHEET 2 OF 4

PLAN SCALE 1"=50'

PROFILE SCALE 1"=50'

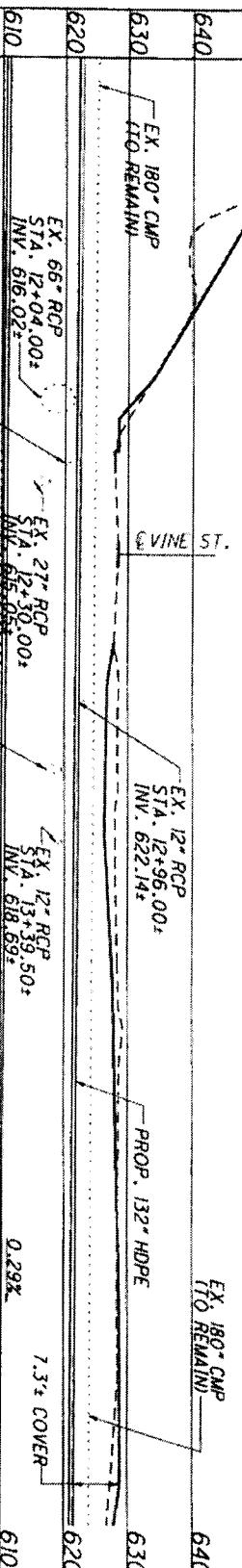
CROSS SECTION HORIZ. SCALE 1"=50'

600

610

620

630



MATCH LINE STA. 11+00

PLAN

MATCH LINE STA. 15+50

CROSS SECTION (VINE STREET)

K-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545

PROPOSED IMPACTS FOR STREAM NO. 2

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 5 of 50

UNNAMED STREAM STA. 308+66

STA. 11+00 TO STA. 15+50

SHEET 3 OF 4

PLAN SCALE 1"=50'  
PROFILE SCALE 1"=50'  
CROSS SECTION HORIZ. SCALE 1"=50'

640  
630  
620  
610  
600

640  
630  
620  
610  
600

	EX. JUNCTION BOX STA. 16+02.32 <sup>z</sup> 1/6 = 628.73 <sup>z</sup> EX. 180° (S) = 608.78 <sup>z</sup> EX. 120° (N) = 608.91 <sup>z</sup> 8.3% MIN. COVER	640
	PROP. 90° HOPE 12.2% MAX. COVER	630
	EX. PRO. CHP 170' REMAINING	620
	LIMITS OF ROCK CHANNEL PROTECTION EX. HEADWALL 170' REMAINING	610
	STA. 16+98.60 INV. 609.78 STA. 16+05.00 INV. 609.78 EX. INV. 608.78 <sup>z</sup> EX. INV. 608.91 <sup>z</sup>	600

16 PROFILE 18

19

1.AK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545

PROPOSED IMPACTS FOR STREAM NO. 2

UNNAMED STREAM STA. 308+66

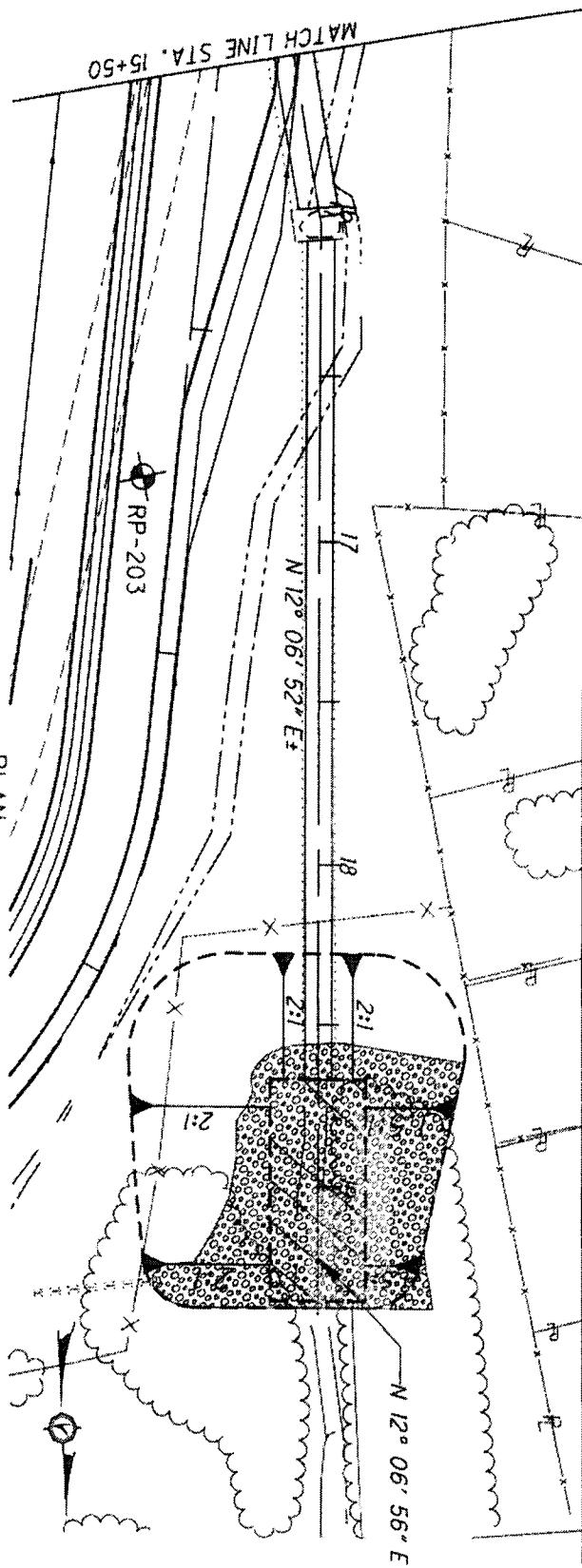
STA. 15+50 TO STA. 19+50

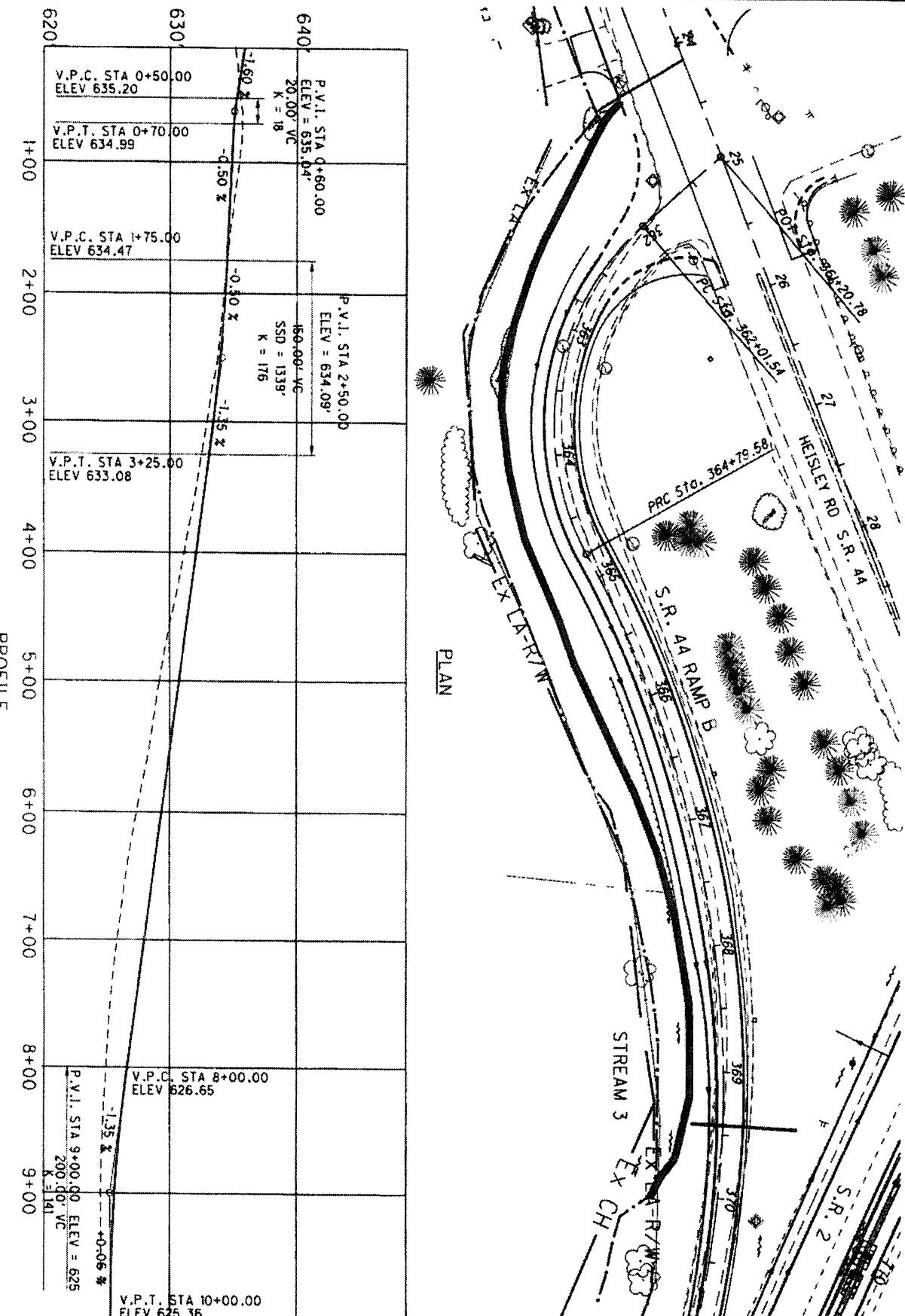
CROSS SECTION (RAMP D)

640  
630  
620  
610  
600

640  
630  
620  
610  
600

640  
630  
620  
610  
600



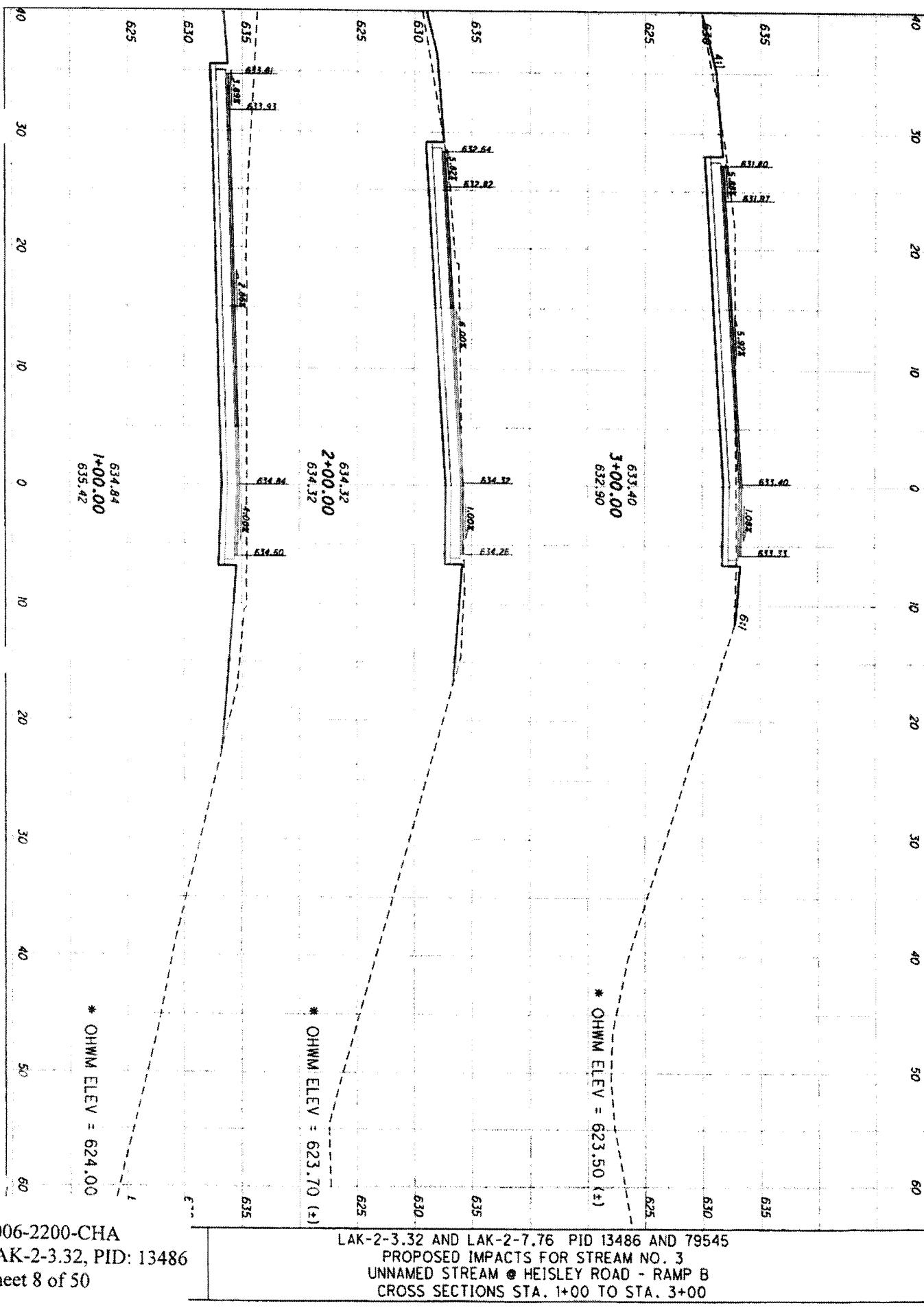


2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 7 of 50

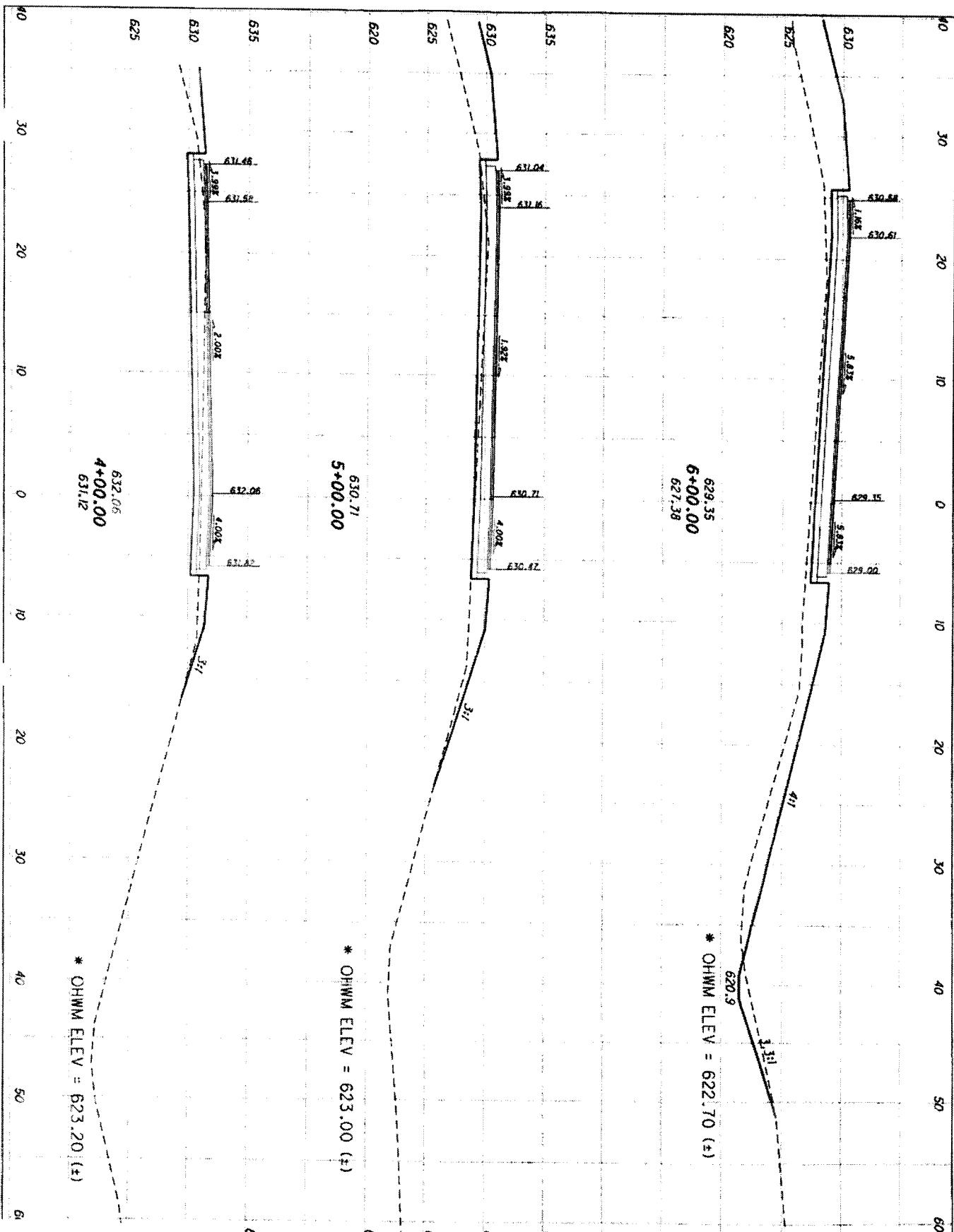
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545  
PROPOSED IMPACTS FOR STREAM NO. 3  
UNNAMED STREAM @ HEISLEY ROAD - RAMP B  
PLAN AND PROFILE STA. 361+20.78 TO STA. 371+50

SCALE 1"=100'





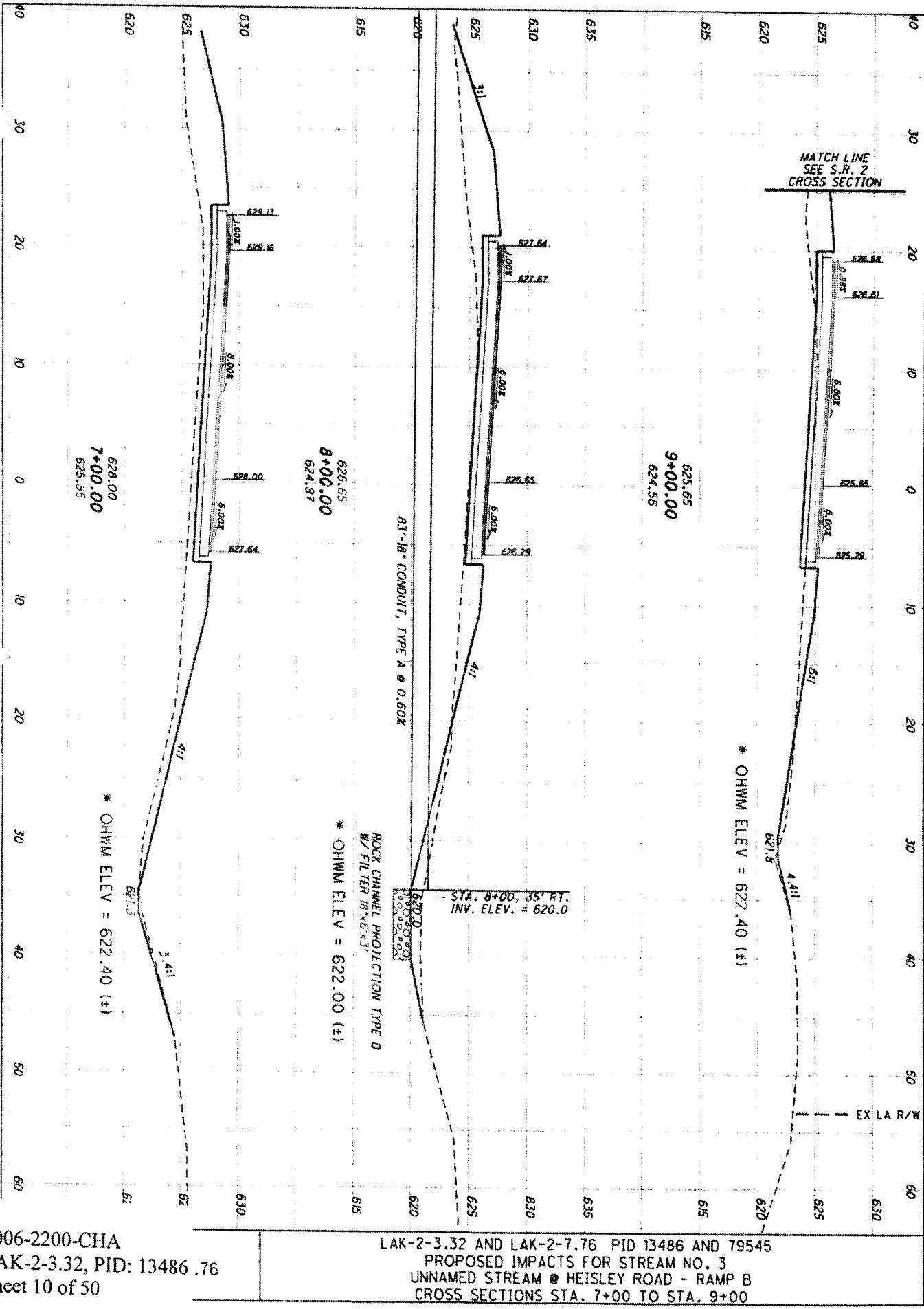
2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 8 of 50



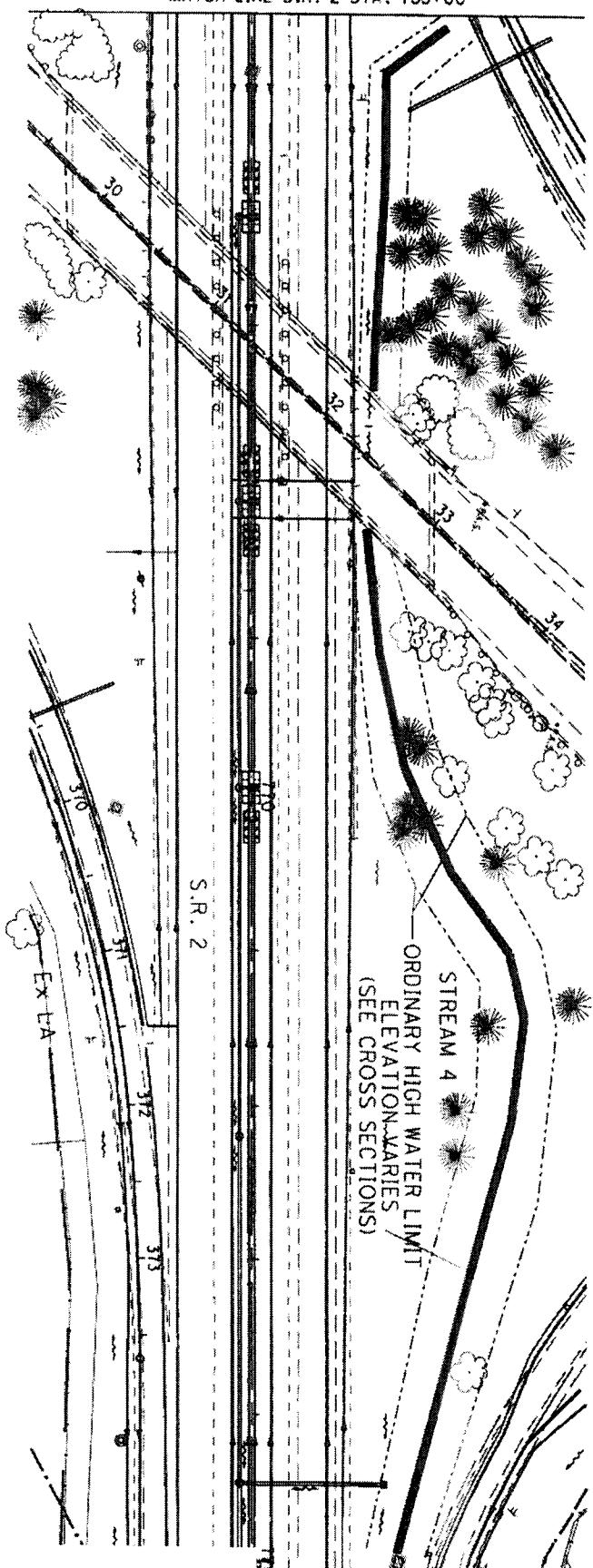
2006-2200-CHA

LAK-2-3.32, PID: 13486  
Sheet 9 of 50

LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545  
PROPOSED IMPACTS FOR STREAM NO. 3  
UNNAMED STREAM @ HEISLEY ROAD - RAMP B  
CROSS SECTIONS STA. 4+00 TO STA. 6+00



MATCH LINE S.R. 2 STA. 765+00



2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 11 of 50

AK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

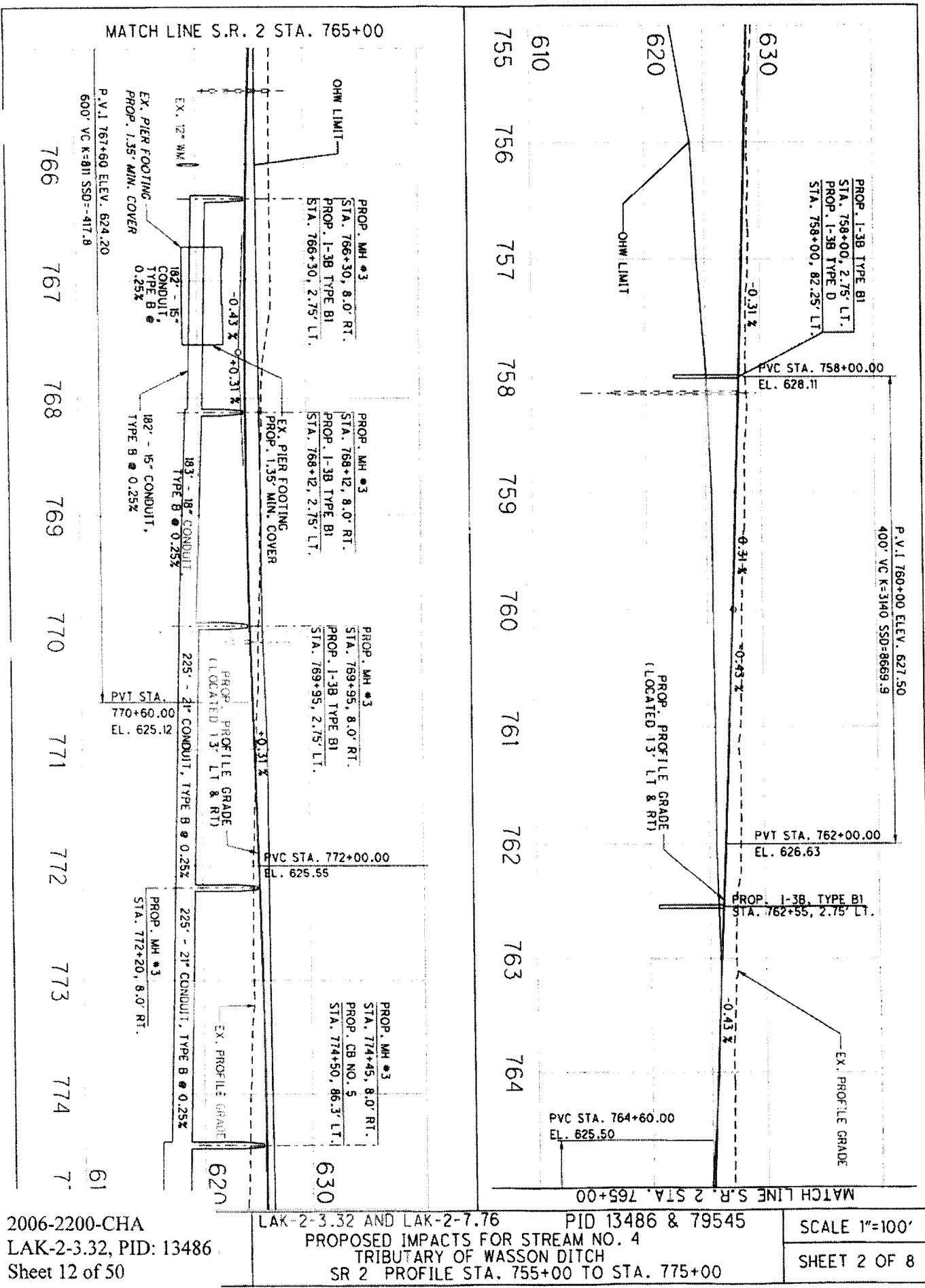
**PROPOSED IMPACTS FOR STREAM NO. 4**

PROPOSED IMPACTS FOR STREAM NO. 1  
TRIBUTARY OF WASSON DITCH

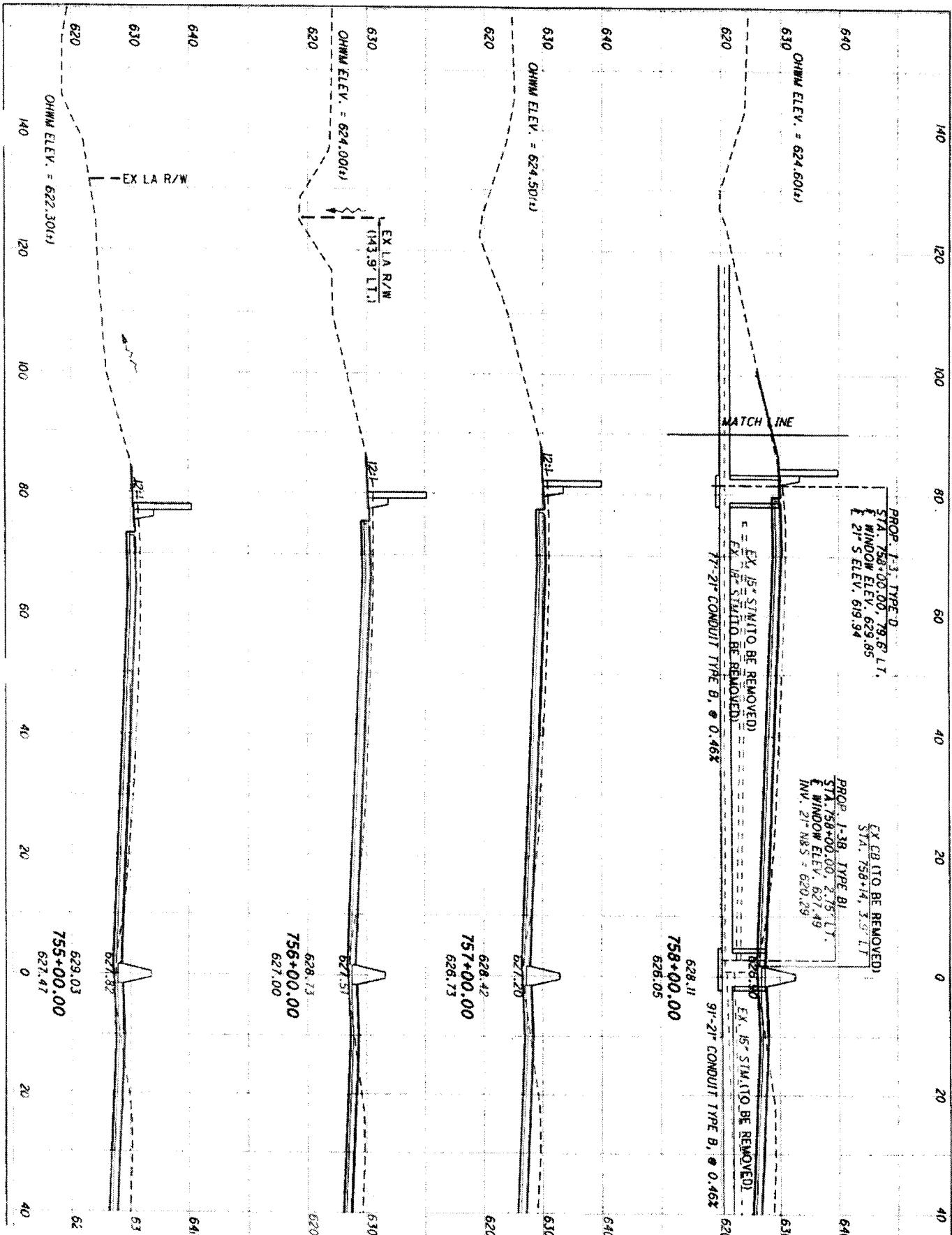
SR 2 PLAN STA. 755+00 TO STA. 775+00

SCALE 1"=100'





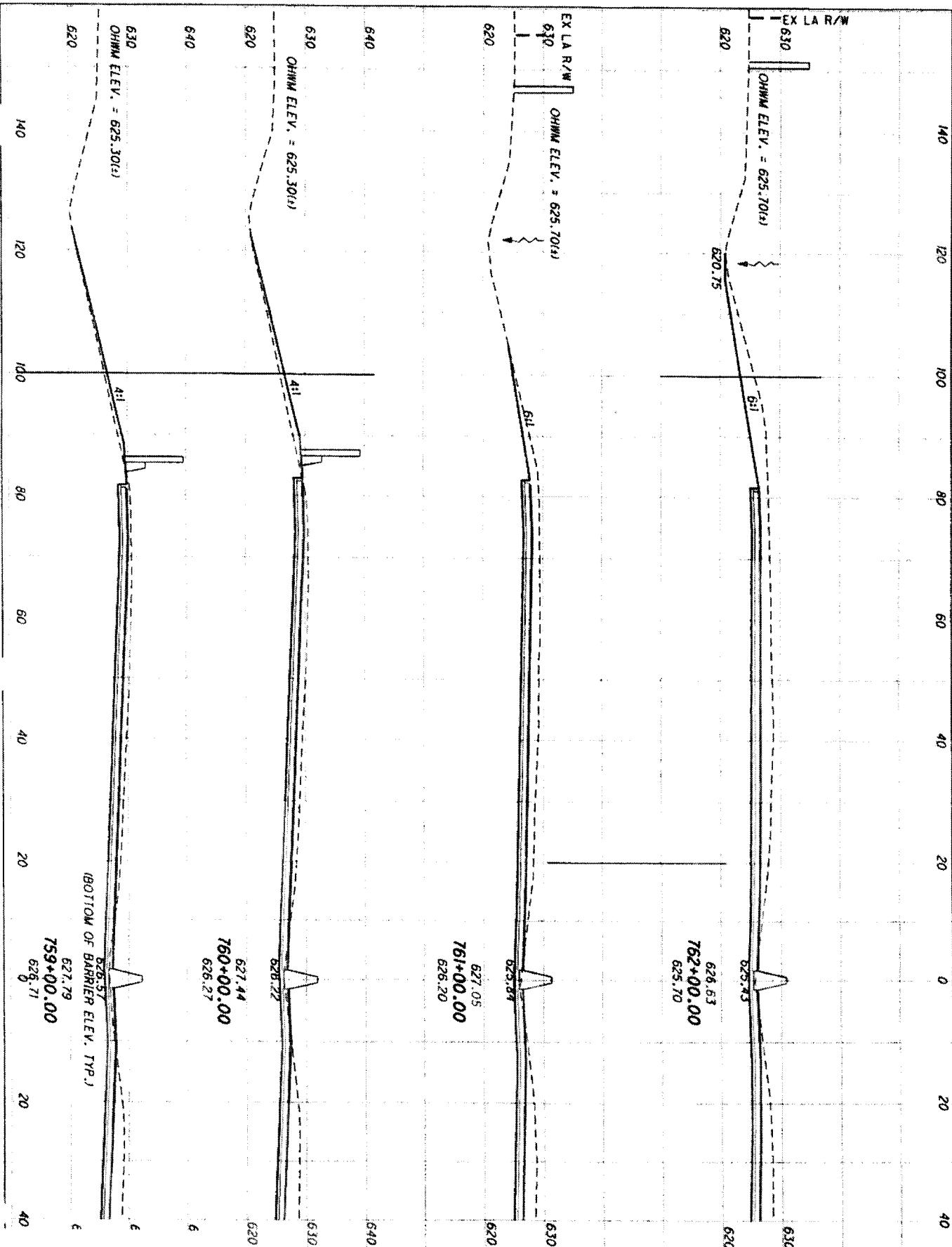
2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 12 of 50



2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 13 of 50

LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 7954  
PROPOSED IMPACTS FOR STREAM NO. 4  
TRIBUTARY OF WASSON DITCH  
SR 2 CROSS SECTION STA. 755+00 TO STA. 758+00

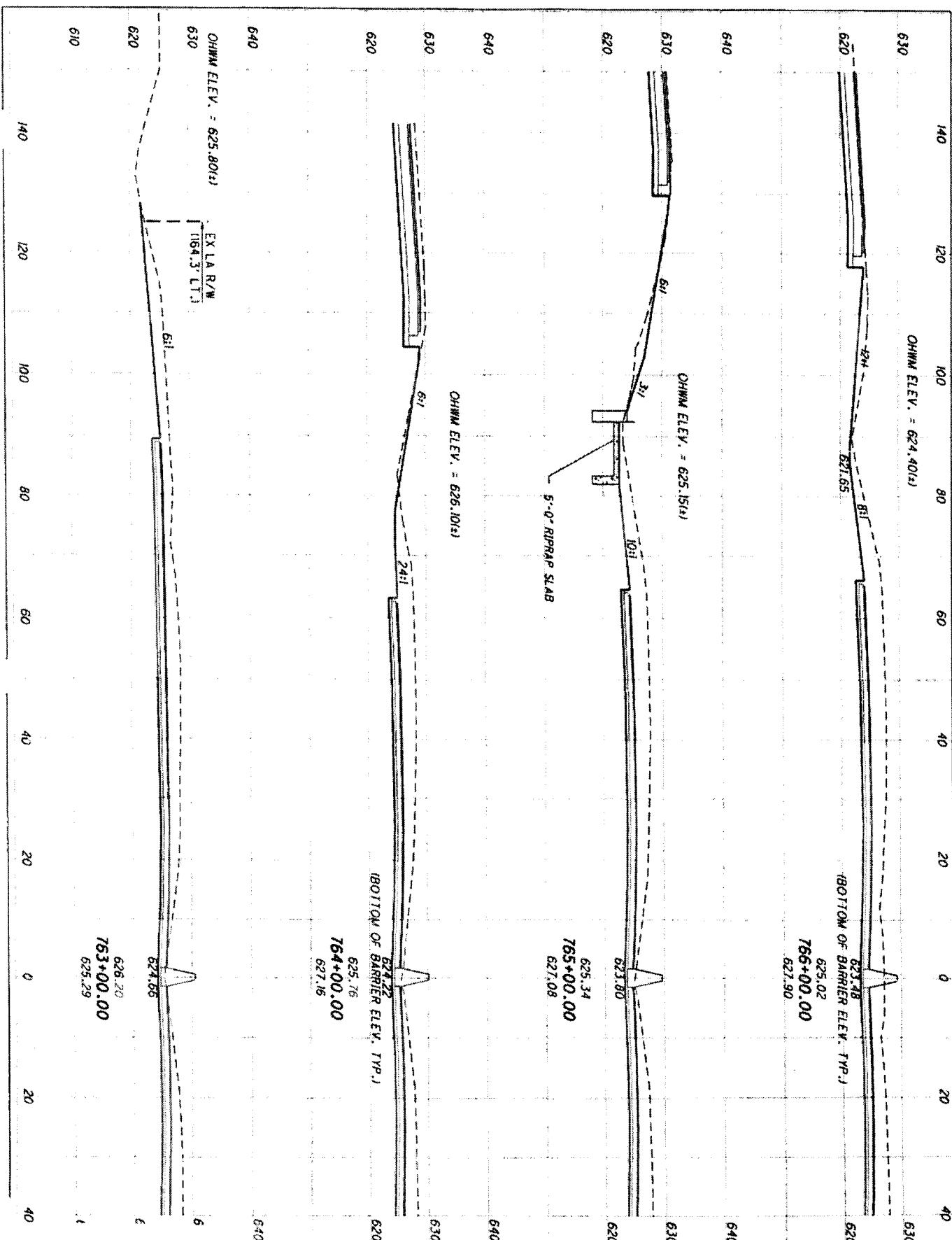
SHEET 3 OF 8



2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 14 of 50

AK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 4  
TRIBUTARY OF WASSON DITCH  
SR 2 CROSS SECTION STA. 759+00 TO STA. 762+00

SHEET 4 OF 8

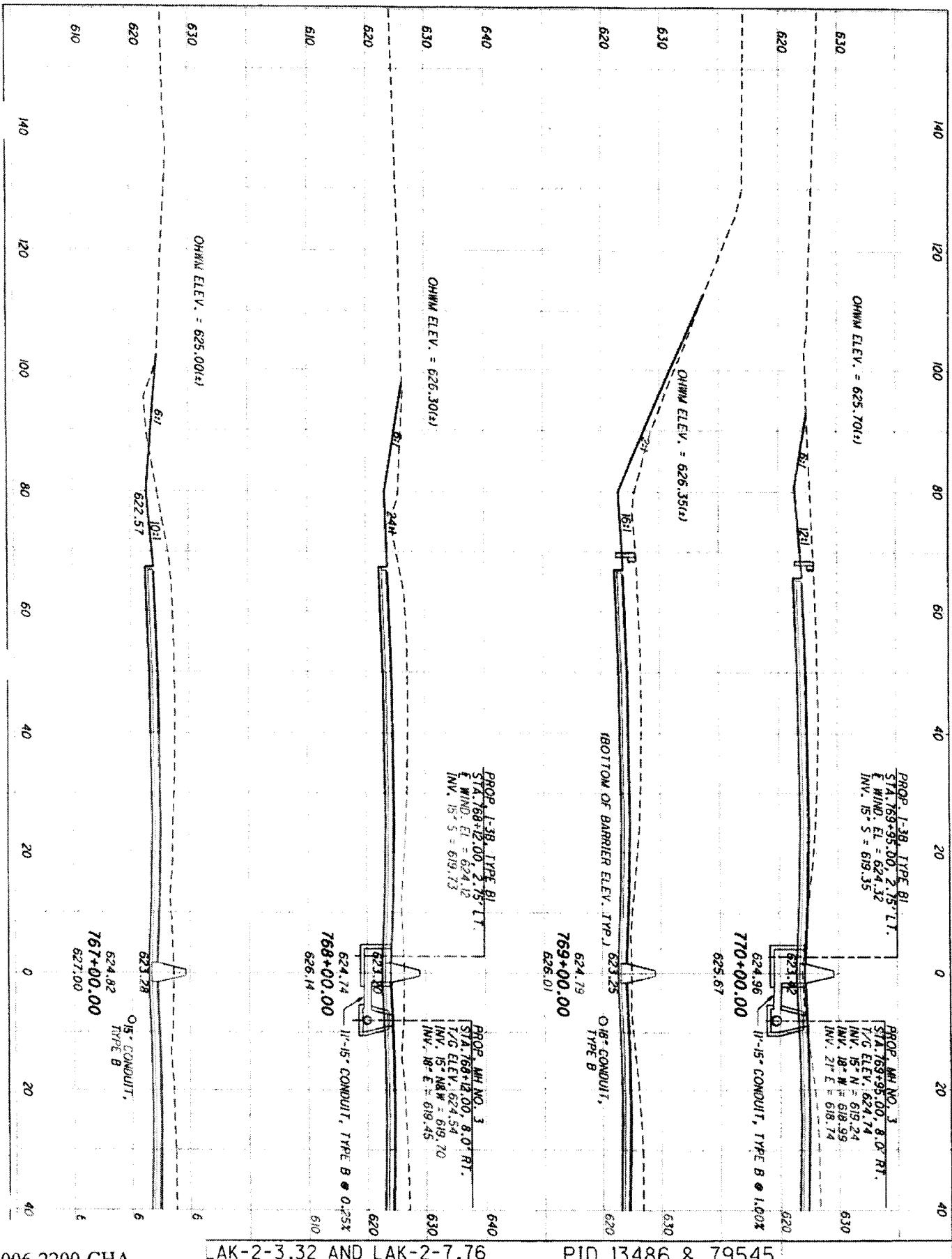


2006-2200-CHA

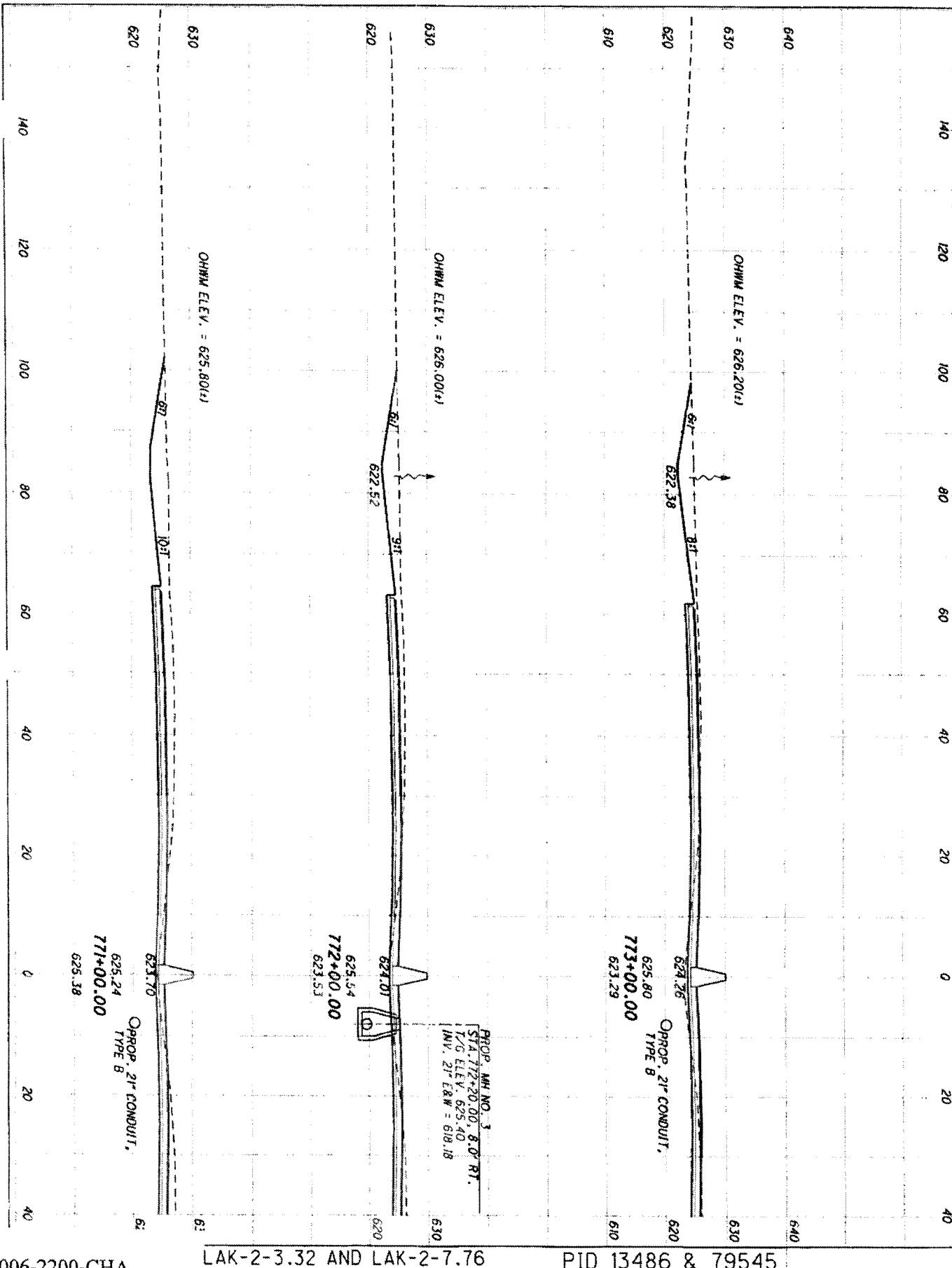
LAK-2-3.32, PID: 13486

AK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 4  
TRIBUTARY OF WASSON DITCH  
SR 2 CROSS SECTION STA. 763+00 TO STA. 766+00

SHEET 5 OF 8



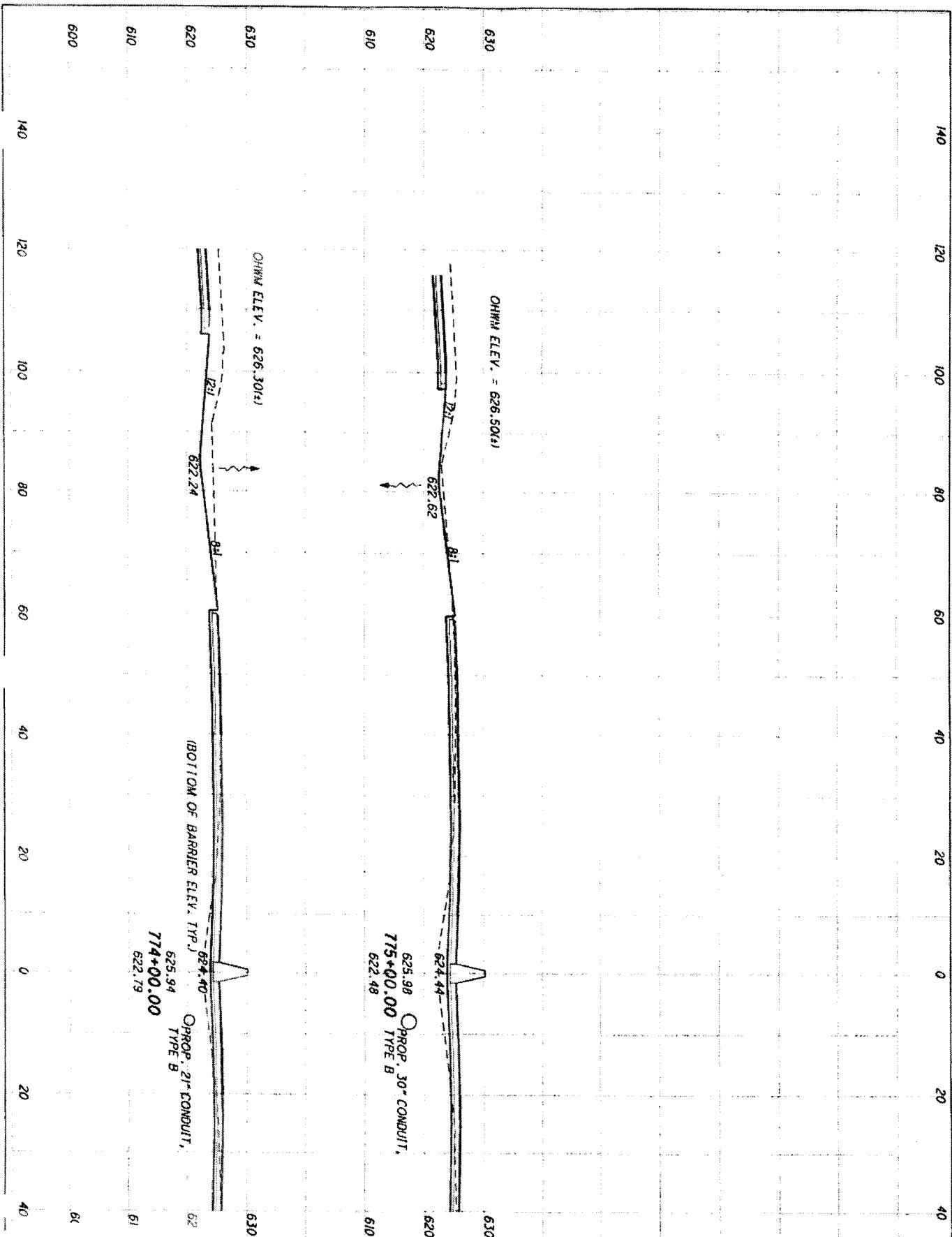
2006-2200-CHA  
LAK-2-3.32, PID: 13486  
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2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 17 of 50

LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 4  
TRIBUTARY OF WASSON DITCH  
SR 2 CROSS SECITON STA. 771+00 TO STA. 773+00

SHEET 7 OF 8

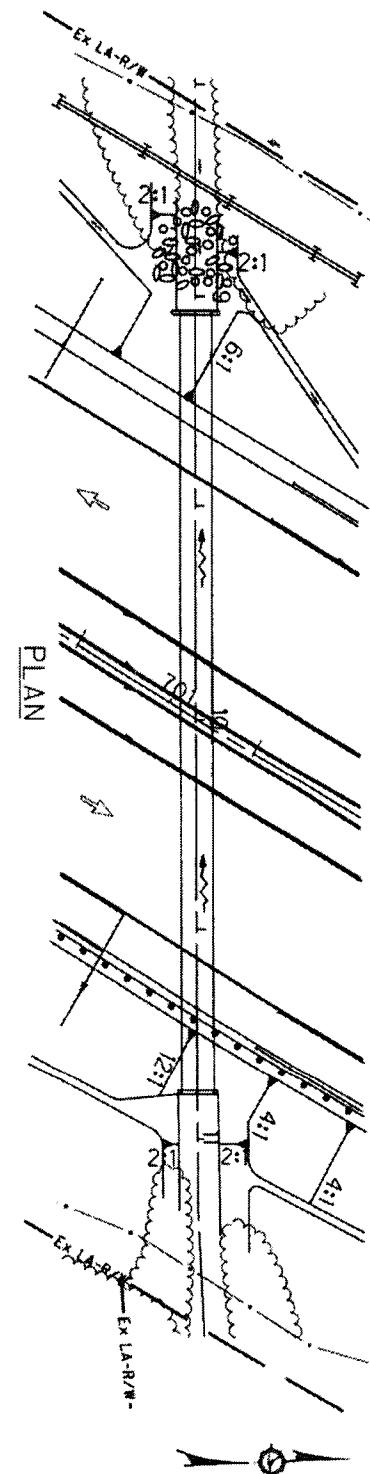


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LAK-2-3.32, PID: 13486  
Sheet 18 of 50

K-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 4  
TRIBUTARY OF WASSON DITCH  
CROSS SECTION STA. 774+00 TO STA. 775+00

SHEET 8 OF 8



CONST. SR2 STA. 701+08  
INV. EL. 623.25

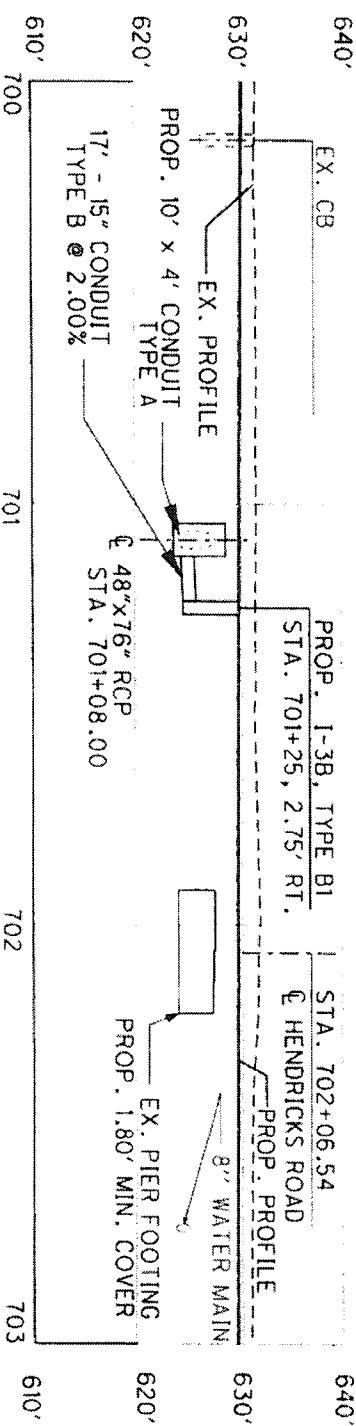
640'  
630'  
620'  
610'

E INV. EL. 623.00  
6:1  
97' 90'  
187" PROP. 10' x 4' RC BOX CULVERT  
@ 0.13%  
ROCK CHANNEL PROTECTION  
TYPE B, 30" THICK W/FILTER

640'  
630'  
620'  
610'

### PROFILE

\*OHMM ELEV. = 627.40 (±)

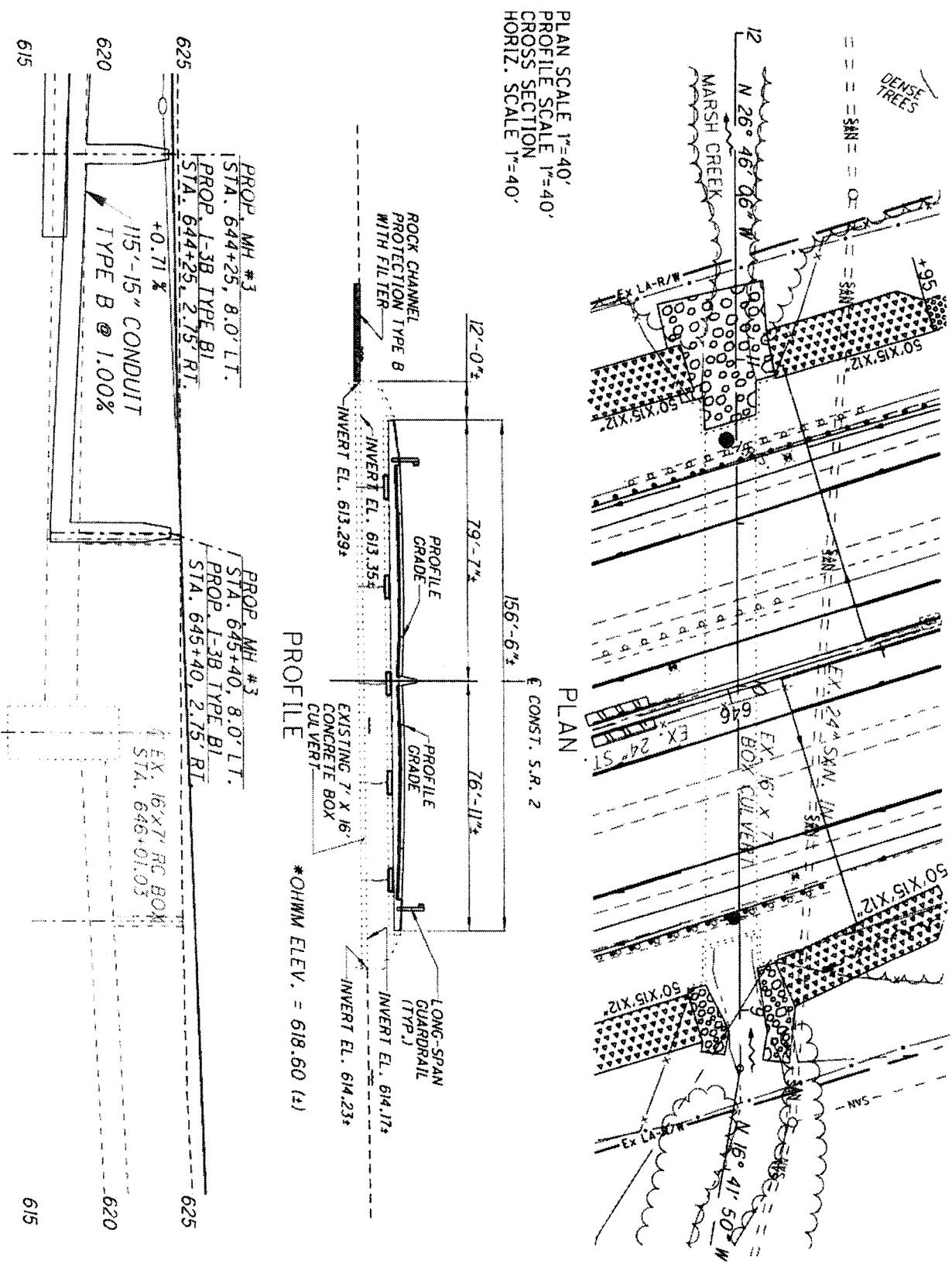


PLAN SCALE 1"=40'  
PROFILE SCALE 1"=40'  
CROSS SECTION HORIZ. SCALE 1"=40'

LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 5

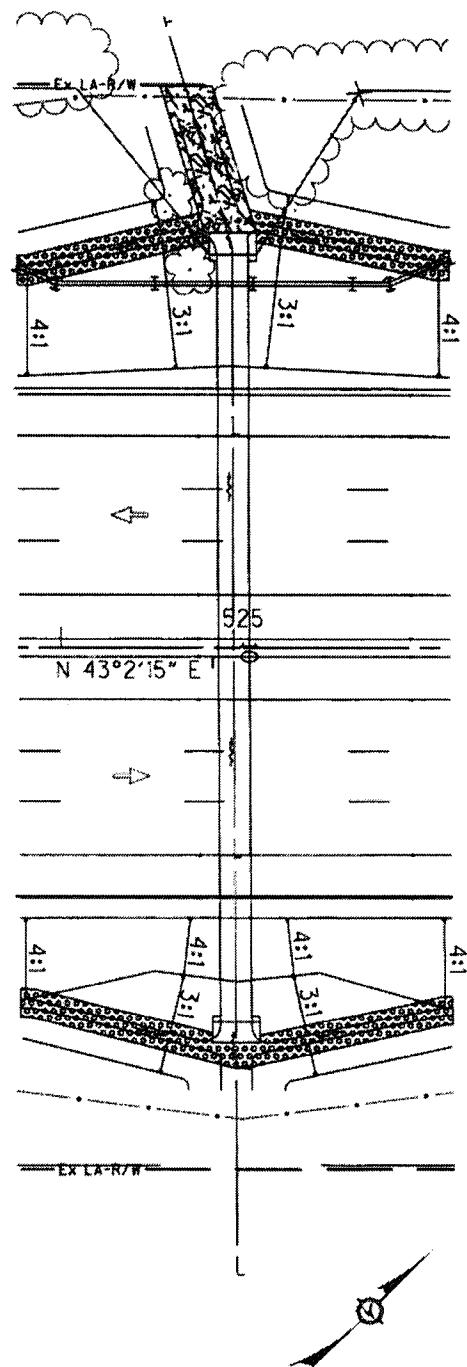
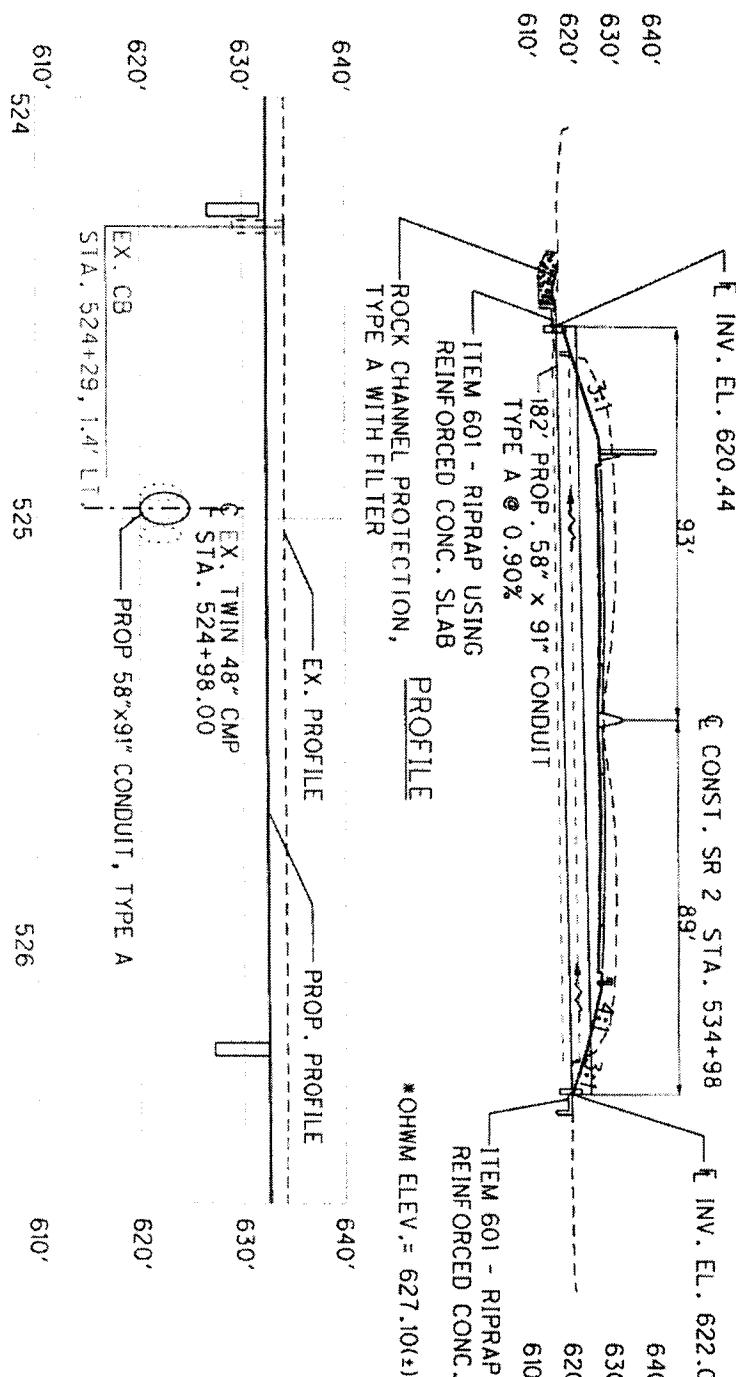
TRIBUTARY OF HEISLEY CREEK  
STA. 701+08

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 19 of 50



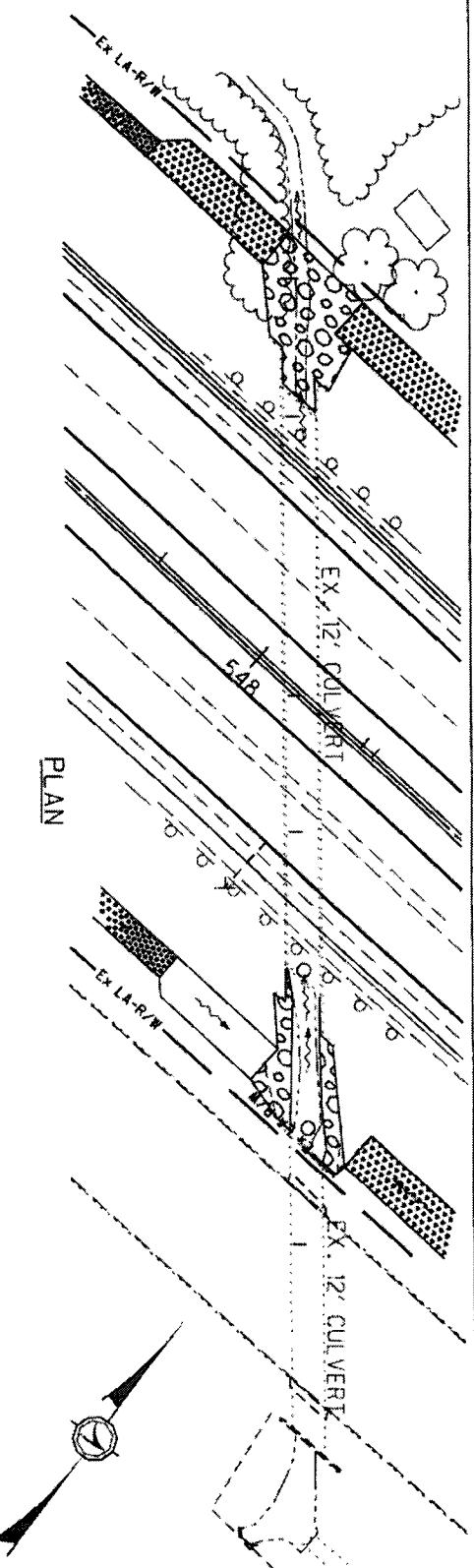
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545

PROPOSED IMPACTS FOR STREAM NO. 6  
MARSH CREEK STA. 646+04



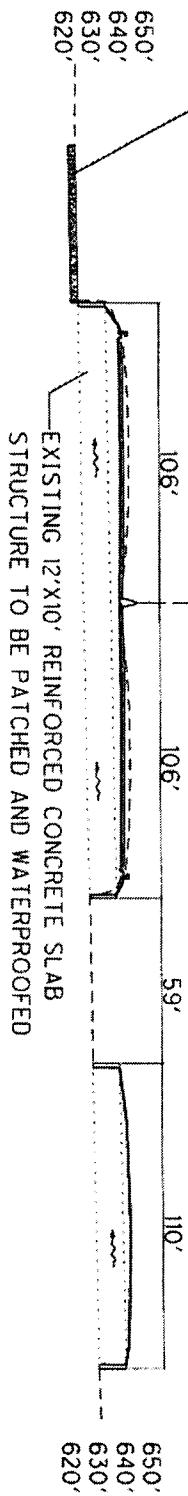
PLAN SCALE 1"=40'  
PROFILE SCALE 1"=40'  
CROSS SECTION HORIZ. SCALE 1"=40'

1 AK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 8  
UNNAMED STREAM  
86 STA 524+98

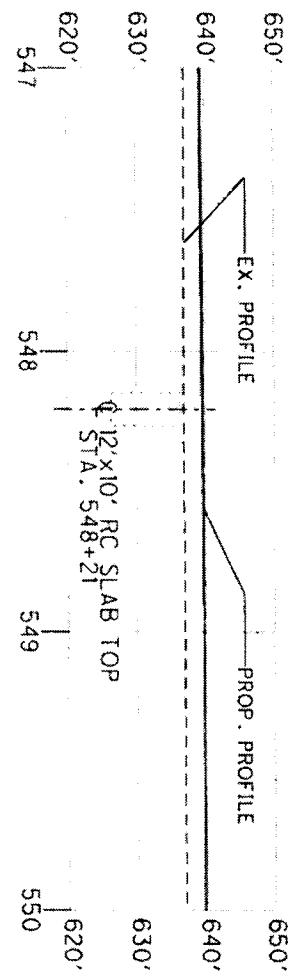


PLAN

C CONSTRUCTION S.R. 2 STA. 548+21

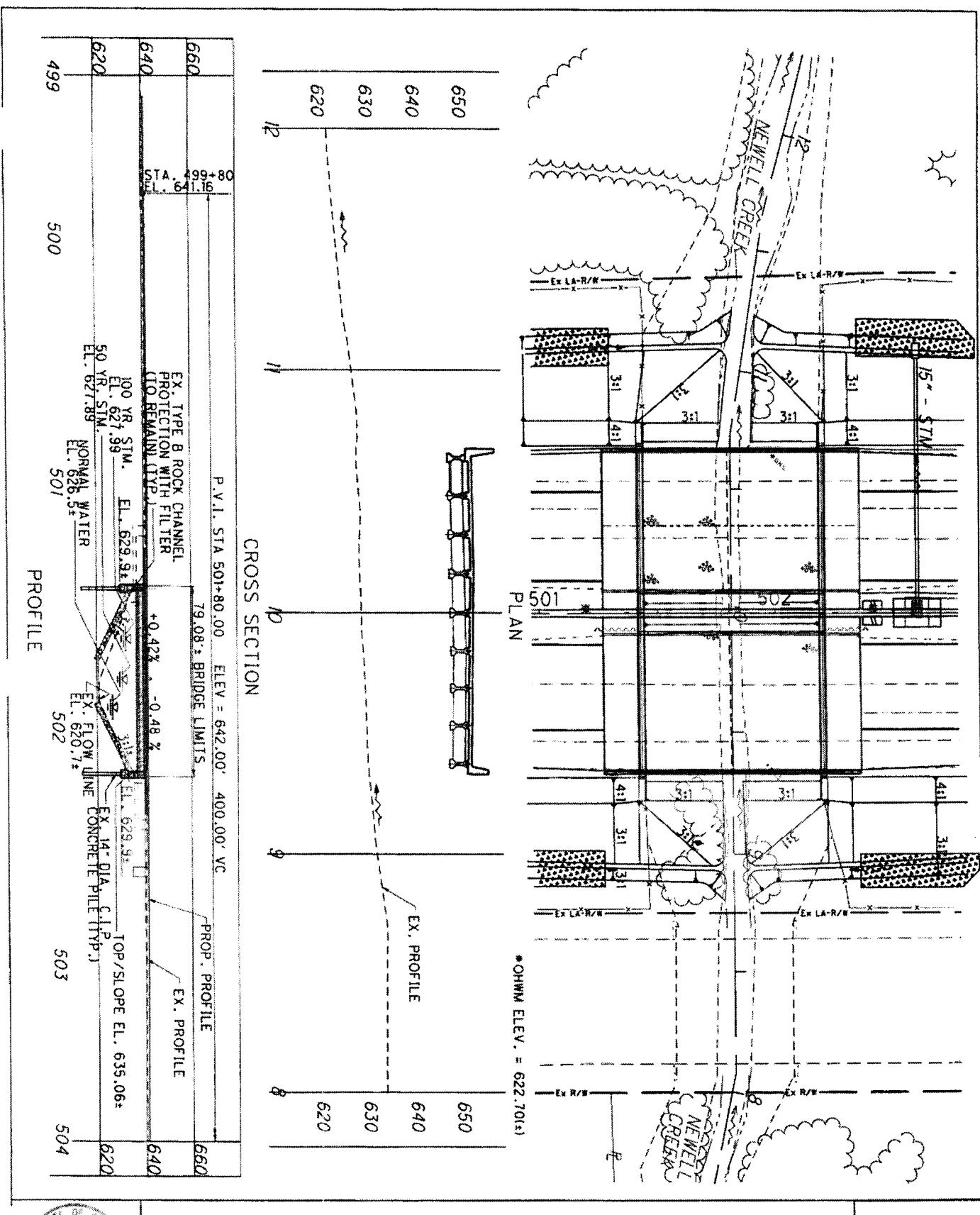


PROFILE



PLAN SCALE 1'=60'  
PROFILE SCALE 1'=60'  
CROSS SECTION HORIZ. SCALE 1'=60'

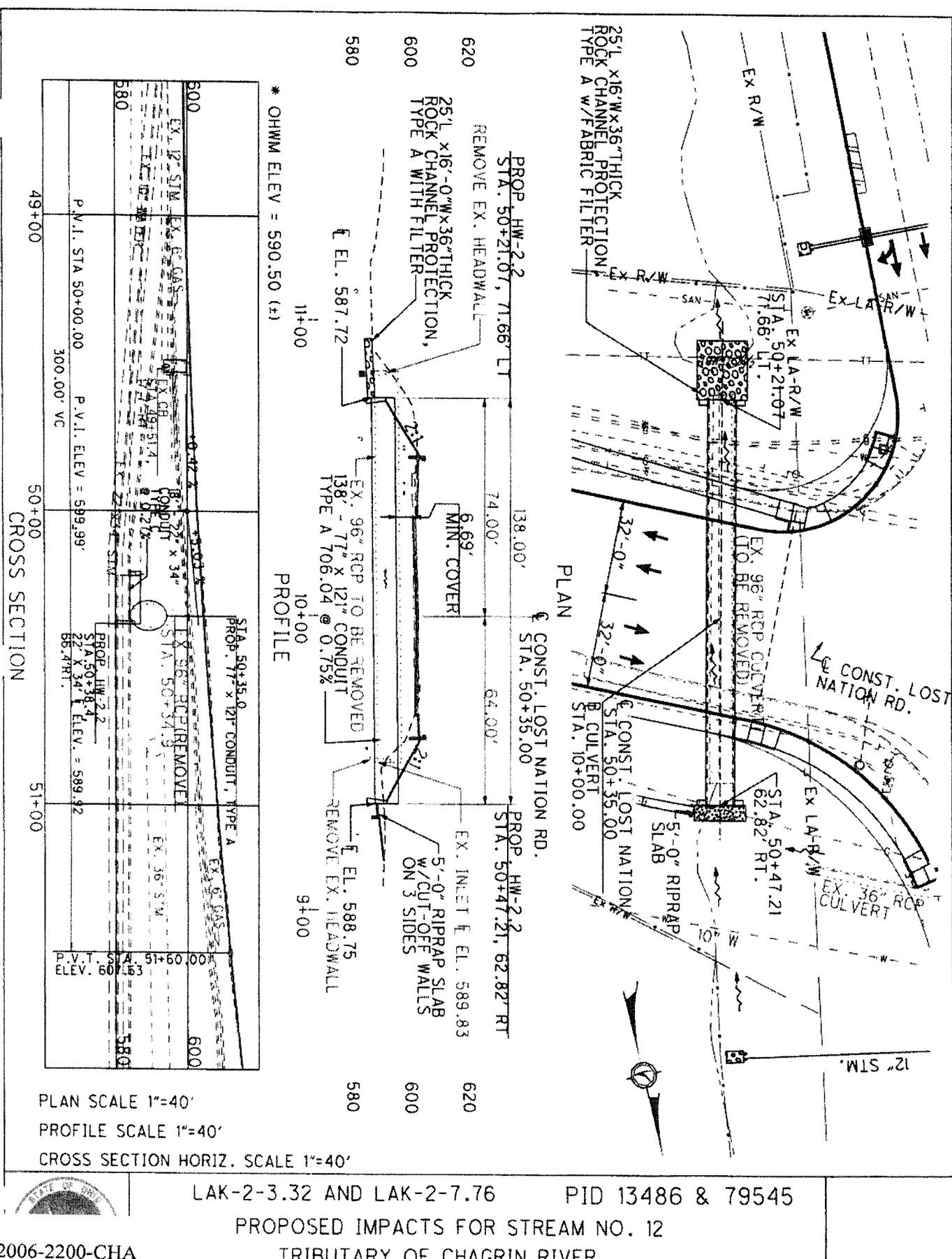
LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 9  
UNNAMED STREAM  
STA. 548+21



LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND 79545

PROPOSED IMPACTS FOR STREAM NO. 10  
NEWELL CREEK STA. 501+81

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 23 of 50



PLAN SCALE 1"=40'

PROFILE SCALE 1"-40'

CROSS SECTION HORIZ. SCALE 1:40'

LAK-2-3.32 AND LAK-2-7.76

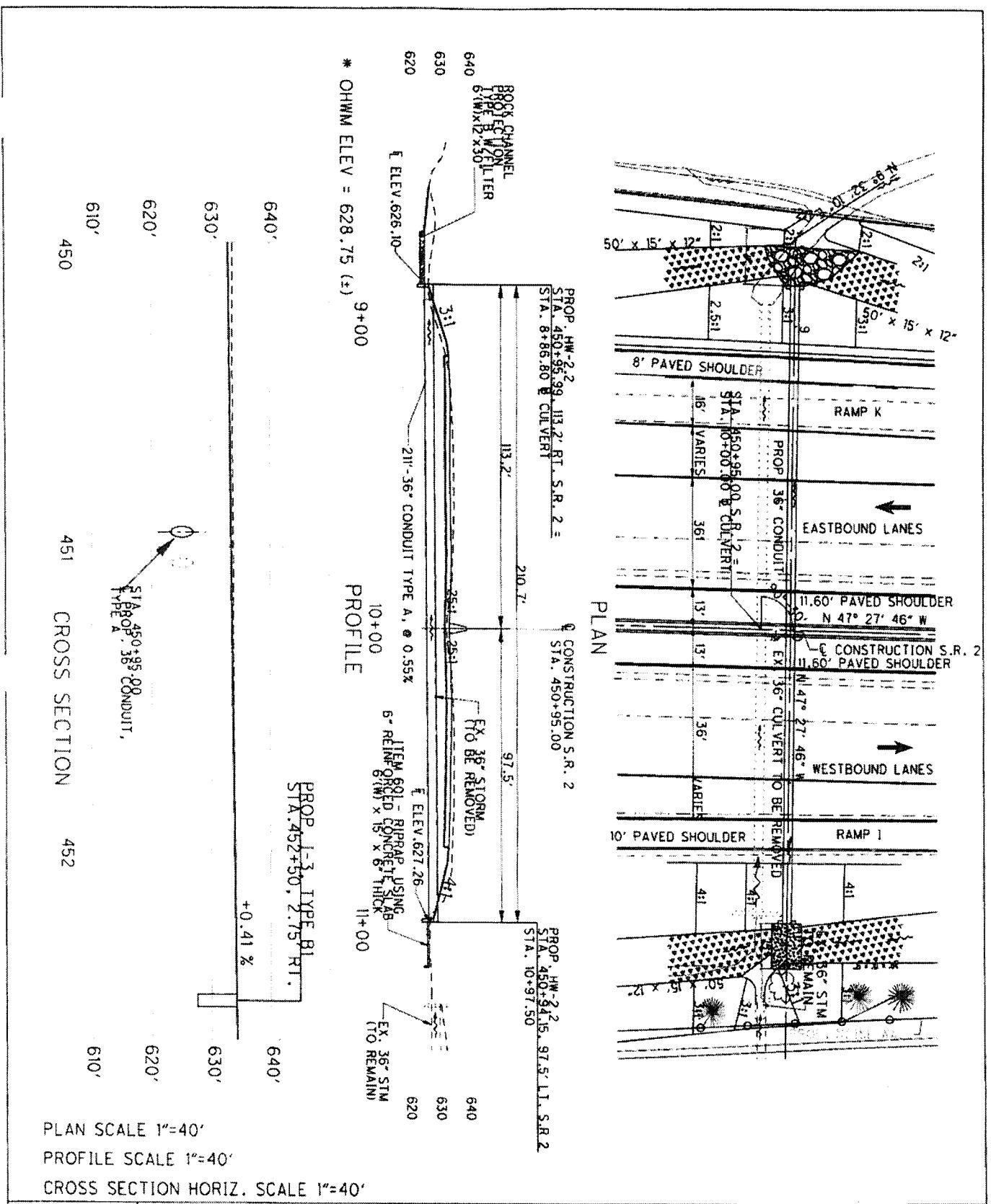
PID 13486 & 79545

## PROPOSED IMPACTS FOR STREAM NO. 12

2006-2200-CHA

LAK-2-3.32, PID: 13486) ST NATION ROAD CULVERT DETAIL STA. 50+36  
Sheet 24 of 50

SHEET 1 OF 12



PLAN SCALE 1"=40'

PROFILE SCALE 1<sup>o</sup>=40'

CROSS SECTION HOBIZ. SCALE 1"=40'

LAK-2-3.32 AND LAK-2-7.76

PID 13486 & 79545

## PROPOSED IMPACTS FOR STREAM NO. 12

## TRIBUTARY OF CHAGRIN RIVER

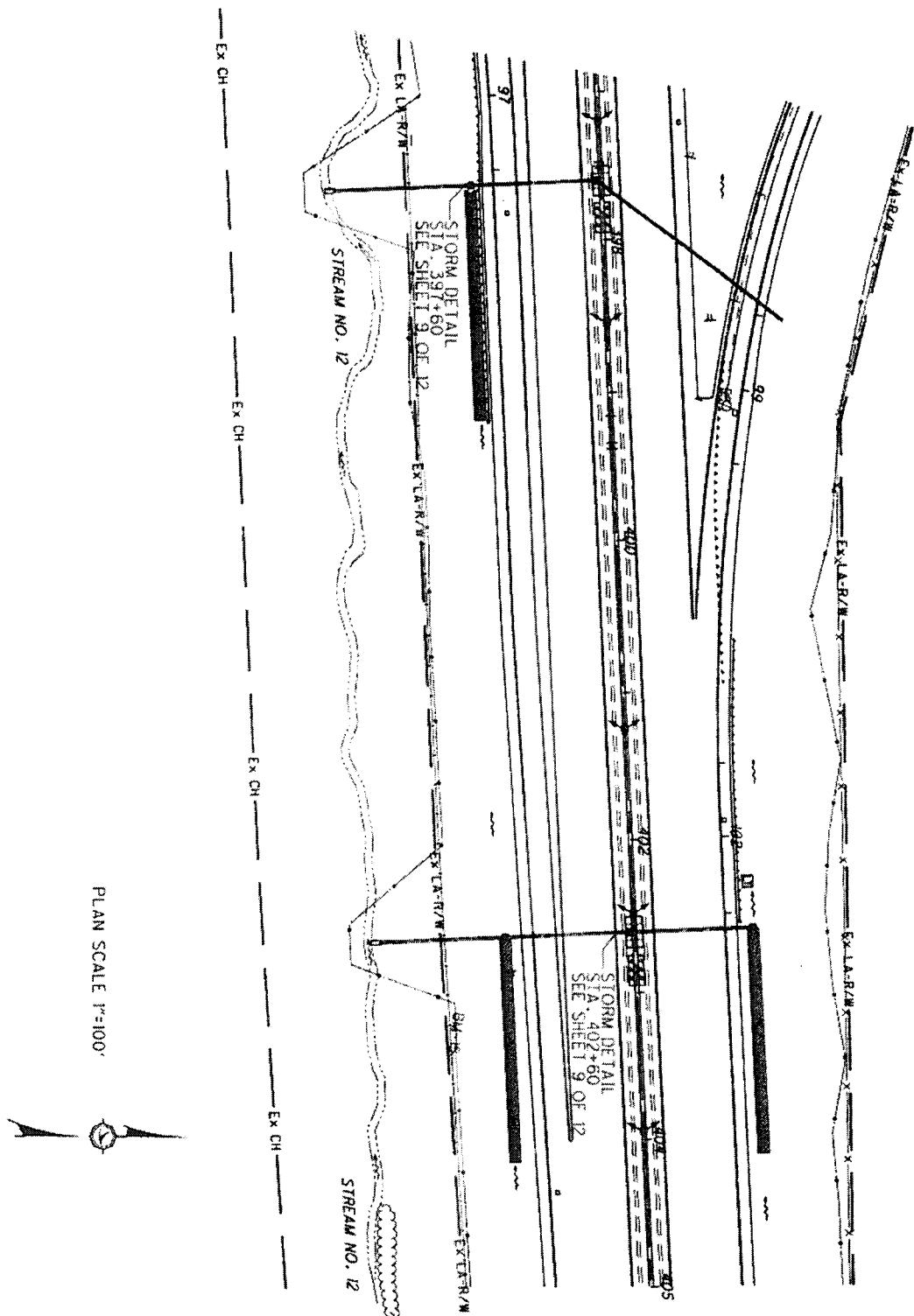
**MISSOURI RIVER**

2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 25 of 50

SHEET 2 OF 12



1 AV-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 26 of 50

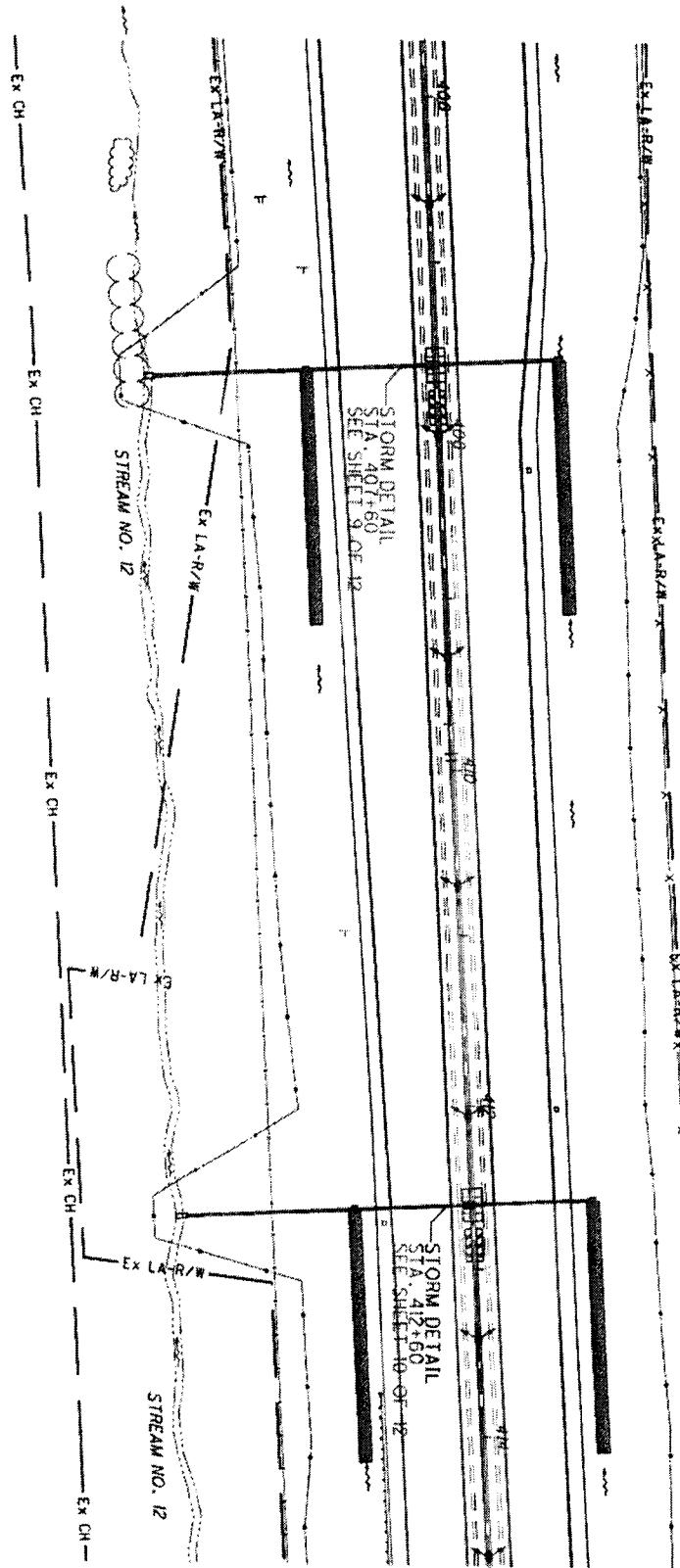
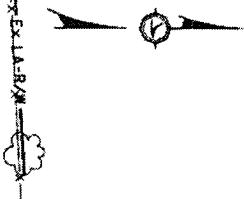
## PROPOSED IMPACTS FOR STREAM NO. 12

## TRIBUTARY OF CHAGRIN RIVER

SR 2 PLAN STA. 397+00 TO STA. 405+00

SHEET 3 OF 12

PLAN SCALE 1"=100'



LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

2006-2200-CHA

PROPOSED IMPACTS FOR STREAM NO. 12

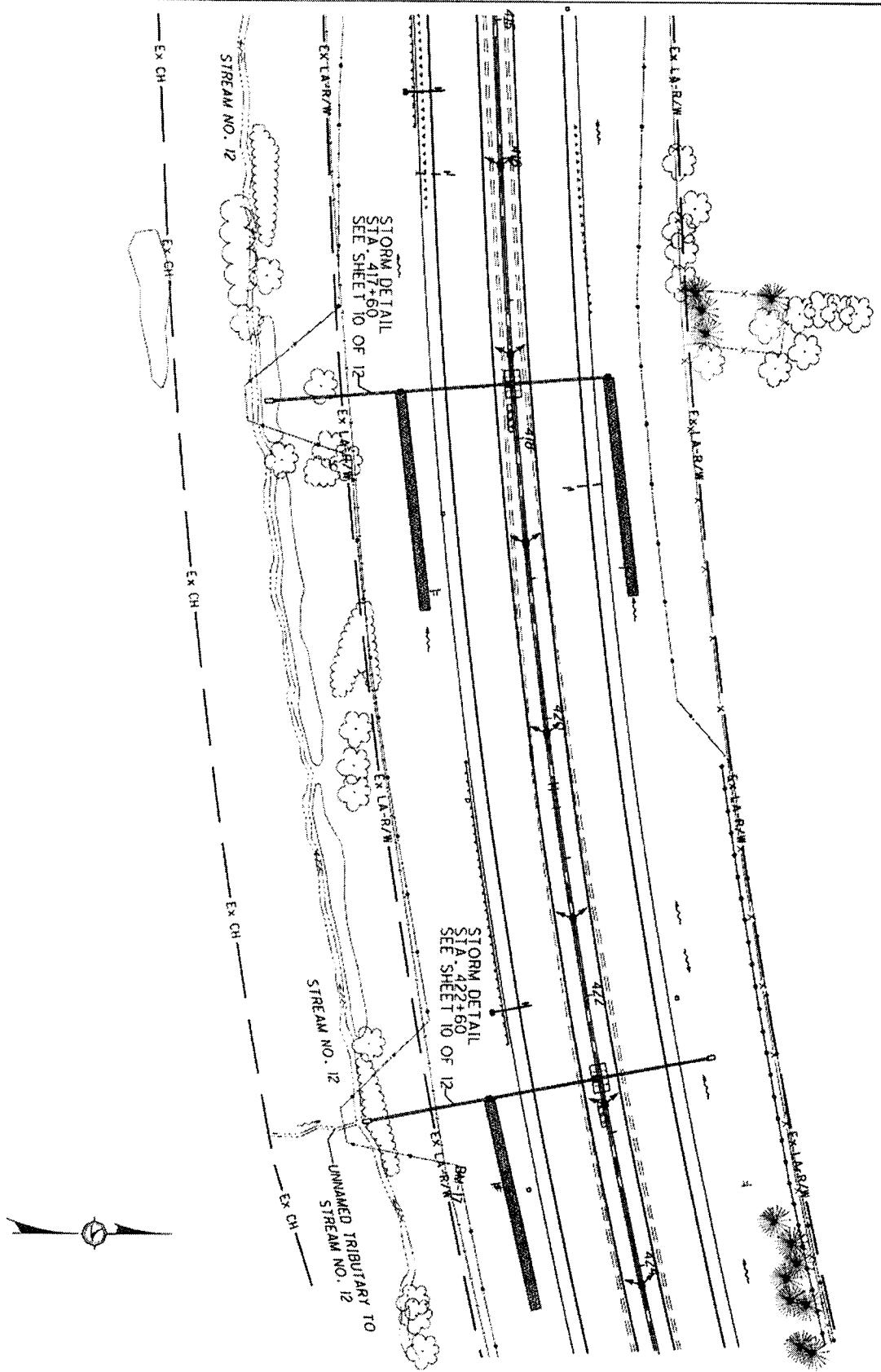
LAK-2-3.32, PID: 13486

TRIBUTARY OF CHAGRIN RIVER

Sheet 27 of 50

R 2 PLAN STA. 406+00 TO STA. 414+00

SHEET 4 OF 12



PLAN SCALE 1"=100'



LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

## PROPOSED IMPACTS FOR STREAM NO. 12

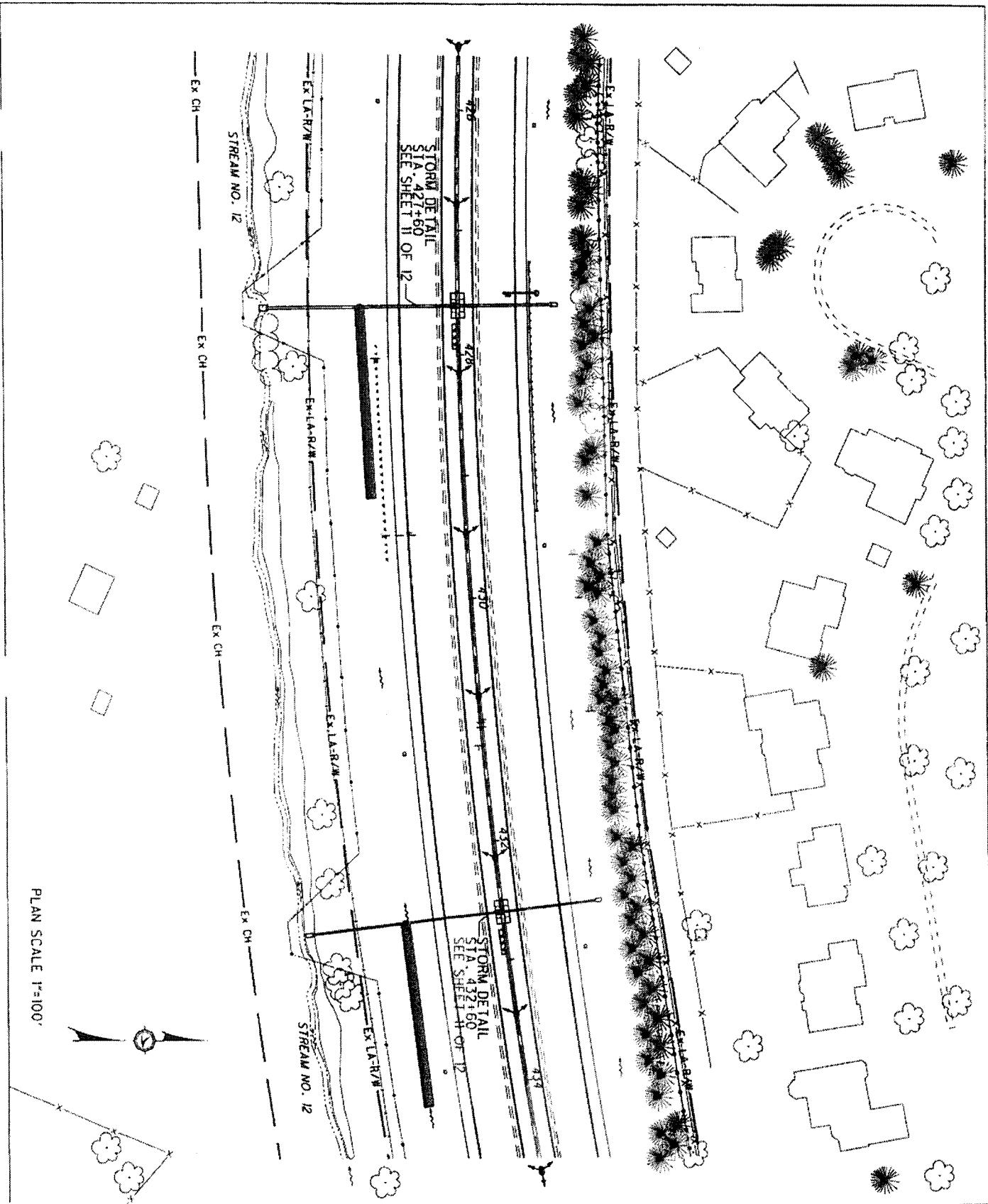
2006-2200-CHA

LAK-2-3.32, PID: 13486  
Sheet 28 of 50

## TRIBUTARY OF CHAGRIN RIVER

SR 2 PLAN STA. 415+00 TO STA. 424+00

SHEET 5 OF 12



LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

### PROPOSED IMPACTS FOR STREAM NO. 12

2006-2200-CHA

LAK-2-3.32, PID: 13486

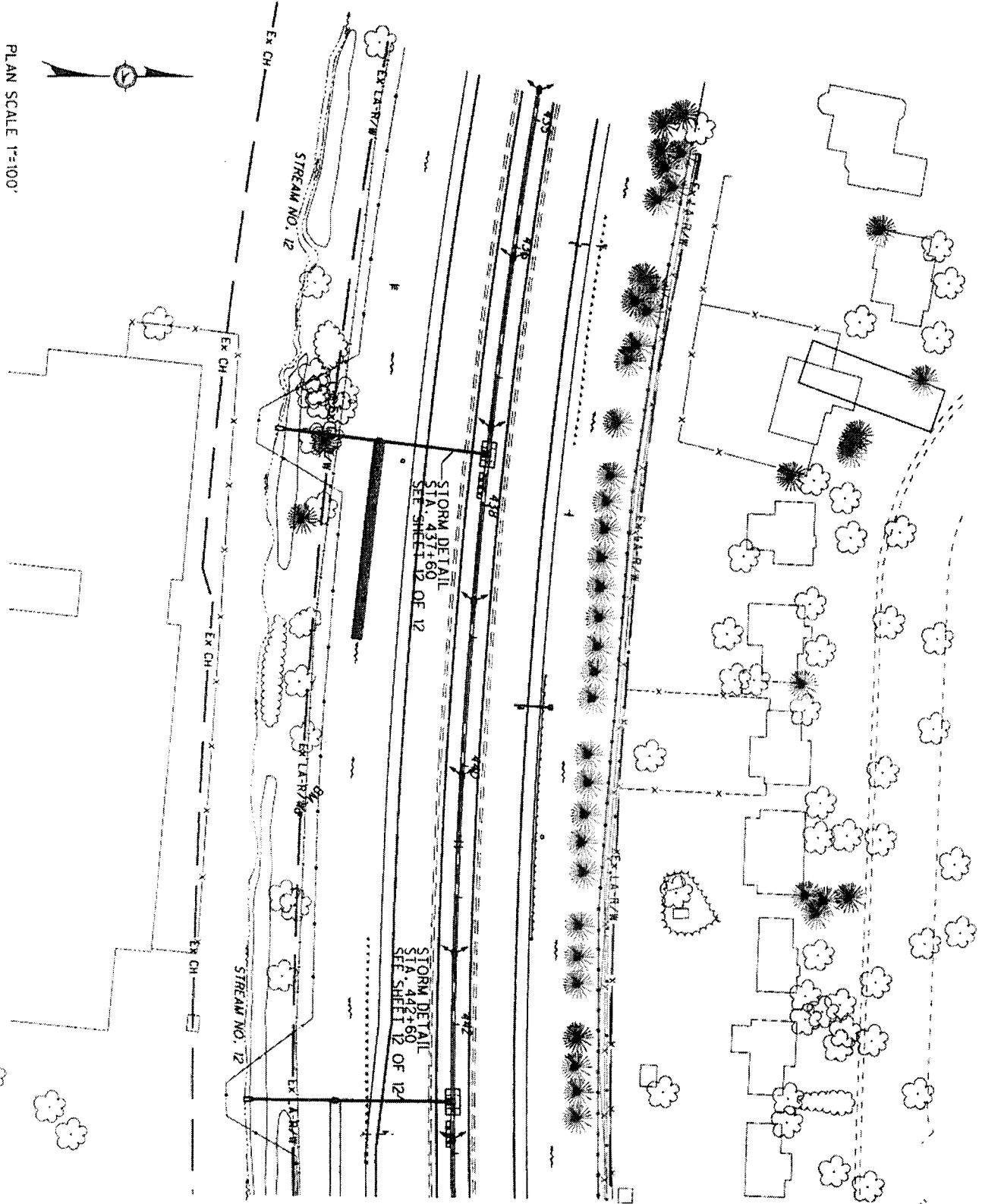
Sheet 29 of 50

## TRIBUTARY OF CHAGRIN RIVER

TRIBUTARY OF CHACKIN RIVER  
SR 2 PLAN STA. 426+00 TO STA. 434+00

SHEET 6 OF 12

PLAN SCALE 1"=100'



LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

2006-2200-CHA

LAK-2-3.32, PID: 13486

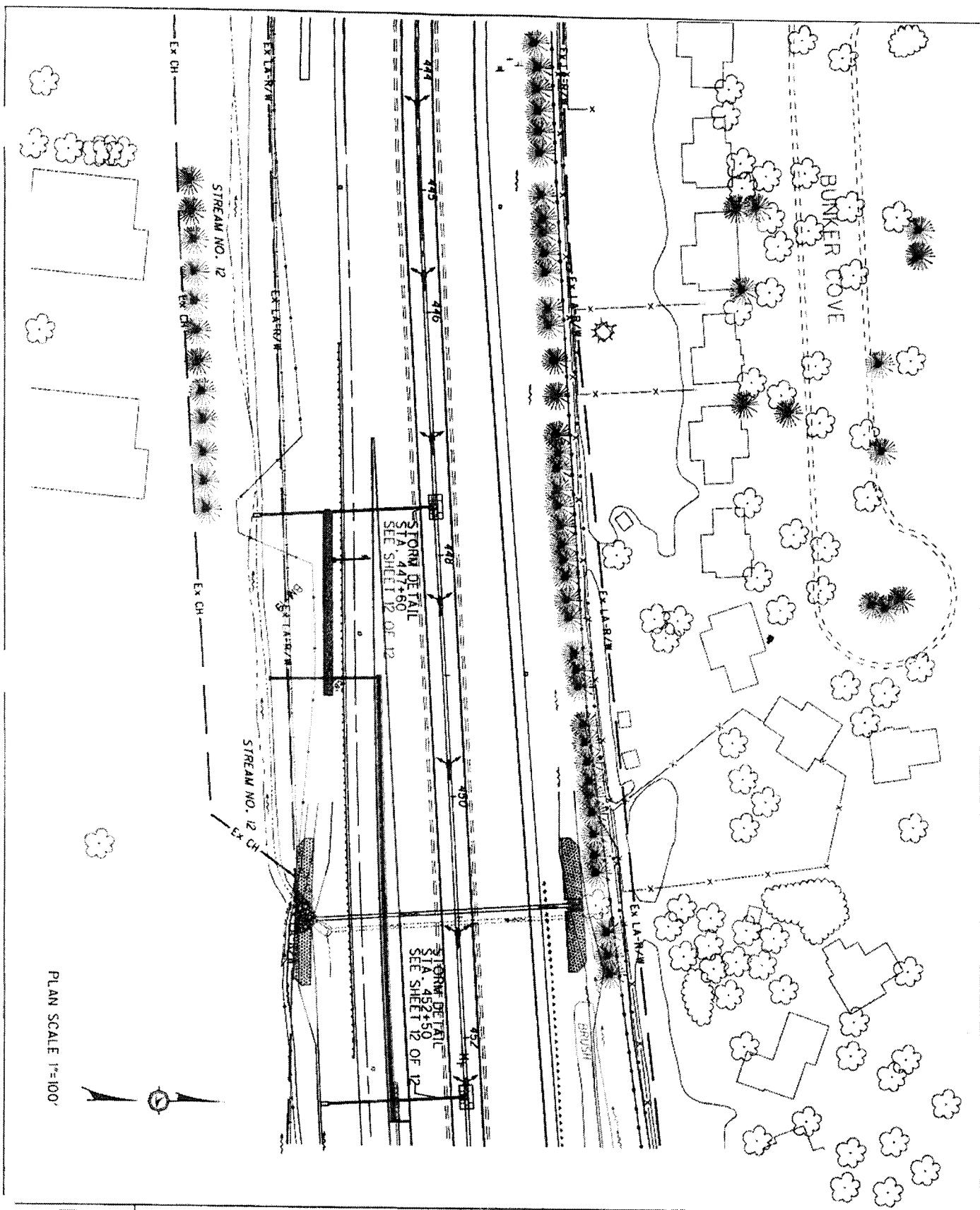
Sheet 30 of 50

## PROPOSED IMPACTS FOR STREAM NO. 12

## TRIBUTARY OF CHAGRIN RIVER

32 PLAN STA. 435+00 TO STA. 443+00

SHEET 7 OF 12



LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

2006-2200-CHA

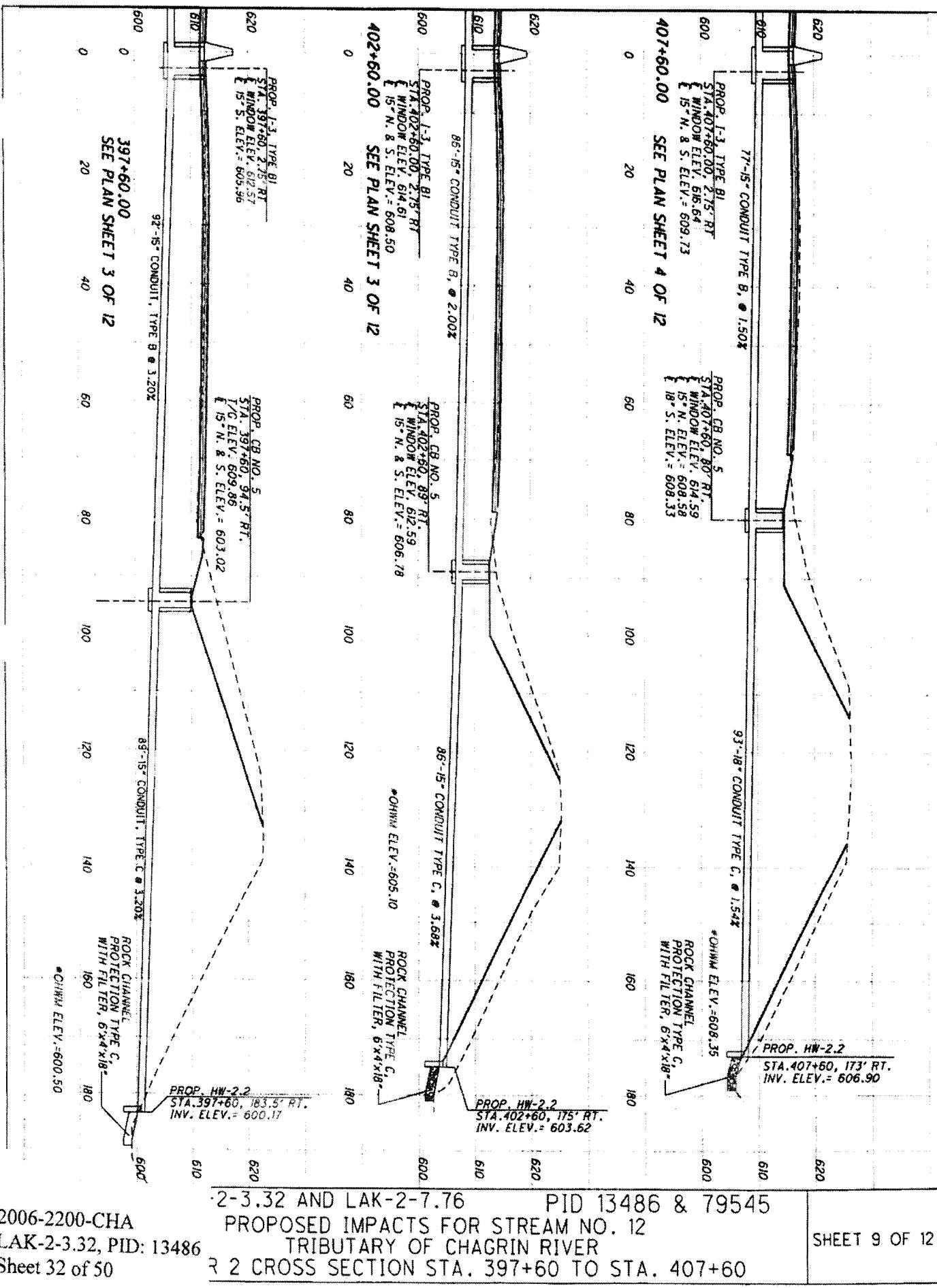
## PROPOSED IMPACTS FOR STREAM NO. 12

LAK-2-3.32, PID: 13486

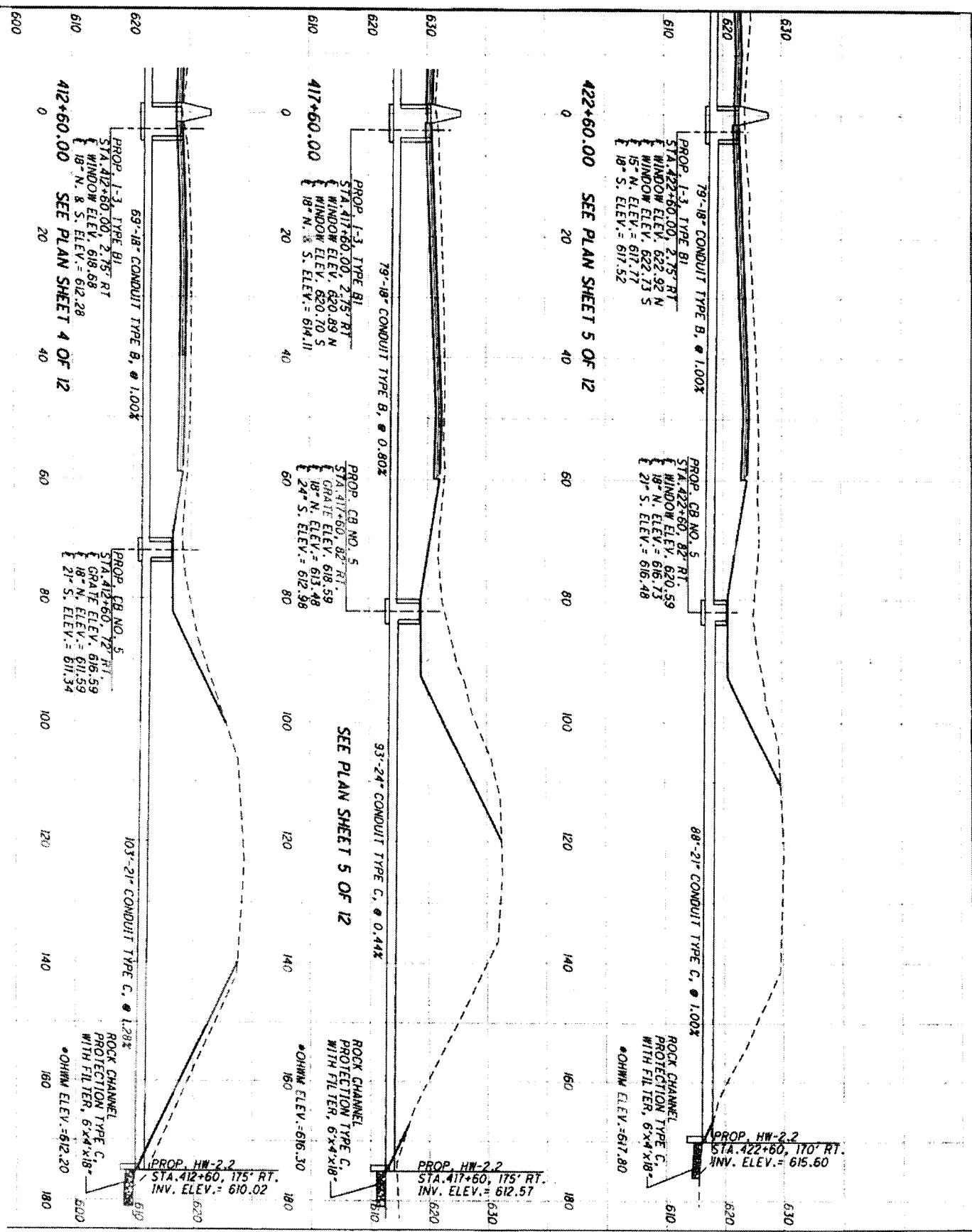
## TRIBUTARY OF CHAGRIN RIVER

Sheet 31 of 50 SR 2 PLAN STA. 444+00 TO STA. 452+00

SHEET 8 OF 12



2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 32 of 50



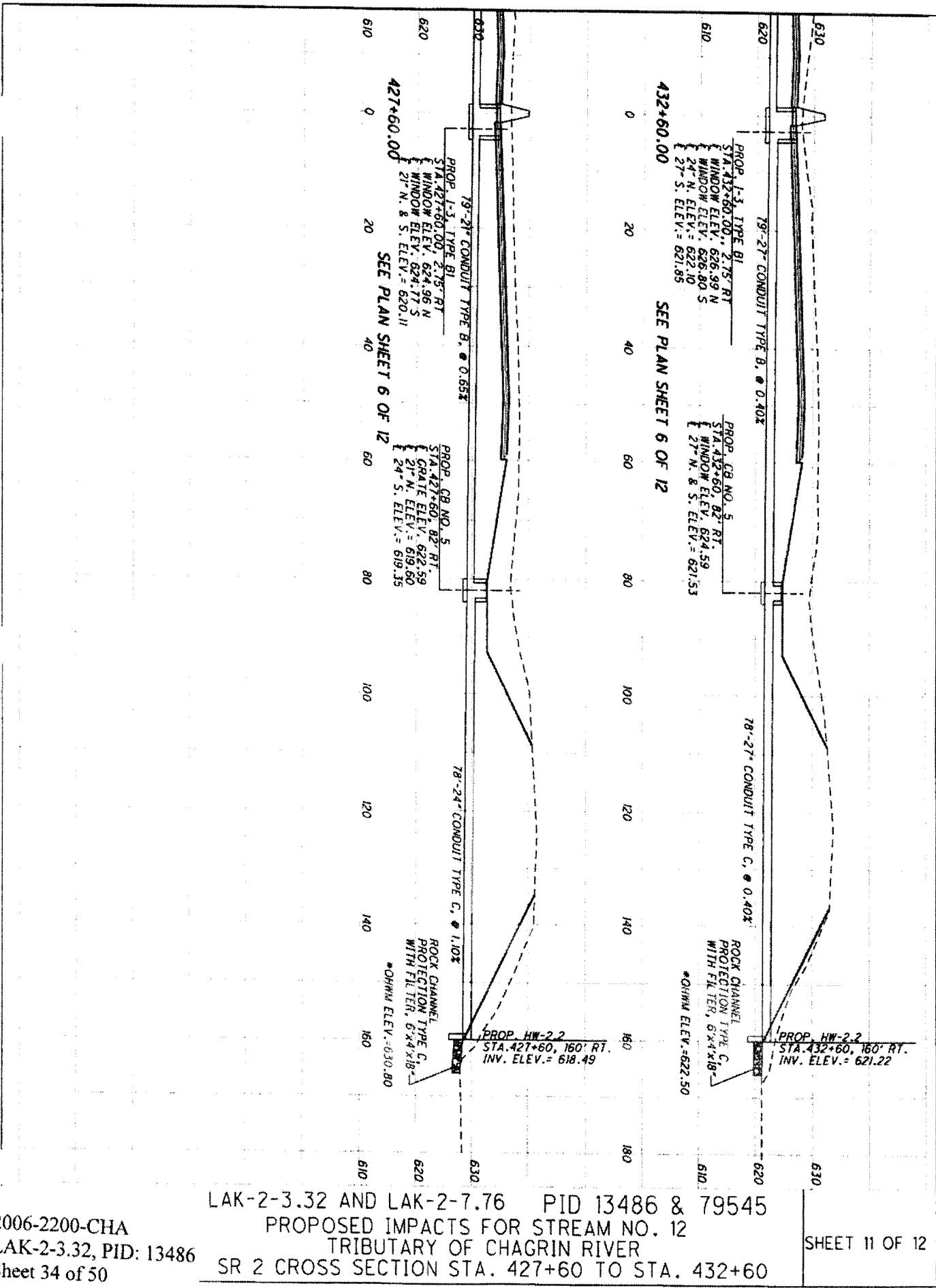
LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

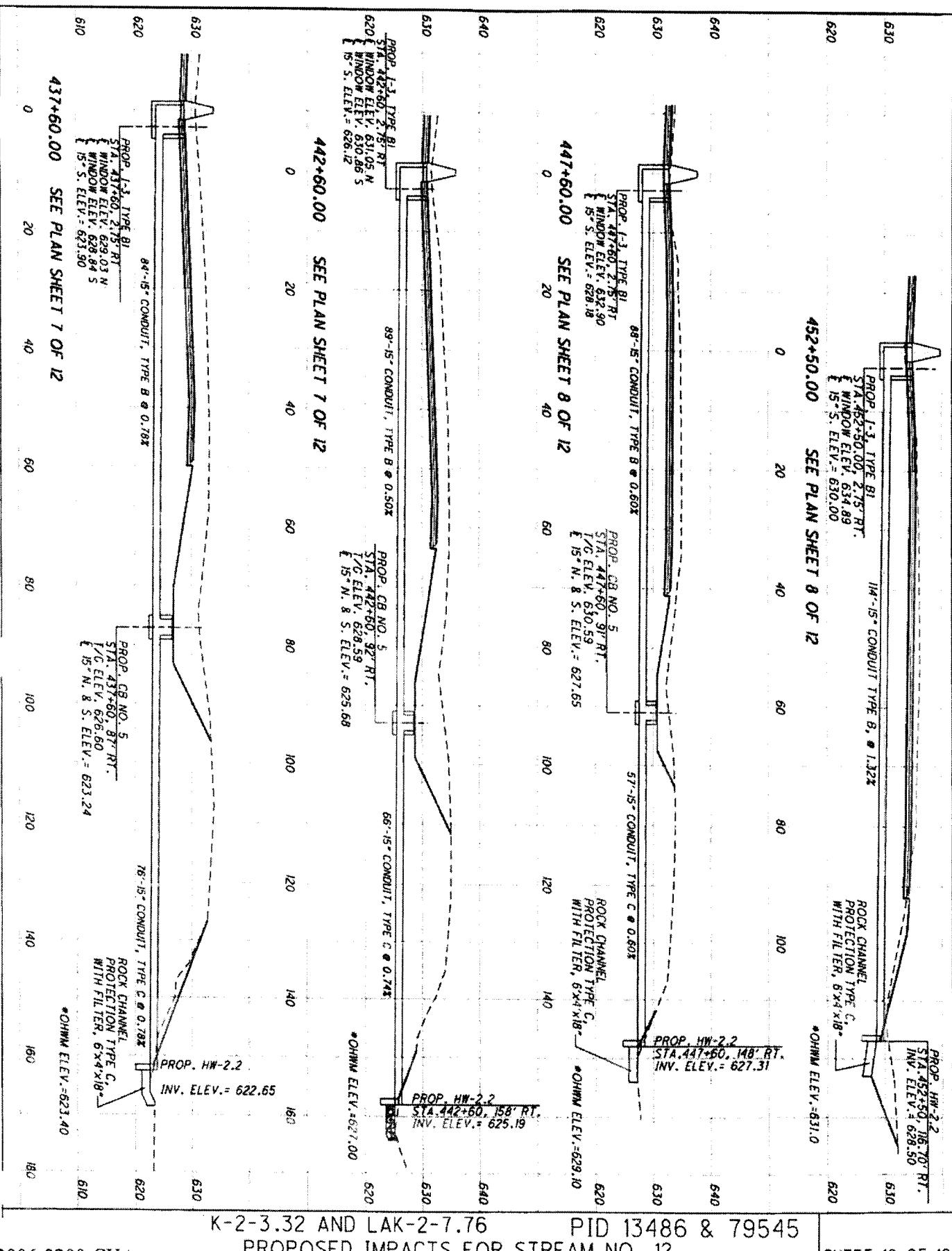
**PROPOSED IMPACTS FOR STREAM NO. 12  
TRIBUTARY OF CHAGRIN RIVER**

TRIBUTARY OF CHAGRIN RIVER

SR 2 CROSS SECTION STA. 412+60 TO STA. 422+60

SHEET 10 OF 12





K-2-3.32 AND LAK-2-7.76 PID 13486 & 79545

PROPOSED IMPACTS FOR STREAM NO. 12

TRIBUTARY OF CHAGRIN RIVER

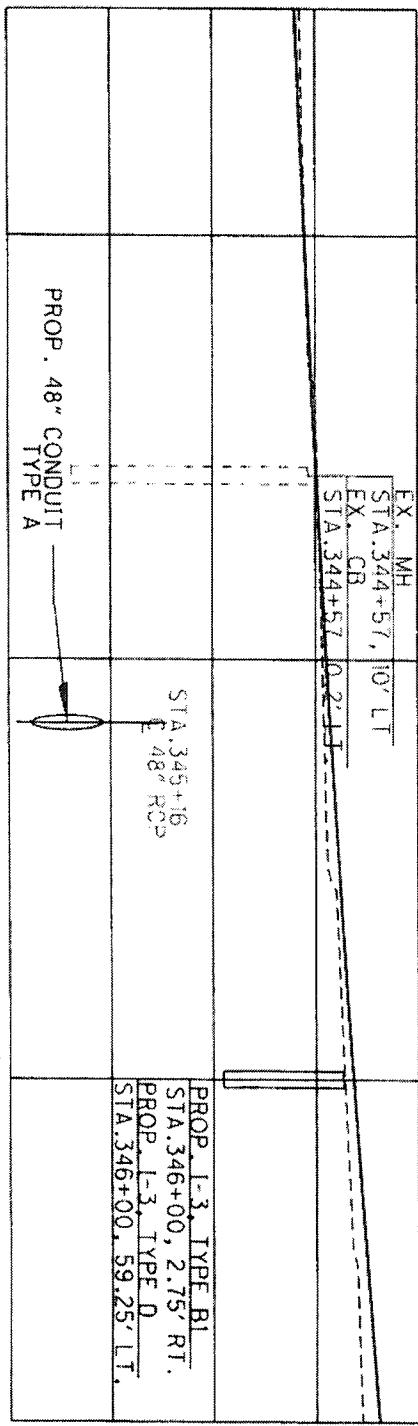
SR 2 CROSS SECTION STA. 437+60 TO STA. 452+50

2006-2200-CHA

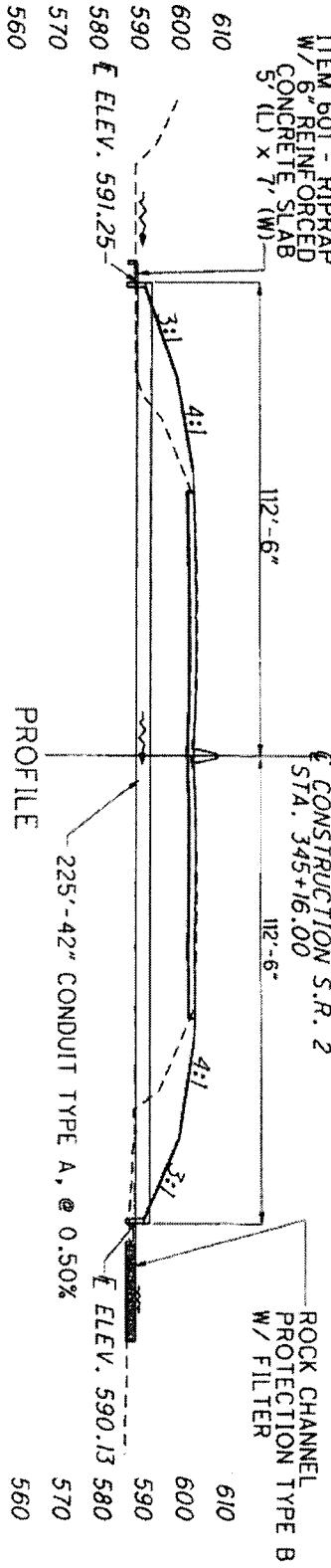
LAK-2-3.32, PID: 13486

Sheet 35 of 50

SHEET 12 OF 12



\*OHWM ELEV. = 593.50(±)



PLAN SCALE 1"=40'

PROFILE SCALE 1"=40'

CROSS SECTION HORIZ. SCALE 1"=40'

LAK-2-3.32 AND LAK-2-7.76

PID 13486 & 79545

PROPOSED IMPACTS FOR STREAM NO. 13

TRIBUTARY OF CHAGRIN RIVER

STA. 346+00, 2.75' RT.

PROP. 1-3, TYPE B1

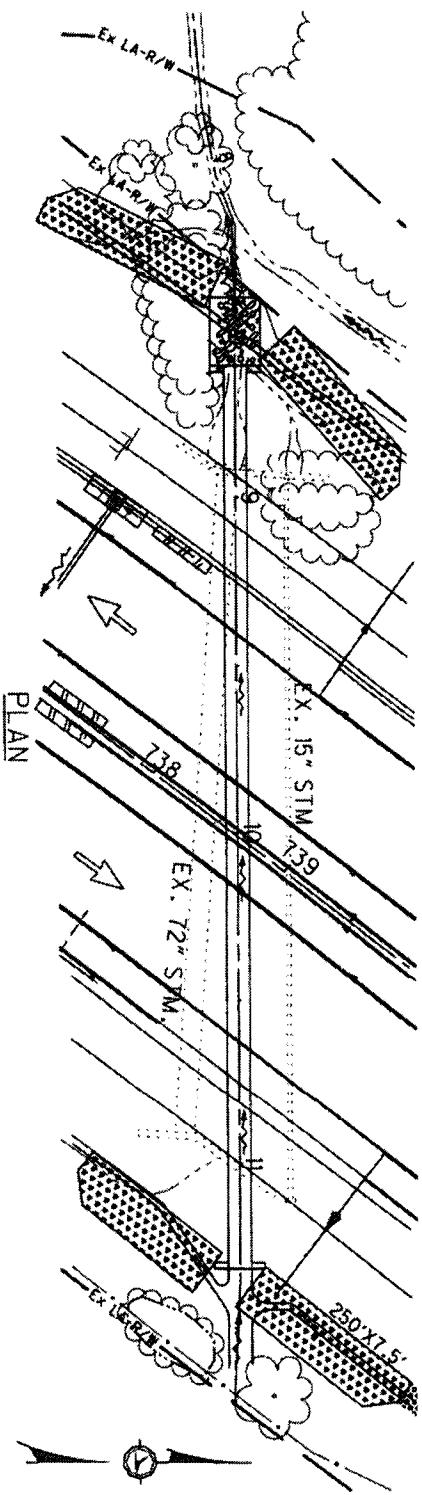
STA. 346+00, 2.75' RT.

PROP. 1-3, TYPE D

2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 36 of 50



PLAN

E CONST. SR2 STA. 738+57.00

133'

E

INV. EL. 614.79

E

139'

640  
ROCK CHANNEL  
PROTECTION, TYPE A WITH FILTER  
20'(L)x16'(W)x36'(H)  
630  
620  
610  
600

ITEM 601 - RIPRAP USING REINFORCED CONC. SLAB PROFILE

ITEM 601 - RIPRAP USING REINFORCED CONC. SLAB PROFILE

640

630

620

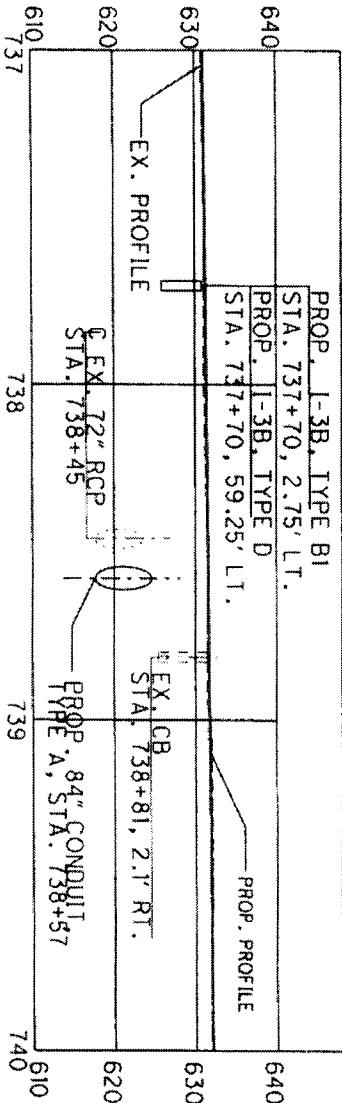
610

600

LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 14

WASSON DITCH  
STA. 738+57

CROSS SECTION



PLAN SCALE 1'=50'

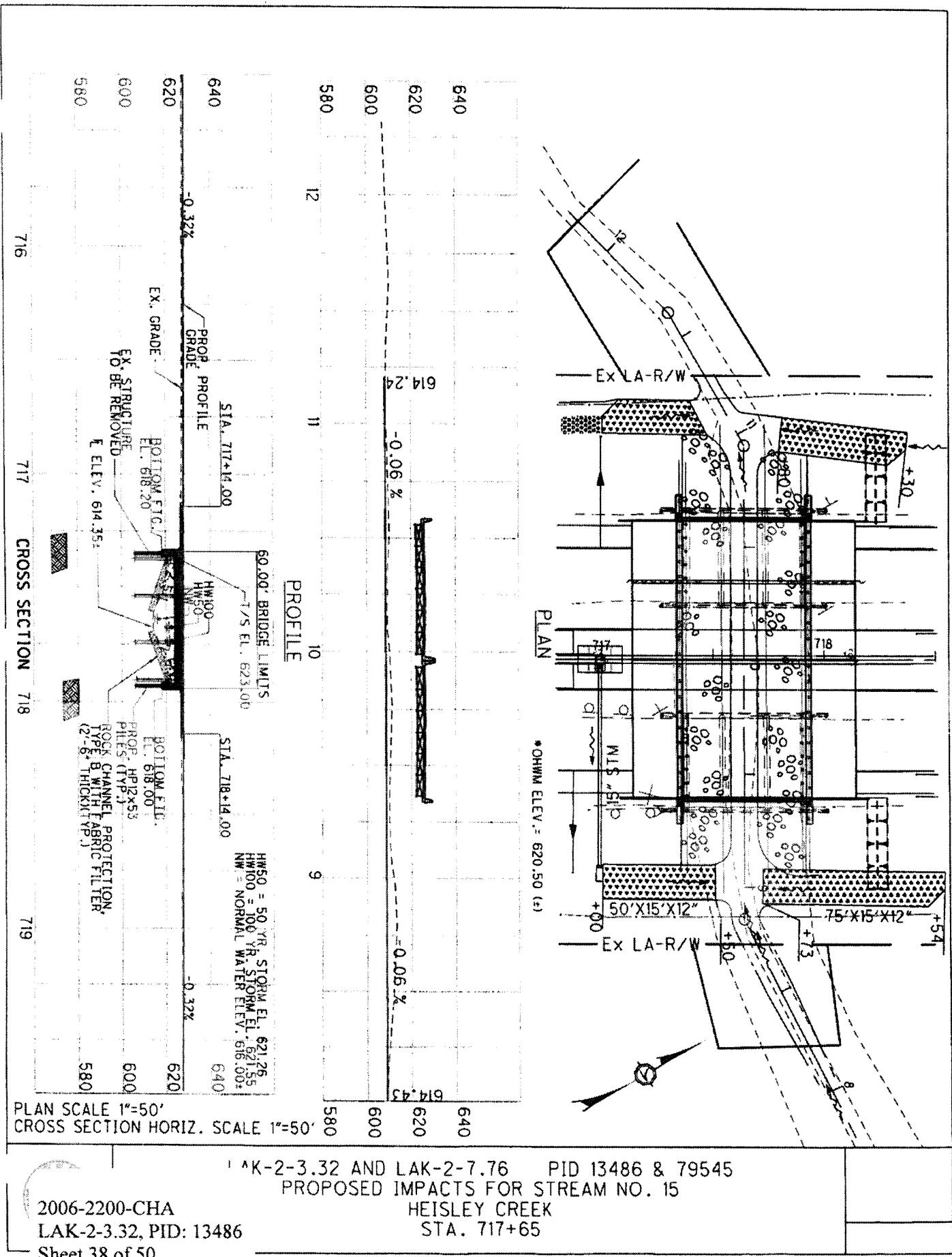
PROFILE SCALE 1'=50'

CROSS SECTION HORIZ. SCALE 1'=50'

2006-2200-CHA

LAK-2-3.32, PID: 13486

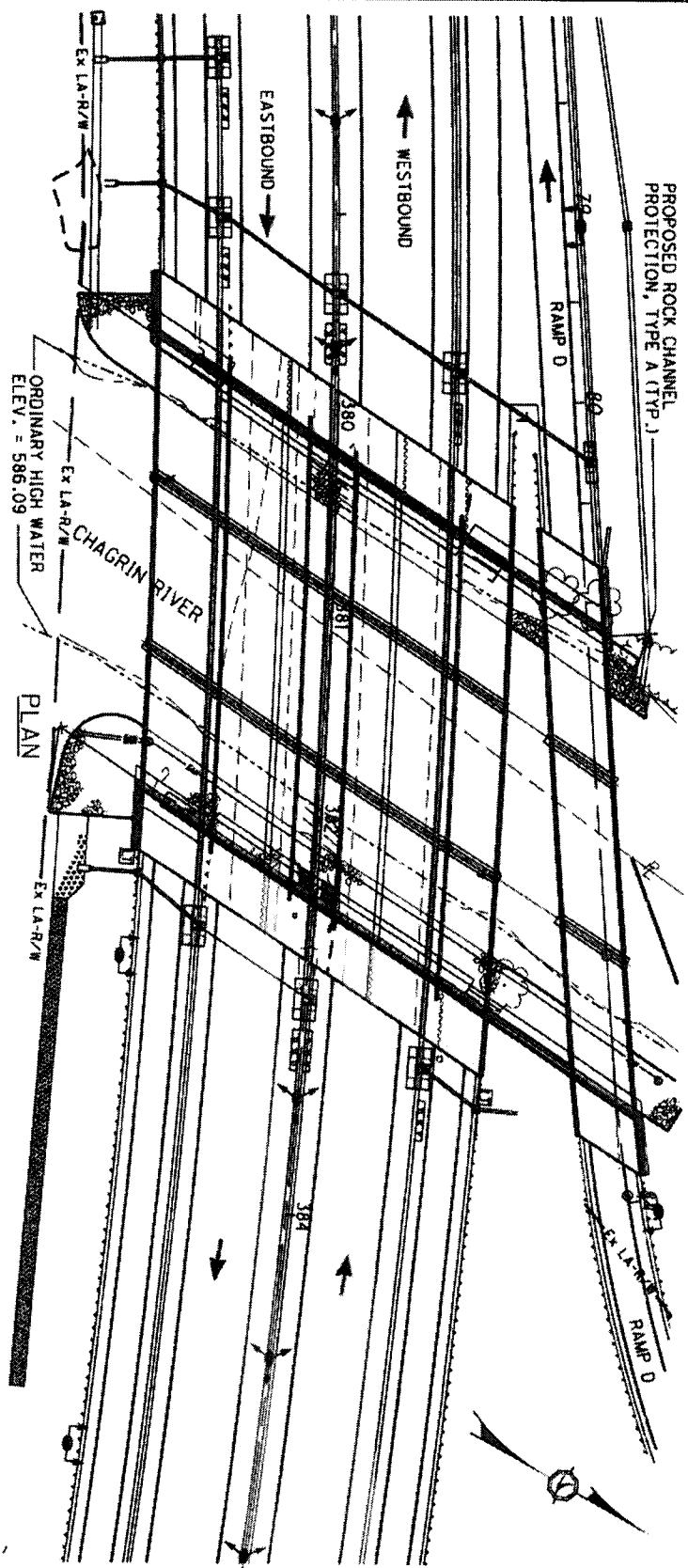
Sheet 37 of 50



^ K-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 15

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 38 of 50

PROPOSED ROCK CHANNEL  
PROTECTION, TYPE A (TYP.)



286.15' BRIDGE LIMITS		PROP. PROFILE	
OHWM ELEV. = 586.09	EL. 586.90	100 YR. STORM EL. 602.51	640
		50 YR. STORM EL. 601.49	620
		NORMAL WATER EL. 584.87	600
		+0.57%	580
		FLOW LINE EL. 582.82	560
580	35' DIA. DRILLED SHAFTS (SOCKET, 14'-2" TYP.)	EX. 18" SAN. (TBRI) PROPR. 18" SAN.	540
580	42" DIA. DRILLED SHAFTS ROCK CHANNEL PROTECTION, TYPE A (3'-0" THICKN. (TYP.))	EX. 18" SAN. (TBRI)	520
380	381	382	383
379	380	381	384
378	379	380	385

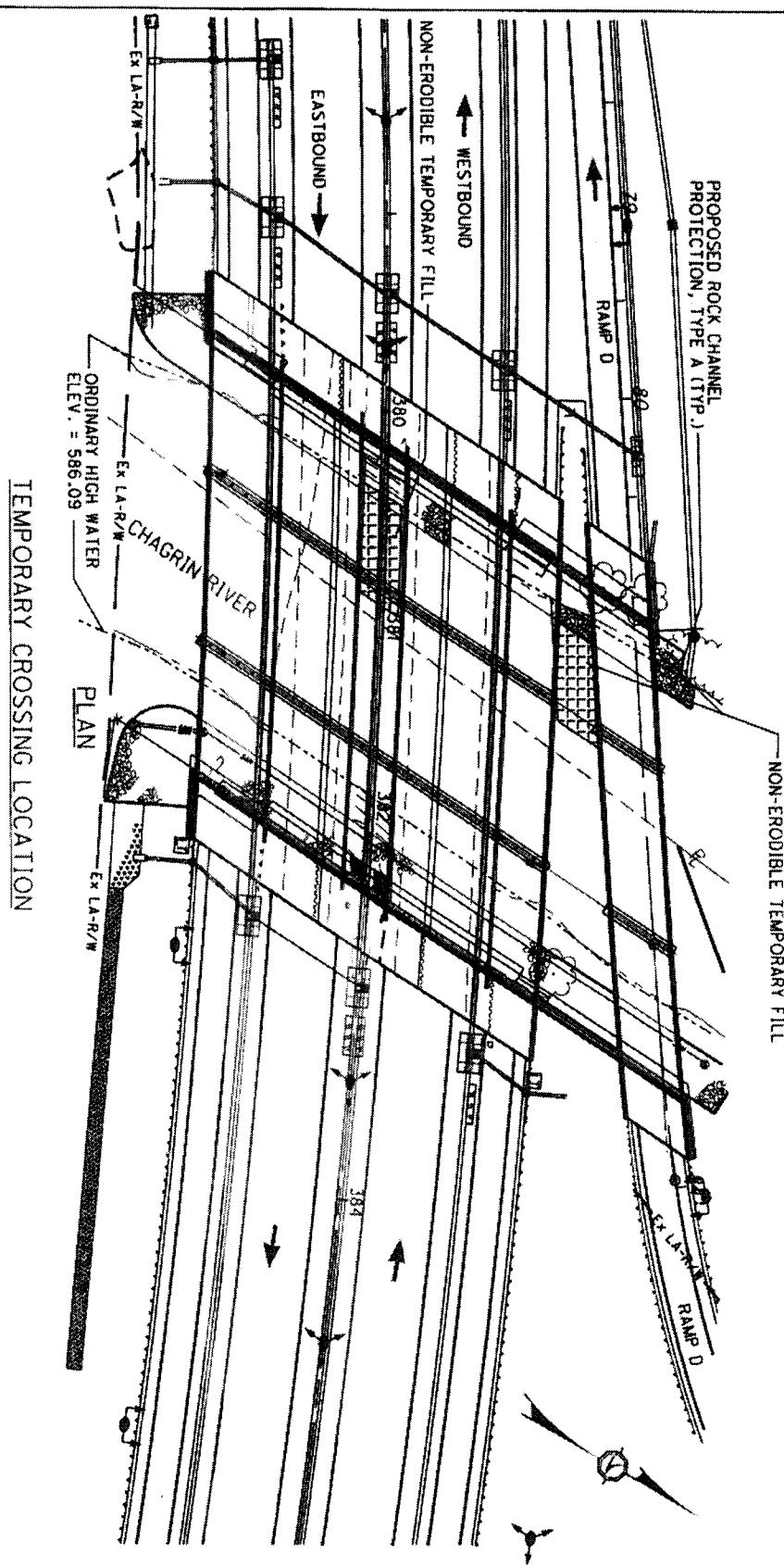
PROFILE

PLAN SCALE 1"=80'  
CROSS SECTION HORIZ. SCALE 1"=80'

AK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM NO. 16  
CHAGRIN RIVER STA 381+16

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 39 of 50

SHEET 1 OF 2



NOTE:

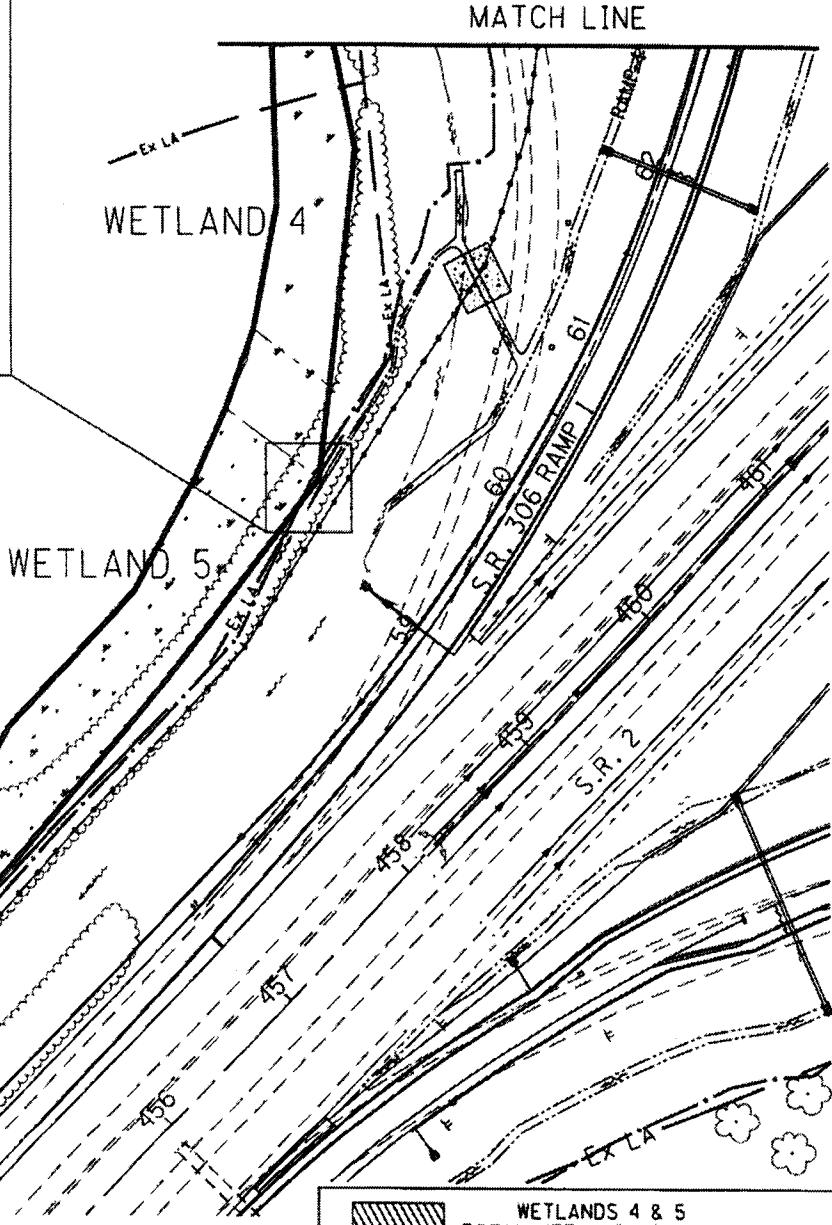
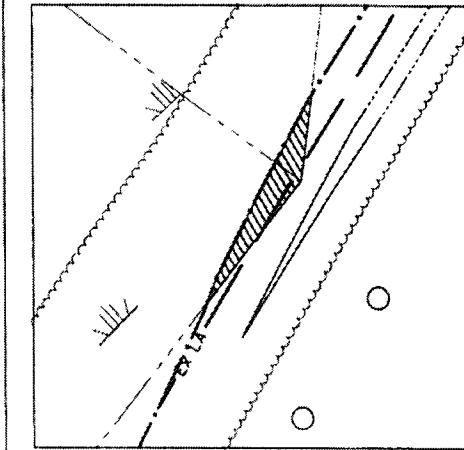
THE MAJORITY OF THE BRIDGE SPAN NO. 3 (EAST BANK) HAS AGGRADED AND ALLOWS LITTLE OR NO FLOW TO BE CONVEYED. THEREFORE, THE CONTRACTOR WILL NOT NEED A TEMPORARY CONSTRUCTION STREAM CROSSING IN THIS AREA. LIKEWISE, THE BRIDGE SPAN NO 2 (CENTER BAY) WILL NOT BE IMPACTED WITH THE EXCEPTION OF THE PROPOSED SHEETING/ COFFERDAMS TO CONSTRUCT THE PROPOSED PIERS. LASTLY, THE RIVER'S FLOW WILL BE DIRECTED TOWARD THE CENTER SPAN NO. 2 AND A TEMPORARY STREAM CROSSING WILL BE CONSTRUCTED ONLY WITHIN SPAN NO. 1 WHEN CONSTRUCTING THE WEST ABUTMENT AND THE WEST PIERS. IN ANY CASE, NO TEMPORARY PIPES WILL BE NEEDED TO INSTALLED TO COMPLETE THE CONSTRUCTION.

PLAN SCALE 1"=80'

LAK-2-3.32 AND LAK-2-7.76 PID 13486 & 79545  
PROPOSED IMPACTS FOR STREAM nO. 16  
CHAGRIN RIVER STA 381+16

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 40 of 50

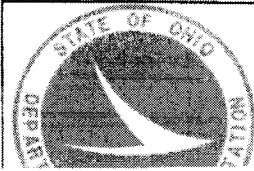
SHEET 2 OF 2



PLAN

PLAN SCALE 1"=100'  
INSET PLAN SCALE 1"=20'

	WETLANDS 4 & 5 TOTAL WETLAND LOSS (.020 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	.020 AC EXCAVATION BELOW OHW: 15 CY FILL BELOW OHW: 0.0 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.0 AC



## IMPACTS TO WETLANDS W4 & W5

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

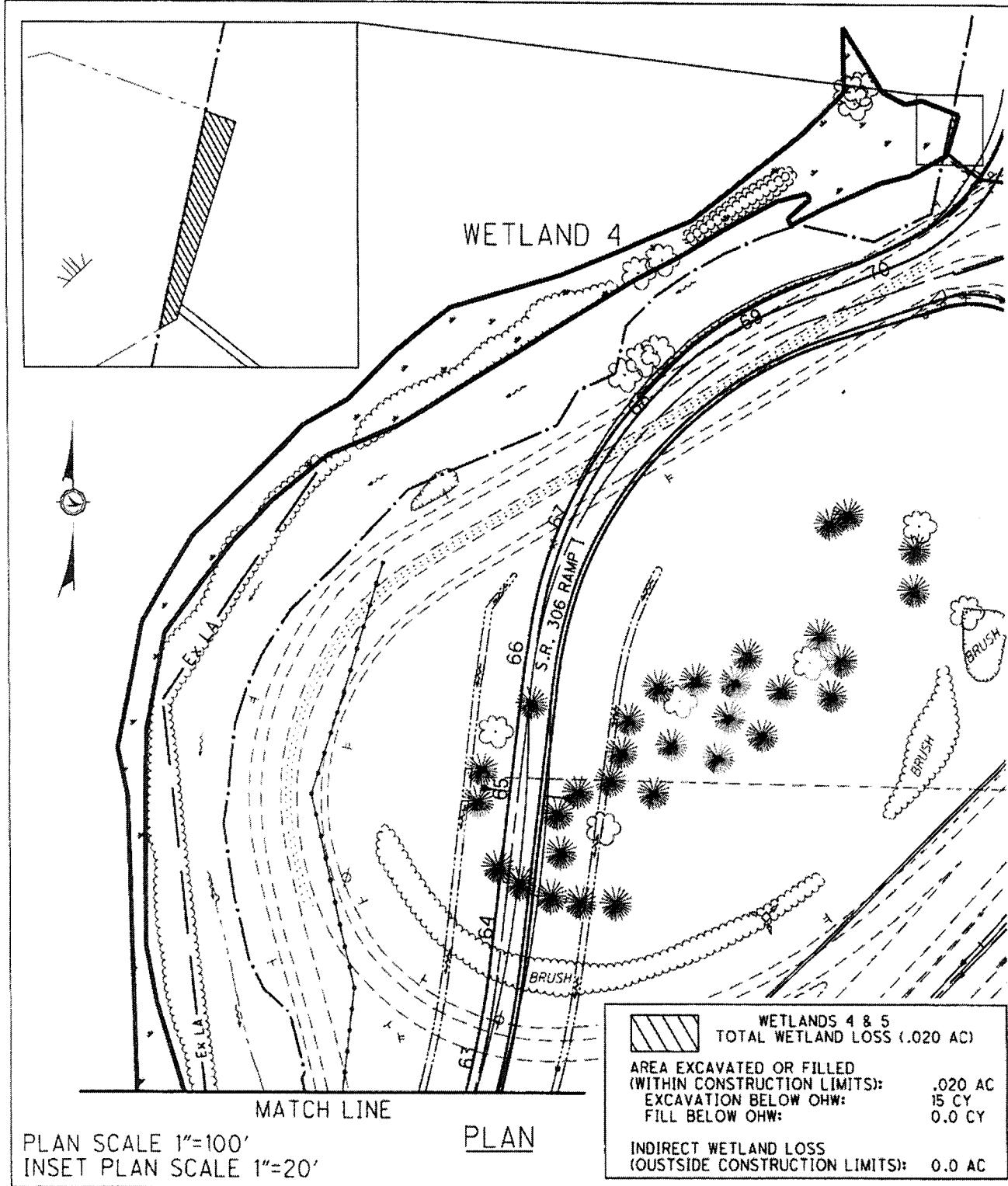
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

SHEET 1 / 2

2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 41 of 50



## IMPACTS TO WETLANDS W4 & W5

OHIO DEPARTMENT OF TRANSPORTATION

S.R. 2 IN LAKE COUNTY

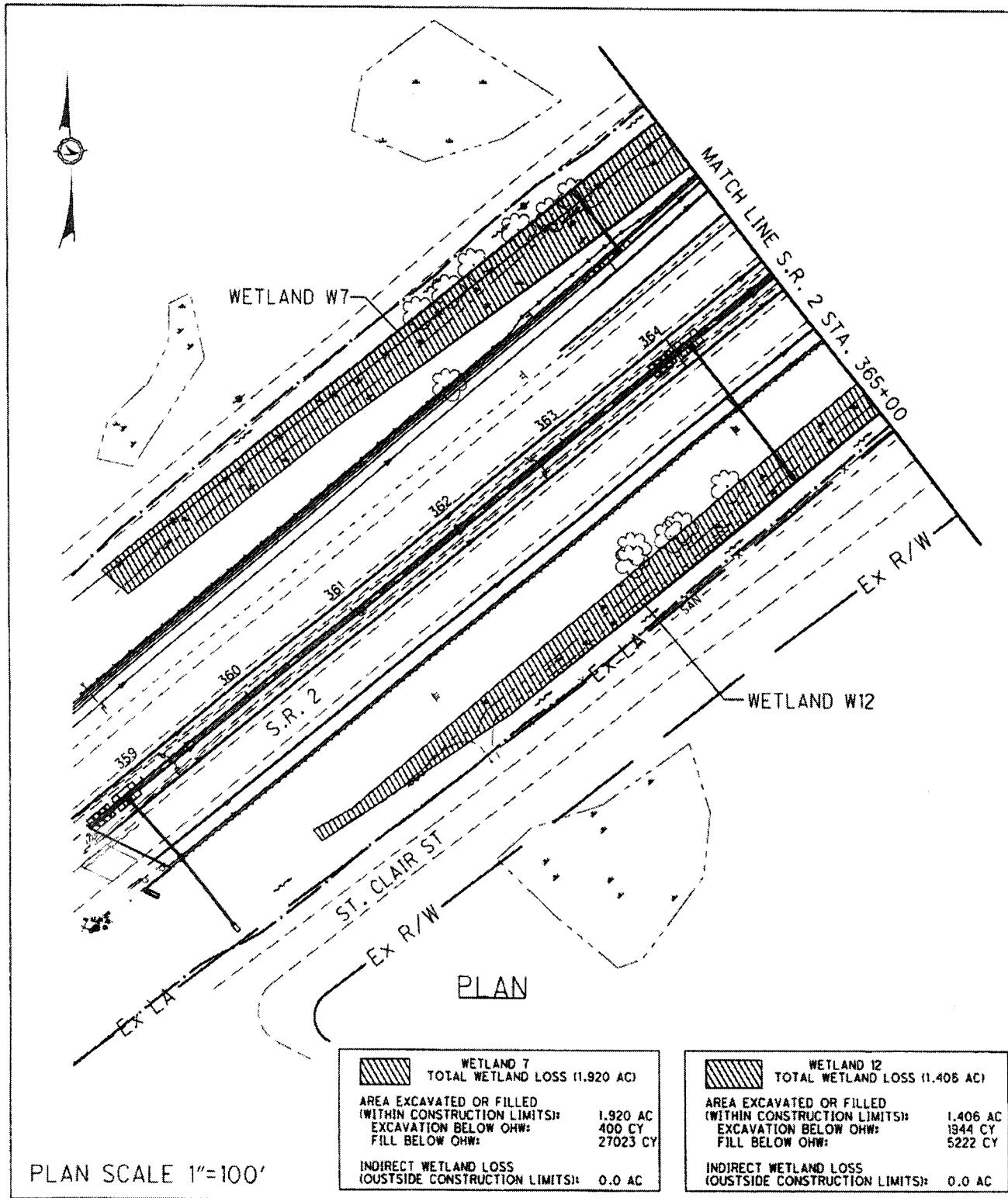
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

SHEET 2 / 2

2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 42 of 50



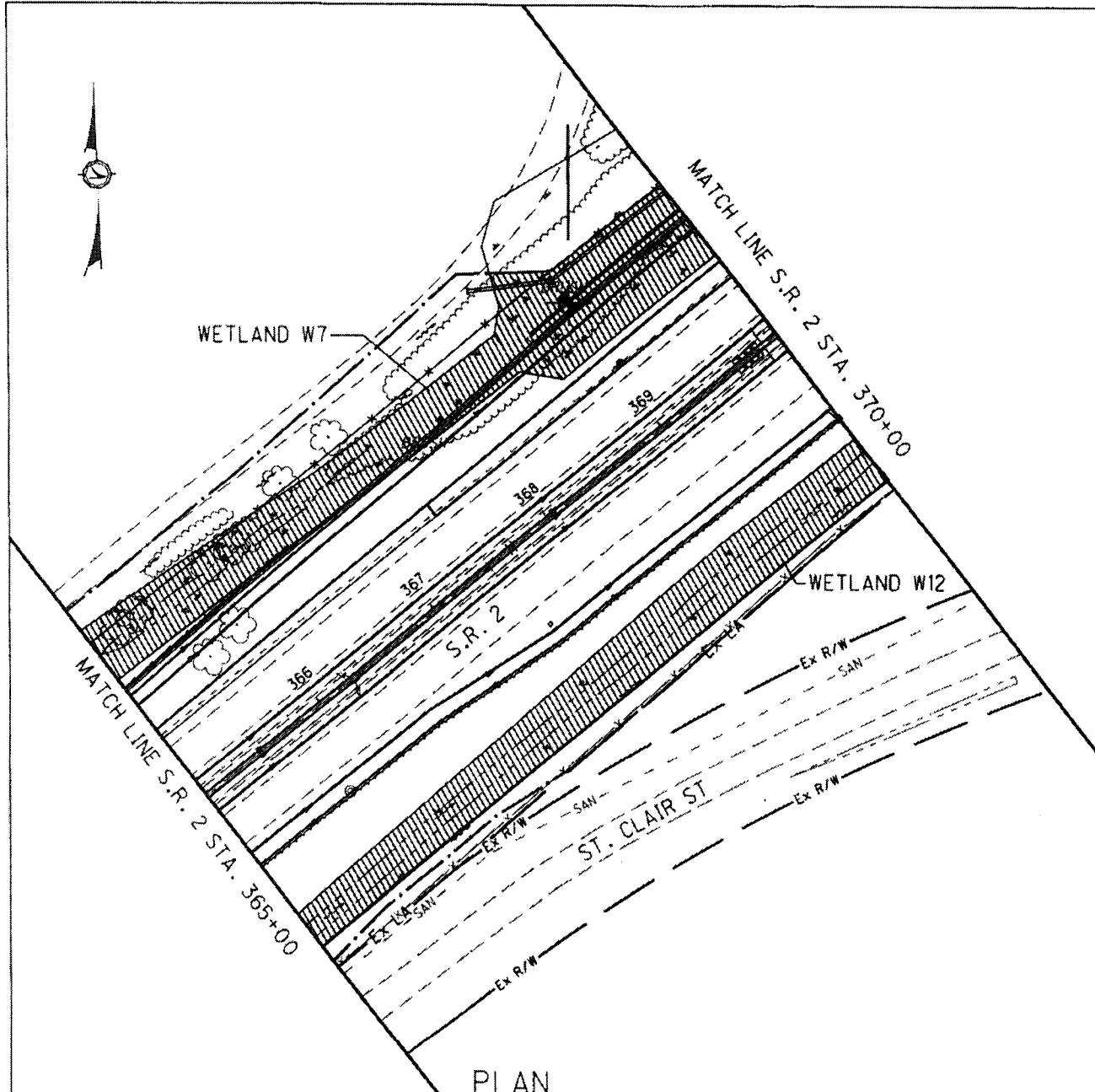
## IMPACTS TO WETLANDS W7 & W12

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
Sheet 43 of 50

SHEET 1 / 4



PLAN SCALE 1"=100'

	WETLAND 7 TOTAL WETLAND LOSS (1.920 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	1.920 AC
EXCAVATION BELOW OHWI: FILL BELOW OHWI:	400 CY 27023 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.0 AC

	WETLAND 12 TOTAL WETLAND LOSS (1.406 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	1.406 AC
EXCAVATION BELOW OHWI: FILL BELOW OHWI:	1944 CY 5222 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.0 AC



## IMPACTS TO WETLANDS W7 & W12

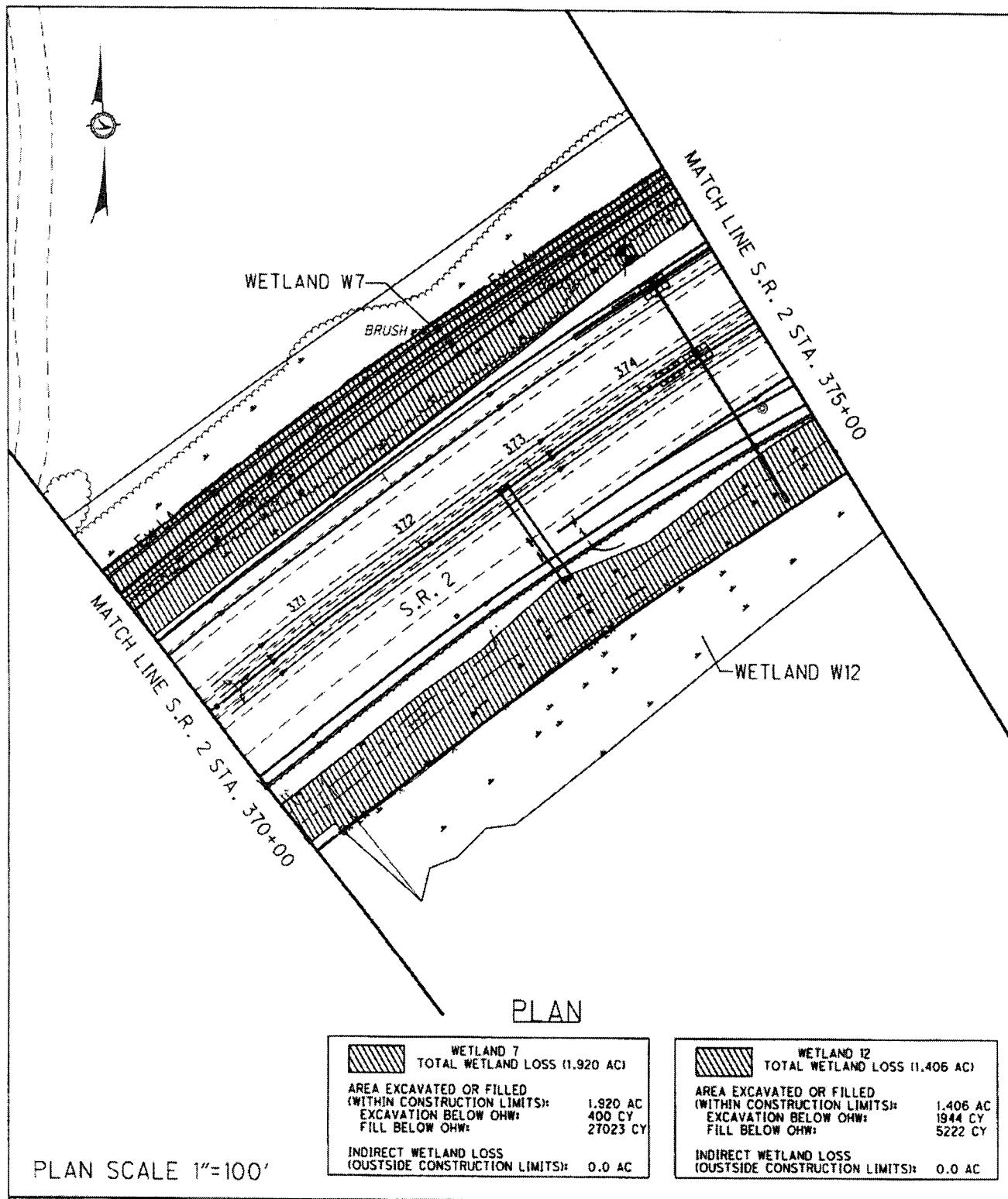
OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY  
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 44 of 50

SHEET 2 / 4



## IMPACTS TO WETLANDS W7 & W12

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

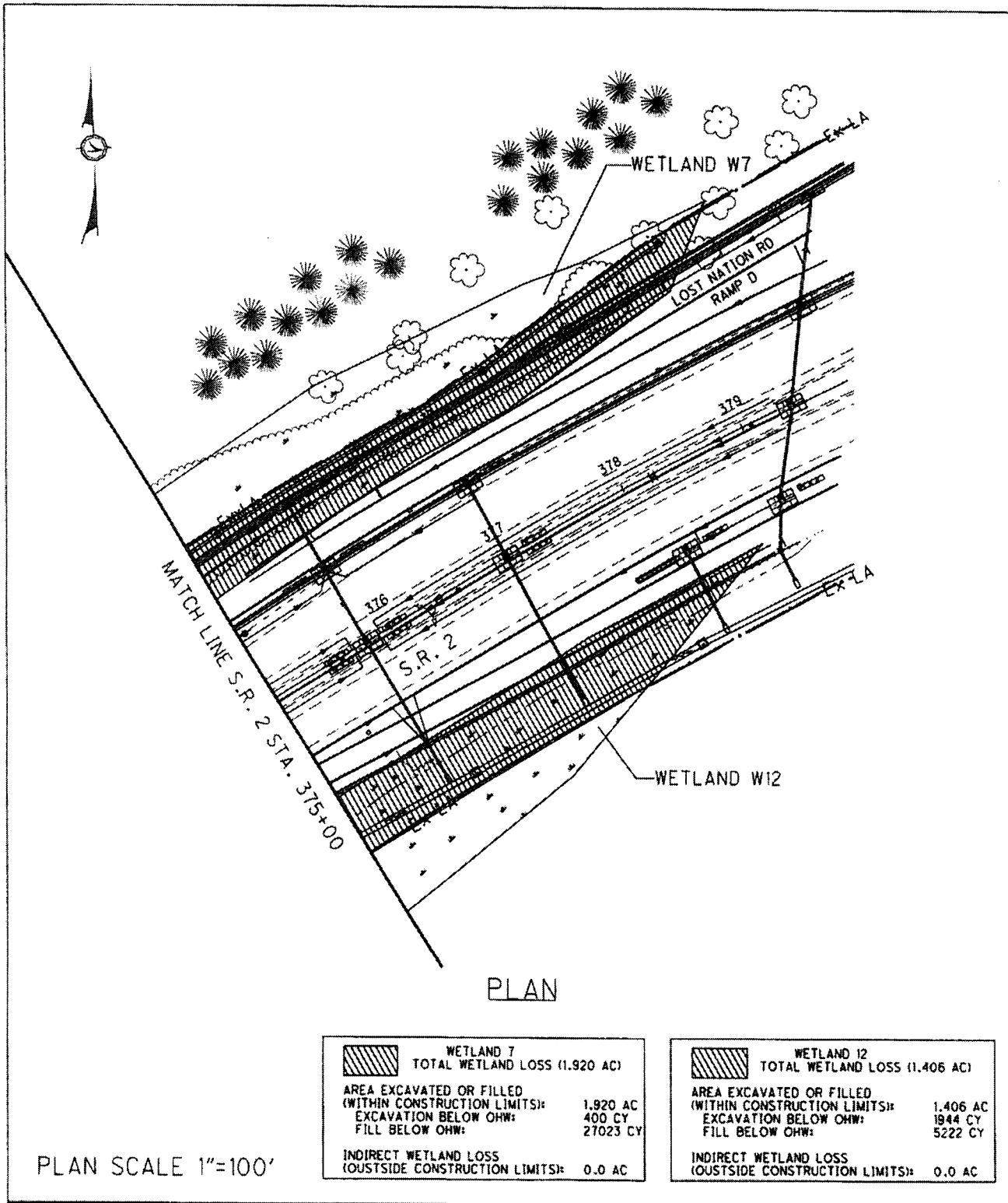
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

2006-2200-CHA

LAK-2-3.32, PID: 13486

Sheet 45 of 50

SHEET 3 / 4



## IMPACTS TO WETLANDS W7 & W12

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

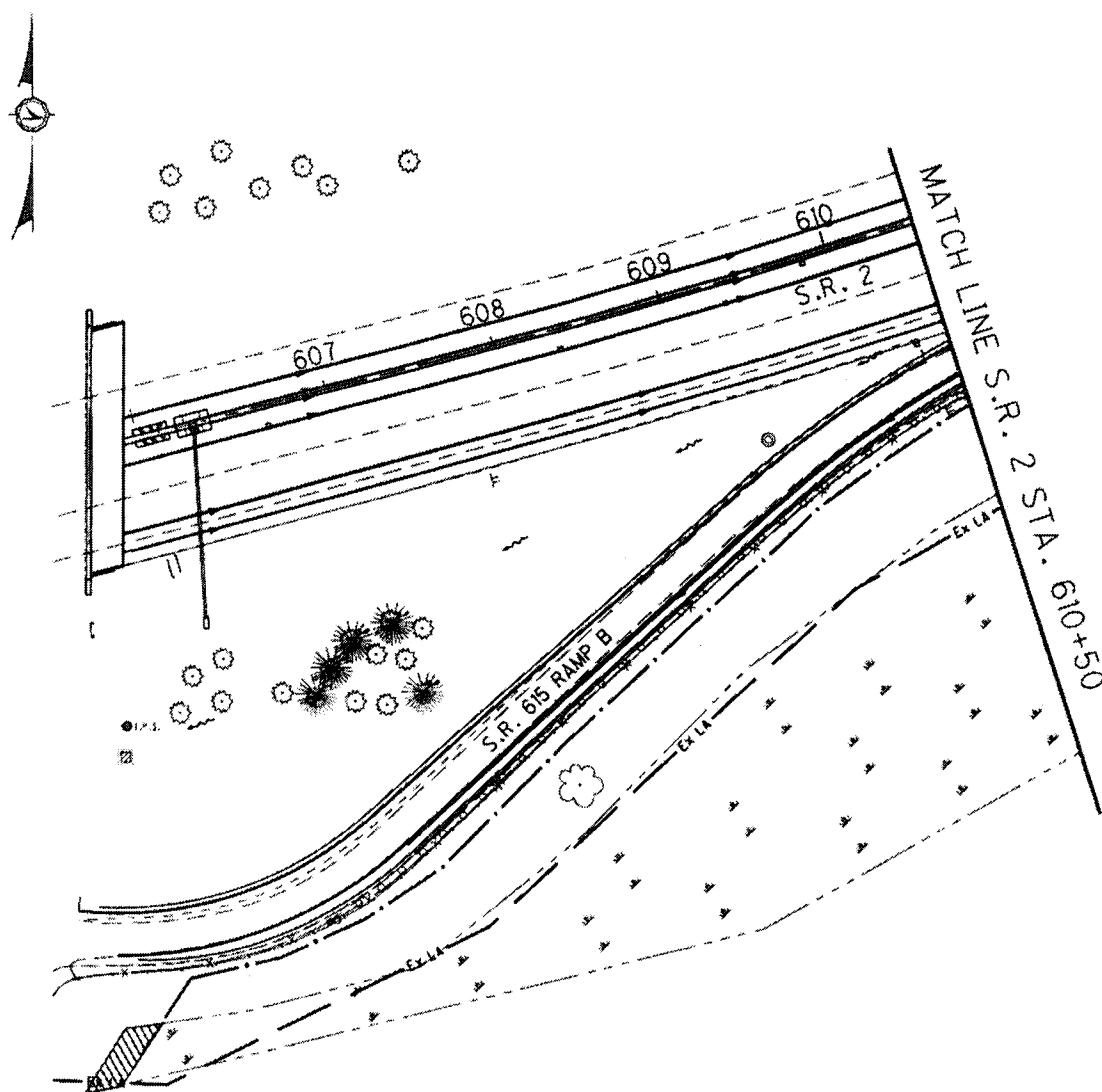
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

SHEET 4 / 4

2006-2200-CHA

LAK-2-3.32, PID: 13486

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PLAN

PLAN SCALE 1"=100'



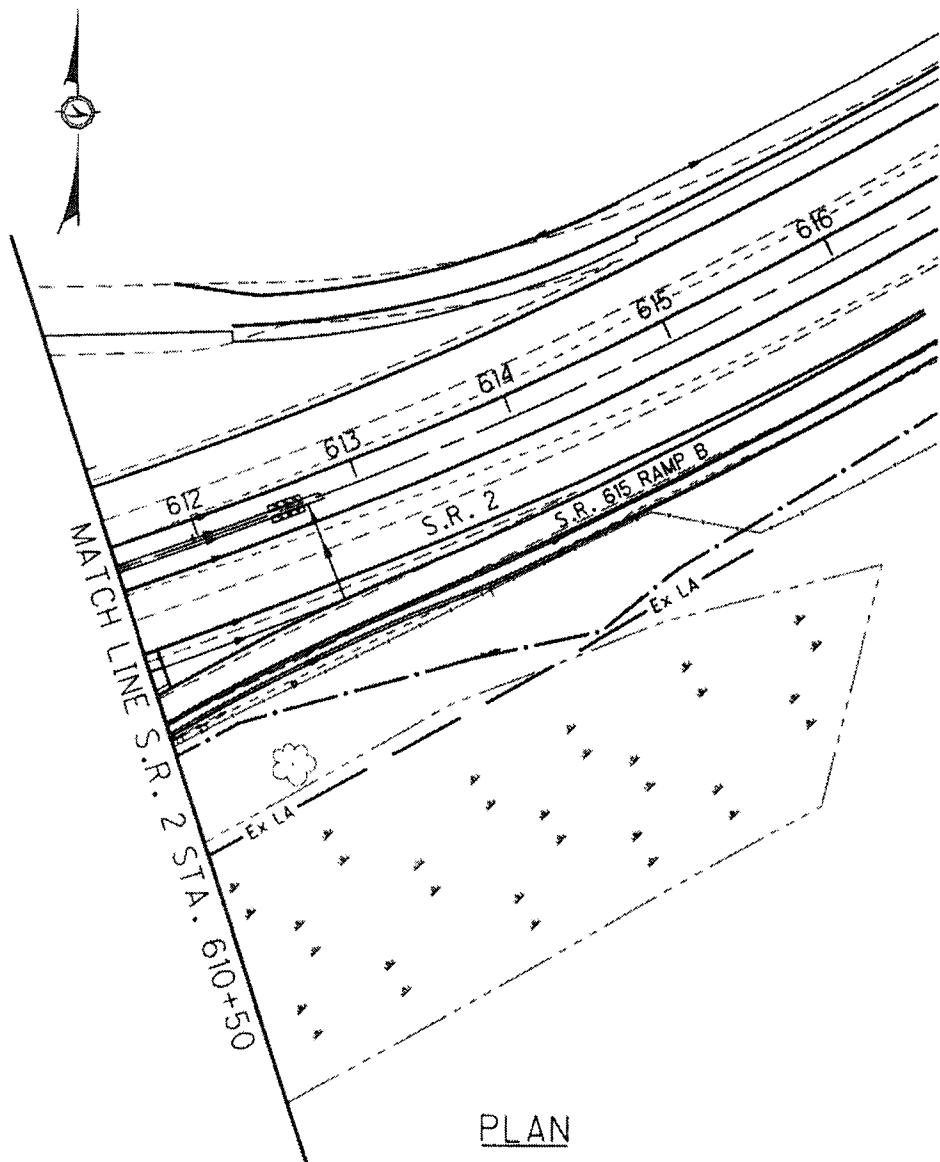
## IMPACTS TO WETLANDS W11

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

2006-2200-CHA  
LAK-2-3.32 AND LAK-2-7.76  
LAK-2-3.32, PID: 13486  
Sheet 47 of 50

	WETLAND 11
TOTAL WETLAND LOSS (.010 AC)	
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	.010 AC
EXCAVATION BELOW OHW:	15 CY
FILL BELOW OHW:	0 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.0 AC

SHEET 1 / 2



PLAN SCALE 1"=100'

	WETLAND 12 TOTAL WETLAND LOSS (1.406 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	.574 AC
EXCAVATION BELOW OHW:	1944 CY
FILL BELOW OHW:	5222 CY
INDIRECT WETLAND LOSS (OUTSIDE CONSTRUCTION LIMITS):	0.0 AC



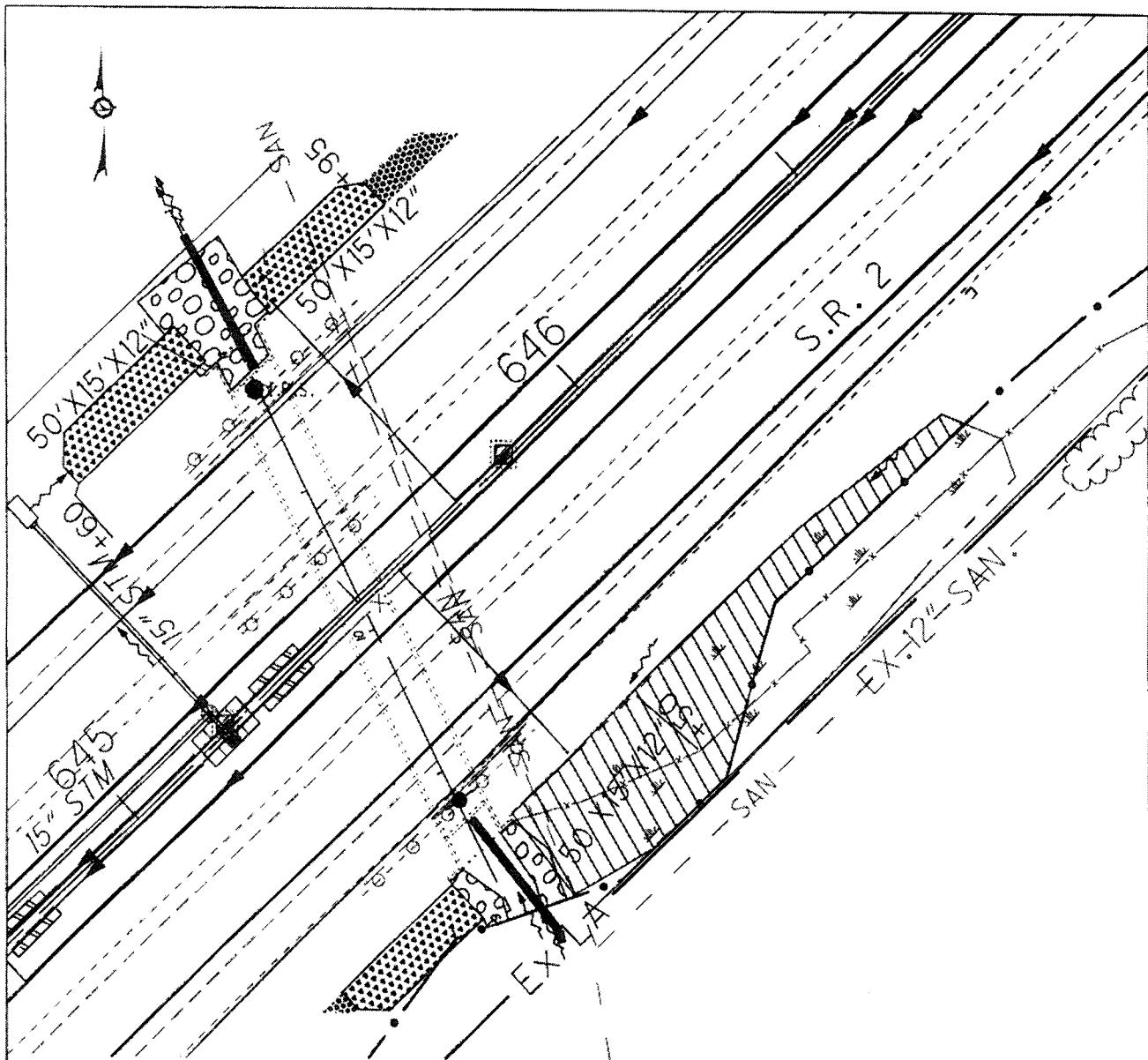
## IMPACTS TO WETLANDS W11

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

2006-2200-CHA  
LAK-2-3.32, PID: 13486  
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LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545

SHEET 2 / 2

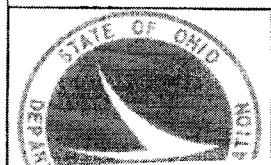


PLAN

	WETLAND 21 TOTAL WETLAND LOSS (.120 AC)
AREA EXCAVATED OR FILLED (WITHIN CONSTRUCTION LIMITS):	.120 AC
EXCAVATION BELOW OHW: FILL BELOW OHW:	208 CY 0.0 CY

INDIRECT WETLAND LOSS  
(OUTSIDE CONSTRUCTION LIMITS): 0.0 AC

PLAN SCALE 1"=50'



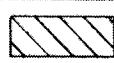
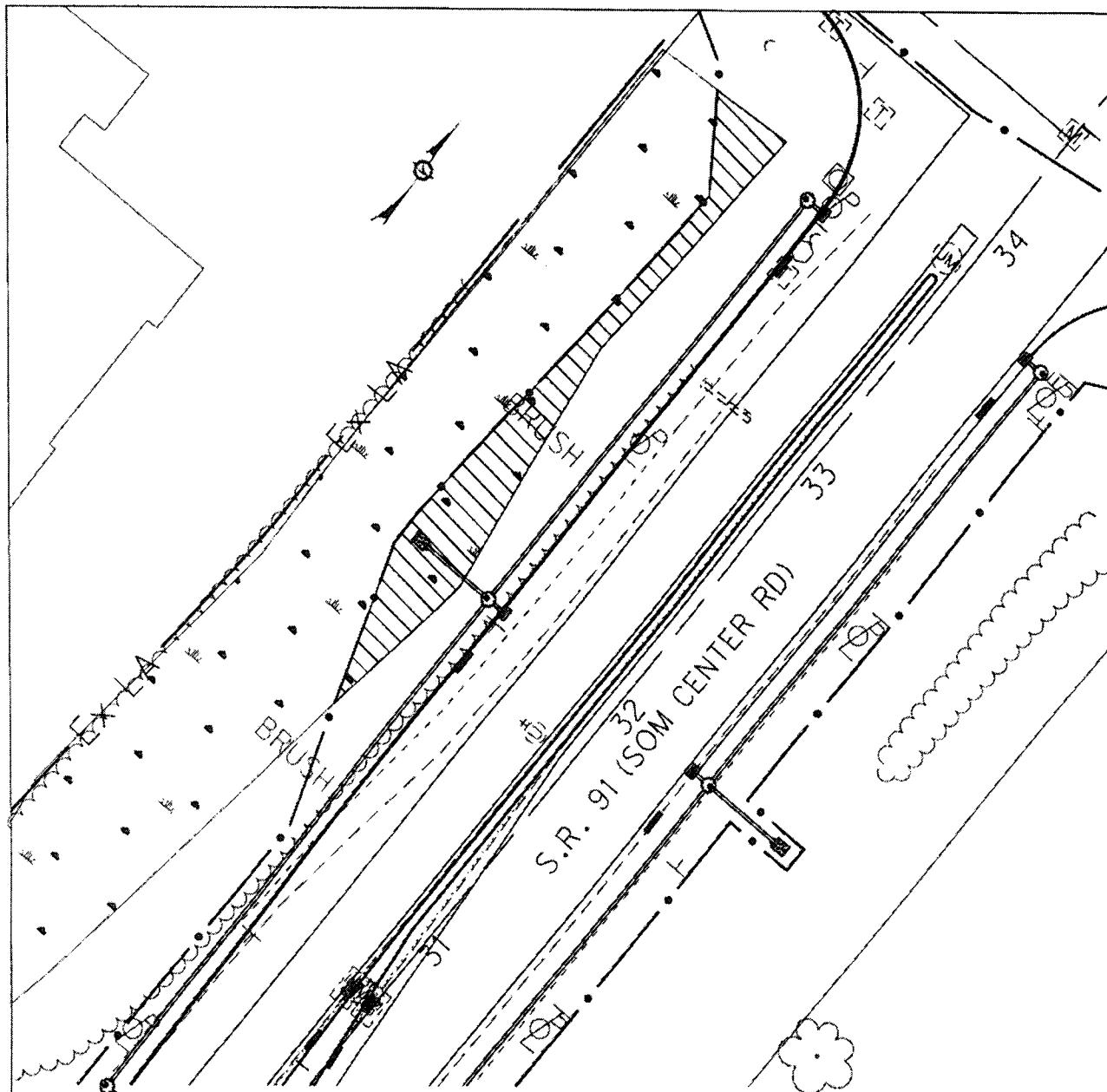
## IMPACTS TO WETLANDS W21

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY

2006-2200-CHA

LAK-2-3.32, PID: 13486

AK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545



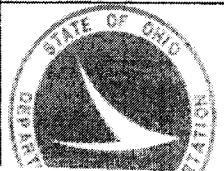
WETLAND 30  
TOTAL WETLAND LOSS (.050 AC)

AREA EXCAVATED OR FILLED  
(WITHIN CONSTRUCTION LIMITS): .050 AC  
EXCAVATION BELOW OHW: 50 CY  
FILL BELOW OHW: 50 CY

INDIRECT WETLAND LOSS  
(OUTSIDE CONSTRUCTION LIMITS): 0.0 AC

PLAN

PLAN SCALE 1"=50'



## IMPACTS TO WETLANDS W30

OHIO DEPARTMENT OF TRANSPORTATION  
S.R. 2 IN LAKE COUNTY  
LAK-2-3.32 AND LAK-2-7.76 PID 13486 AND PID 79545