From: Kelley, Penny (ECY)
To: "Sax, Stephen"
Subject: SR 520 Floating Bridge - March 2nd Inspection Report
Date: Friday, March 18, 2016 3:29:00 PM
Attachments: SR 520 Floating Bridge March 2 2016 Inspect.doc

Hi Stephen,

You know, it has been so long since I wrote one of these reports for the Floating Bridge that I forget if I send the reports to you and you send them on to KGM, or if I send the whole thing to everyone. At any rate, attached is the report. Go ahead and take a look and let me know if you see any errors or if you have any questions. If you are good with it, feel free to send it one to whoever needs it. I am in all day if you have questions. Cheers!

Penny Kelley
WSDOT Liaison
Office: 360-407-7298
Cell: 360-280-8856
pkel461@ecy.wa.gov

401 Inspection Form

Project Name: SR 520 Floating Bridge & Landing Site under active construction? X Yes ☐ No or ☐ Project completed	Date of Visit: March 2, 2016 Inspector: Penny Kelley
City: Medina County: King Location: SR 520/Lake Washington	Site visit trigger: Routine

WSDOT/KGM Contacts:

Stephen Sax – WSDOT 425-576-7133

John Gage – KGM 817-789-2380

Weather Conditions: partly sunny

Is a copy of the 401 Certification onsite: ☐ N/A X Yes ☐ No

Does this project have an additional area of mixing for in-water work? ☐ Yes **X No**

If yes,

Are turbidity standards being met at the boundary of the allowed mixing zone? ☐ Yes ☐ No

Were any WQ samples taken?	Yes **x No**
Were any photographs taken?	**x Yes** No

Is the project in compliance with 401 Certification Conditions:

At the time of the inspection, everything look good. The site appeared to be in compliance with the 401 Certification.

Was Ecology notified of non-compliance? ☐ Yes ☐ No ☐ N/A Notified of all non-compliance events

Are there NPDES Construction Stormwater compliance concerns onsite? Yes ☐ No x N/A

If so, please describe:

I did not inspect any 402 areas

WQ Inspector phone/e-mail

I certify that I have received _____ pages of this Site Inspection Field Form.

Signature_____ ***Date***_____

On-site Observations:

The purpose of this visit was to conduct a routine inspection before the bridge is open to live traffic. Since the bridge is rather long, we conducted a drive through inspection, stopping at different locations to get out and walk and look at equipment/setup or activities.

Overall, the floating bridge was looking good. A lot of material had been moved off and more was being taken off the deck in preparation for opening the bridge in April to live traffic. There was not a lot of work occurring but there was still some concrete pouring in one location and work was still being done on the catch basins. During the drive through, I noted that spills kits were available on site and secondary containment was underneath almost all of the equipment. If the equipment was on the move, they had the flexible yellow containment pans folded up and bungeed on so that wherever they stopped and parked for any length of time, they could just unfold the pan and put it underneath.

At the concrete truck, plastic sheeting was laid down underneath an eco-pan and was large enough to catch drips from the concrete chute on the truck. The crew was set up on the bridge deck which is an impervious surface itself and provides its own containment. The biggest danger of a discharge would be if water slurry got away from the crew and were to discharge through a catch basin (if it were open). However, working with concrete itself, it tends to be more viscous and would be feasible to clean up off the deck if some were to fall out and miss the plastic. I talked to the individual in charge of the operation and he verified that at the end of each work day they clean up the area and either take things off site or secure/cover appropriately. I believe the eco pans with concrete and slurry are removed at the end of each day.

We also examined the ongoing catch basin work. The lining of these basins had to be redone. There was on previous ECAP reported where water used to the clean the basins discharged to the lake and was turbid but outside of that report, there have been no further incidents. KGM had rigged up tents to cover the basins and keep stormwater out of them while the coating/lining was setting/curing/drying. The system appeared to work very well and several basins had tents over them.

We had the opportunity to watch the road grinder in action. This piece of equipment was very large and does use water as part of the operation but I did not see any runoff of process water from the equipment as it has a vacuum system to catch fine grinding debris and water. WSDOT reported they have not had any incidents when using this equipment for the bridge.

At the end of the bridge we also went down below to see the set up. At that location, it is more of the same as above deck: materials storage, some final touch up work occurring. I did not see anything of concern and there were more spill kits and secondary containment present. One final note about pans/containment under equipment. I did not see any standing water in any of the containment. WSDOT stated KGM was been pretty good about keeping the containment under equipment emptied out.

The only area of concern was the materials barge containing rock ballast. I noted that some of the gravel used for the ballast was sitting outside of the containment walls on the lip of the barge that runs around the outside. It was not clear if the material has spilled out from the pile as a piece of equipment was grabbing rock to put in pontoons or if material spilled as the material was loaded. In either case, the gravel sitting outside the walls indicate potential for discharge to the lake which is not authorized and care should be taken to keep the material inside the containment.

Overall the over water areas i.e. the floating bridge, looked good.

Suggested Site Improvements:	
Only one – keep gravel used for ballast within the containment walls of the barge.	

Initials of recipient_____

From: john.gage@kiewit.com
To: Kelley, Penny (ECY); saxsj@wsdot.wa.gov
Cc: bullamb@wsdot.wa.gov
Subject: RE: Penny's visit on the 23rd
Date: Tuesday, March 22, 2016 9:39:40 AM
Attachments: image001.gif
image002.png

Penny,

I will make sure we have a computer setup for the meeting. We will have our demo group go over our plan and discuss any clarifications needed: Schedule, subs, operations, other. Then we can through the WABN lessons learned.

We look forward to seeing you tomorrow.

John Gage, AEP, CSEM, LEED AP
Environmental Manager | Kiewit/General/Manson, A Joint Venture

SR 520 Evergreen Point Floating Bridge
3015 112th Ave N.E., Suite 100, Bellevue, WA 98004
(p) 425-576-7138 (c) 817-789-2380

From: Kelley, Penny (ECY) [mailto:PKEL461@ECY.WA.GOV]
Sent: Monday, March 21, 2016 5:48 PM
To: Stephen.Sax-PTR; John.Gage
Cc: Bryant.Bullamore-PTR
Subject: RE: Penny's visit on the 23rd

Hi John & Stephen,

I just wanted to follow up this email with some thoughts about the upcoming meeting this week. In preparation, I have reviewed the WQMPP, the set of plan sheets provided by KGM to supplement the WQMPP/meeting held on May 28th, and a nice graphic they put together showing the whole bridge. I plan on bringing these items to the meeting in case they are needed. I will also bring a small jump drive containing some pictures of the WABN demo work and two inspection reports for reference on the BMPs used for containment.

That leads me to the point regarding the purpose of this meeting. On the last site inspection for FB & L, we discussed having a "pre demo" meeting and I was under the impression that KGM wanted this meeting. In our follow up discussions, it has come across that Ecology (me) more or less called this meeting. To make sure this meeting is productive and hopefully focused, I wanted to let you know that I plan on using some of this meeting time to discuss the following:

- Review of the pier demolition & BMPs
- Brief discussion about demolition equipment
- Containment for overwater demo work & review of WABN issues
- Problem areas – are there any problem areas that KGM is particularly concerned about
- Who is doing what – subcontractors & prime contractors

If KGM has anything specific they want to discuss, I assume they will come prepared with questions, information, etc. Feel free to send me any kind of informal agenda or list of items if you had anything in mind, ahead of time. I will want to know what the demolition schedule is (roughly), and what will be the first order of work. I assume you will have a computer/projector that I can use to show pictures of the WABN work. I think that about covers it for me. I am in the office tomorrow so if you have questions or are concerned about how much time this meeting will take, give me a call. Otherwise, see you on Wednesday the 23rd.

Penny Kelley
WSDOT Liaison
Office: 360-407-7298
Cell: 360-280-8856
pkel461@ecy.wa.gov

From: Sax, Stephen [mailto:SaxSJ@wsdot.wa.gov]
Sent: Thursday, March 17, 2016 4:31 PM
To: john.gage@kiewit.com
Cc: Bullamore, Bryant <BullamB@wsdot.wa.gov>; Kelley, Penny (ECY) <PKEL461@ECY.WA.GOV>
Subject: Penny's visit on the 23rd

John,

I contacted Penny this afternoon to notify her of the upcoming eyebar lifting work that is scheduled to begin next week. She did not have concerns with the work and appreciated the heads up. As a reminder you will need to complete water quality monitoring reports for the work and submit them to me at the end of each month for the duration of the work activity.

She is planning on bringing a flash drive to the presentation on Wednesday and will need a laptop and projector to show it. Would you be able to arrange to have this equipment ready for the meeting?

Stephen

Stephen J. Sax
Environmental Compliance Team Lead
SR 520, I-5 to Medina: Stage 1 Evergreen Point Floating Bridge and Landings
Washington State Department of Transportation

3015 - 112th Ave NE, Suite 100, Bellevue, WA 98004-8001
425.576.7133 0ffice
206-713-9783 Cell

Please Reduce, Reuse, Recycle, Rethink

From: john.gage@kiewit.com
To: Kelley, Penny (ECY)
Cc: saxsj@wsdot.wa.gov
Subject: Re: KGM Demolition presentation
Date: Wednesday, March 23, 2016 4:44:11 PM

It was pretty big. I am going to compress it to a PDF that is shareable sized. I will try to send it to you this week.

Sent from my iPhone

On Mar 23, 2016, at 4:38 PM, Kelley, Penny (ECY) <PKEL461@ECY.WA.GOV> wrote:

> Hi John & Stephen,
>
> I looked at my jump drive and did not find the presentation on it. I am assuming that it was either too large or you prefer to share it another way or, the third option is you did not intend to share it (which is an option). If you do choose to share the presentation, could you throw it on the WSDOT ftp site? I imagine it is large and I do not think it would come through via email. If I do not hear anything, will assume we are going with option 3. Also, just want to say thanks again for meeting. It was very helpful to run through the proposed demo work again.
>
> Penny Kelley
> WSDOT Liaison
> Office: 360-407-7298
> Cell: 360-280-8856
> pkel461@ecy.wa.gov

From: john.gage@kiewit.com
To: Kelley, Penny (ECY)
Cc: saxsj@wsdot.wa.gov; Robert.Brenner@kiewit.com; BTornberg@mansonconstruction.com
Subject: RE: demolition presentation
Date: Monday, April 04, 2016 11:17:05 AM
Attachments: image001.gif
image002.png
Complete PP for DOE small.pdf

Penny,

I apologize for the delay. I thought the file was saved on my laptop, and it wasn't. I had to get a copy on a jump drive from our demo guys. Attached is the PDF of the presentation. I compressed it a bit so it wouldn't be a big file. Let me know if you need anything else.

John Gage, AEP, CSEM, LEED AP
Environmental Manager | Kiewit/General/Manson, A Joint Venture
SR 520 Evergreen Point Floating Bridge
3015 112th Ave N.E., Suite 100, Bellevue, WA 98004
(p) 425-576-7138 (c) 817-789-2380

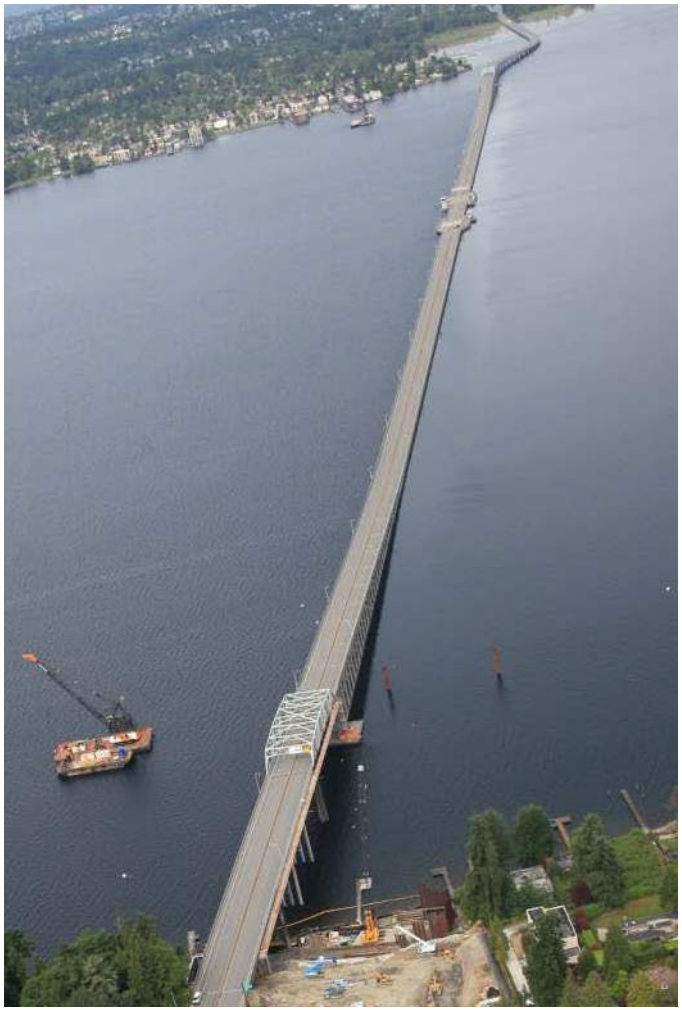
From: Kelley, Penny (ECY) [mailto:PKEL461@ECY.WA.GOV]
Sent: Friday, April 01, 2016 4:58 PM
To: John.Gage
Cc: Stephen.Sax-PTR
Subject: demolition presentation

Hi John,

I just wondered if you were still planning on sending me a copy of the demo presentation. You could even throw it on a CD and mail it to me if that would be easier. Thanks!

Penny Kelley
WSDOT Liaison
Office: 360-407-7298
Cell: 360-280-8856
pkel461@ecy.wa.gov

Demolition Plan Review 3.23.2016



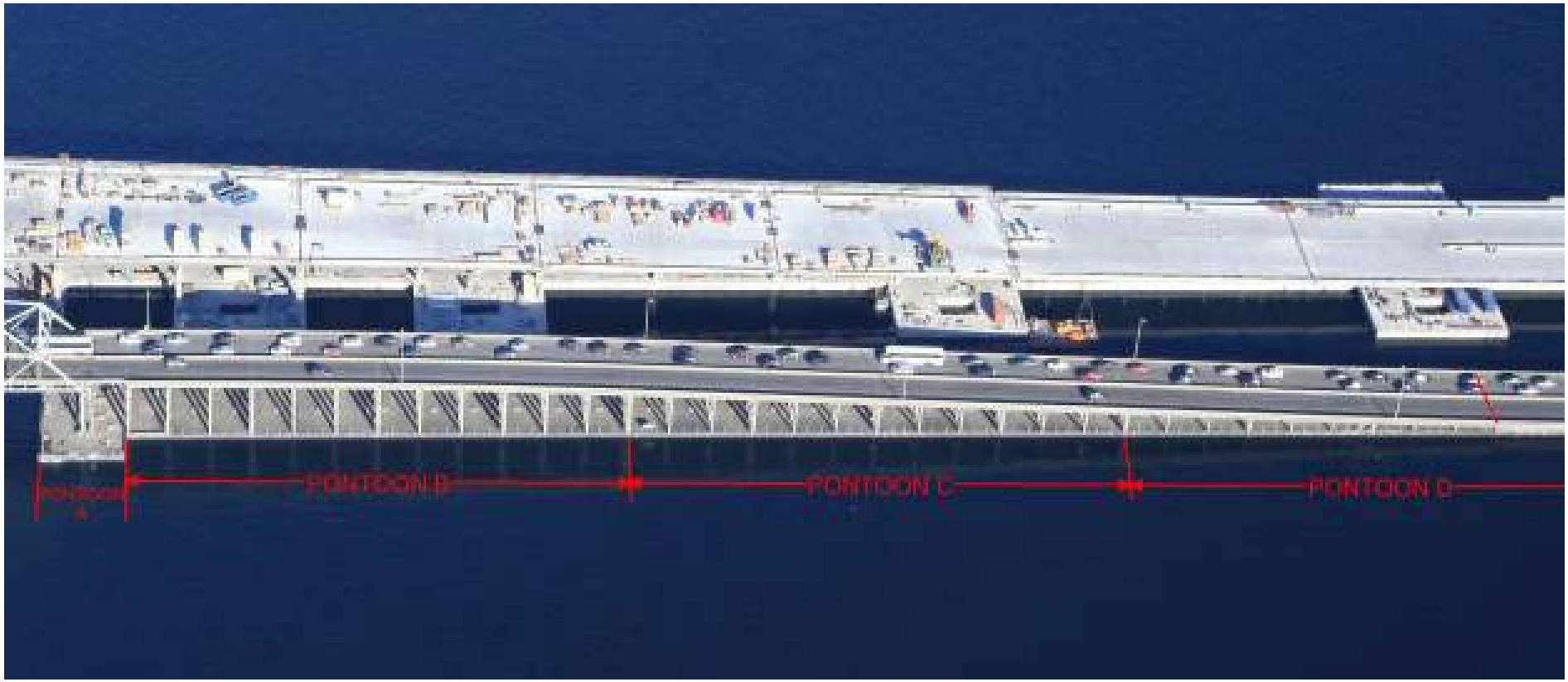
Existing Bridge Demolition - LOCATIONS

Schedule Milestones

Substantial completion	April 28th 2016
East Navigation Channel open (required 90 days after substantial)	July 27th 2016
Transition Span work Complete	June 6th, 2016
Approach work Complete	September 21st 2016
De-tension Pontoons Complete	July 22nd, 2016
Separate Pontoons complete	November 24th, 2016

West Approach

West Pontoon Superstructure



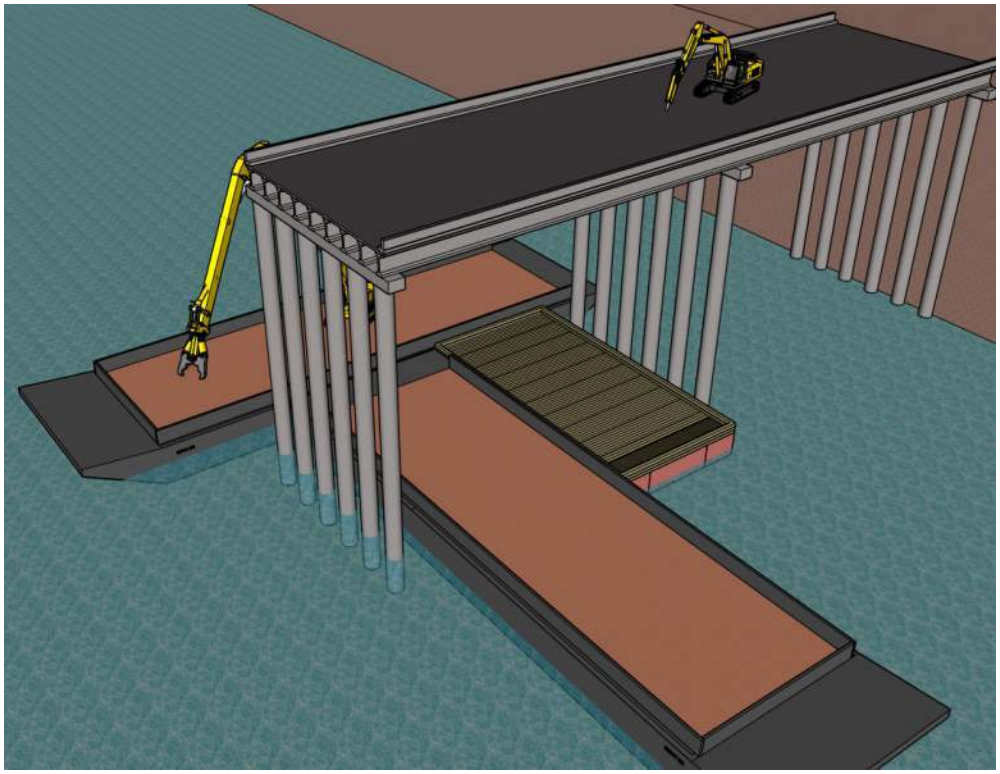
East Approach

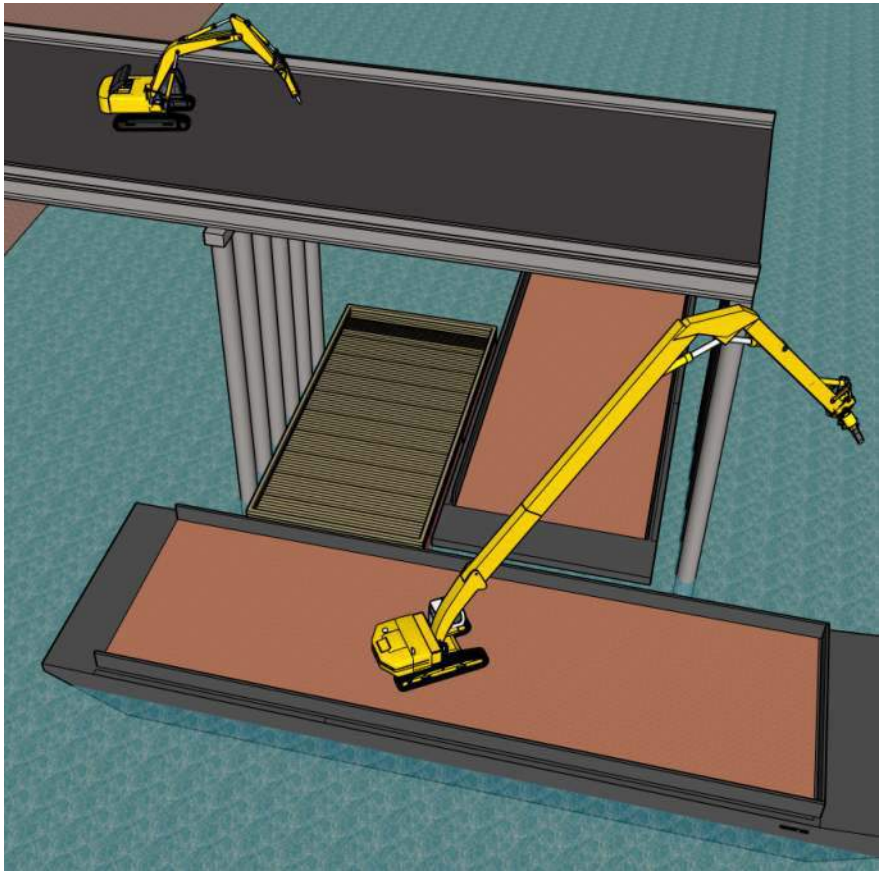
East Pontoon Superstructure

Span 41 Removal

- Span 41 is required to be removed to get DB24 to the south side of the bridge

Typical Span Removal Containment

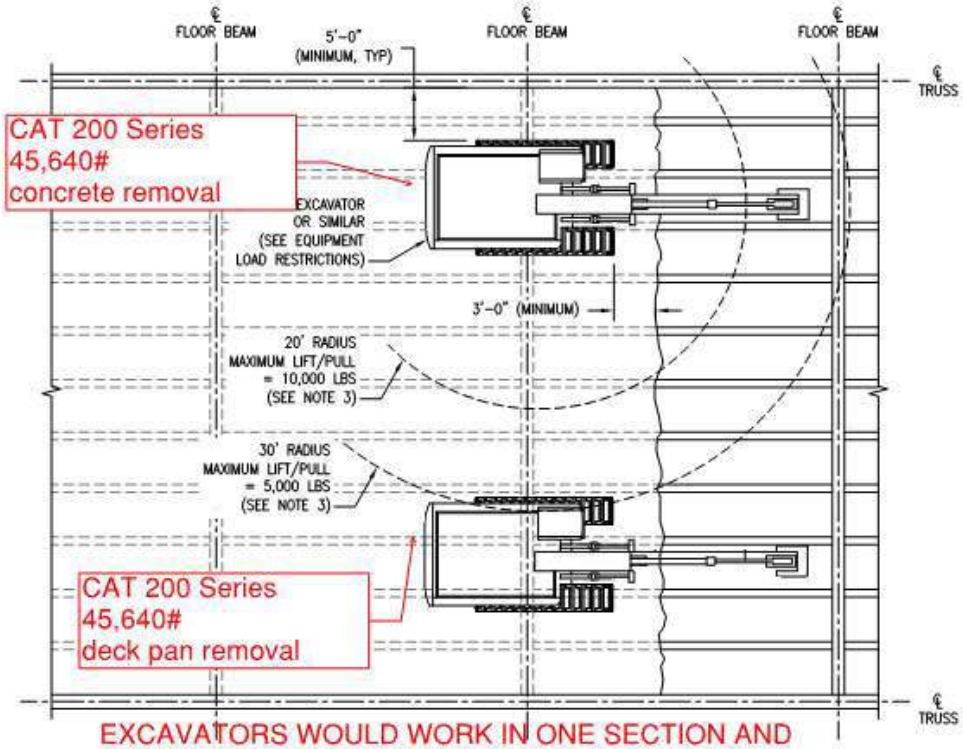




Transition Span Removal

- Engineering for Transition span removal by Foothills Bridge (Reuben Zylstra P.E.) – Complete except for minor changes from NorthStar Work Plan
- Second check completed by Simpson Gumpertz & Heger (Sam Yao, Ph.D., P.E.) - Complete except for minor changes from NorthStar Work Plan
- Work performed by KGM & NorthStar

Remove roadway deck, utilities, and all nonstructural steel



PART PLAN
EQUIPMENT RESTRICTIONS

Two excavator analysis currently under review by Foothills & SGH

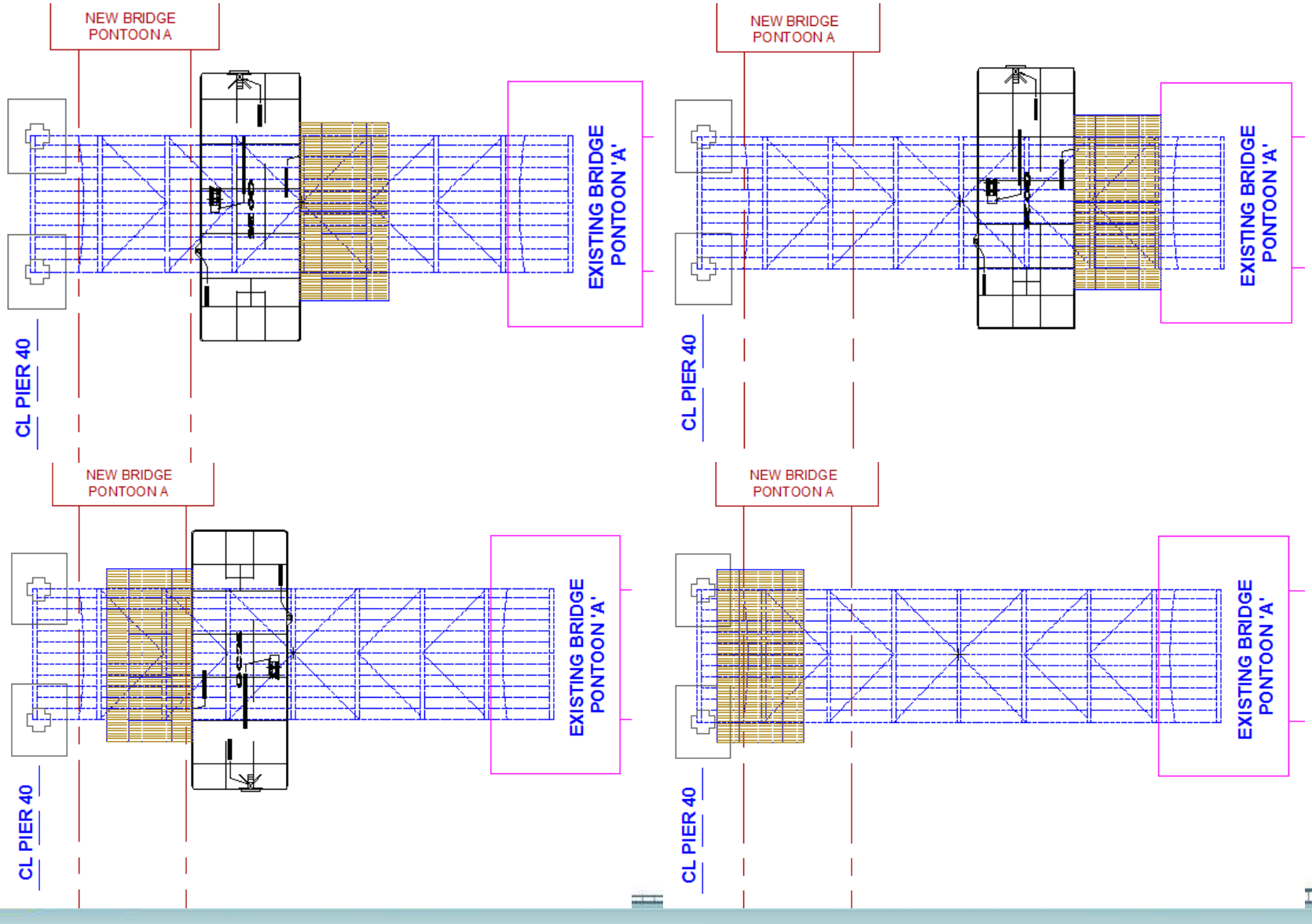
Additional Load Restrictions

- pick weight limited to 10 Kips
- maintain 5' distance between excavators at all times.

EQUIPMENT LOAD RESTRICTIONS

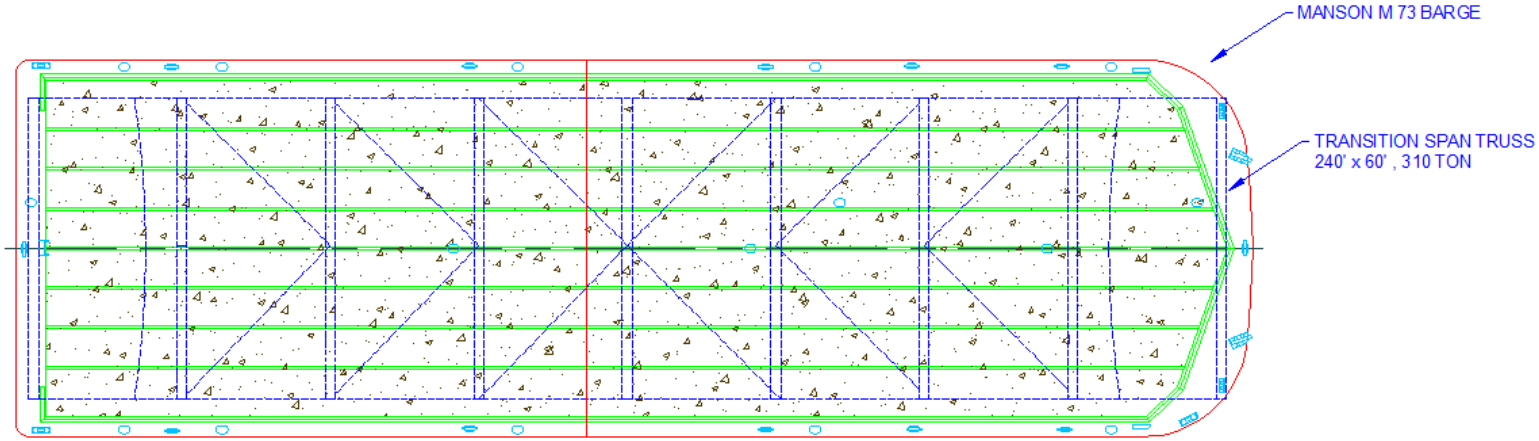
1. DECK REMOVAL SHALL BE COMPLETED USING ONE CAT 350 EXCAVATOR (OR SIMILAR) WITH A MAXIMUM OPERATING WEIGHT OF 90,000 LBS (INCLUDING ATTACHMENTS) ON THE BRIDGE DECK. THIS OPERATING WEIGHT FOR A CAT 350 ASSUMES A REDUCED COUNTERWEIGHT CONFIGURATION.
2. THE EXCAVATOR SHALL REMAIN A MINIMUM OF 3'-0" FROM THE LEADING EDGE OF DECK REMOVAL AND A MINIMUM OF 5'-0" FROM THE TRUSS LOWER CHORDS AS SHOWN.
3. BRIDGE ASBUILT DRAWINGS INDICATE THAT THE STEEL DECK ELEMENTS ARE WELDED TO THE SUPPORTING STRINGERS. THE CONTRACTOR SHALL LIMIT THE EXCAVATOR PULL TO THE LOAD LIMITS SHOWN. IT MAY BE NECESSARY TO SEPARATE THE DECK AND STRINGERS USING TORCH OR OTHER MEANS.
4. ALL OTHER LOADS ON THE BRIDGE SHALL BE LEGAL BRIDGE LOADS AND SHALL REMAIN A MINIMUM OF 20'-0" FROM THE EXCAVATOR.

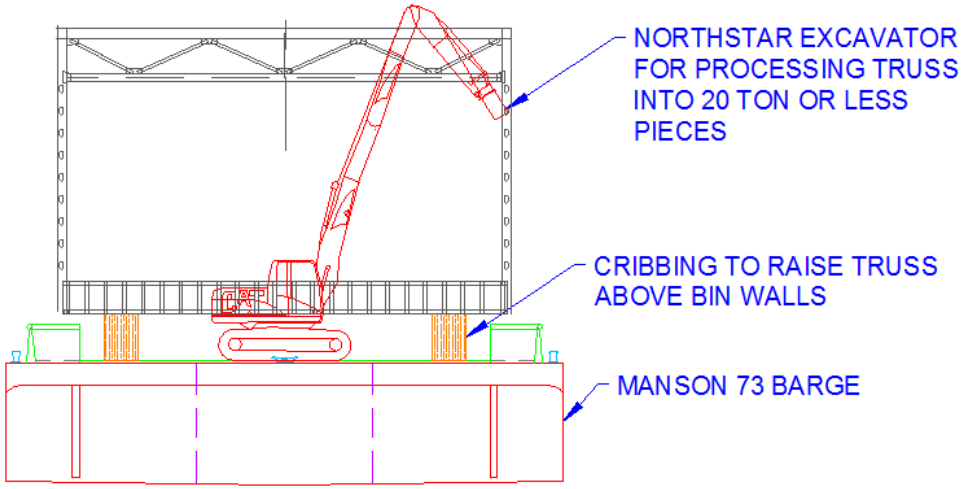
Containment for Deck Removal



Transition Span Removal

East Truss Pick Plan



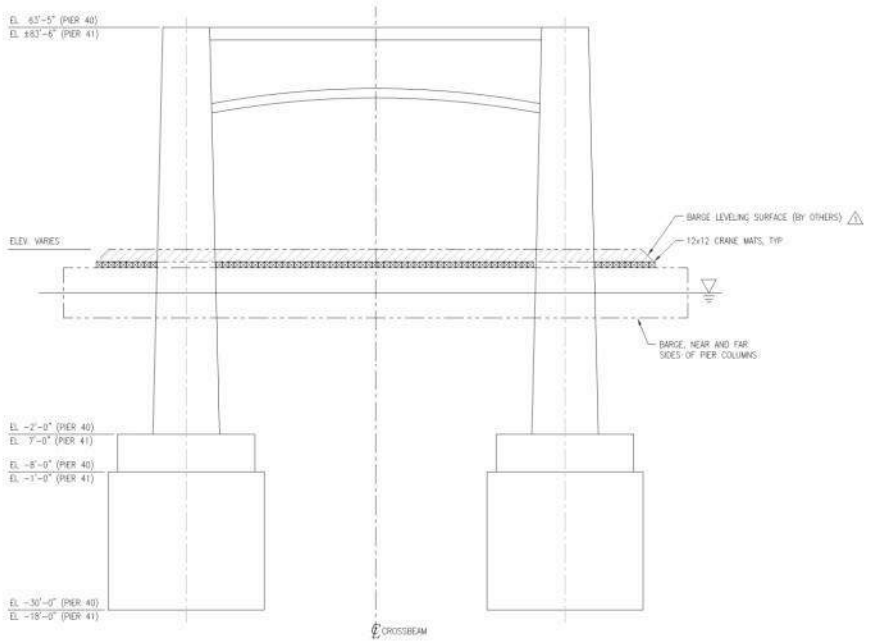


TRANSITION SPANS WILL BE PROCESSED BY NORTHSTAR INTO 20 TON OR LESS PIECES

MATERIAL BARGE WILL BE TRANSPORTED TO SEATTLE IRON FOR OFFLOAD AND RECYCLING

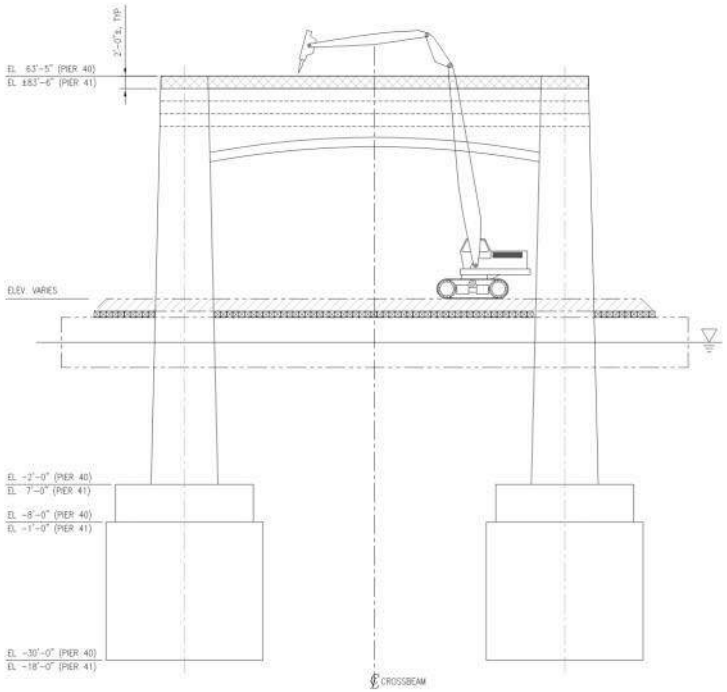
Pier 40 & 41 Removal

Pier 40 & 41 Removal – Work Sequence



1/01 STAGE 1
1" = 10'-0"

1. POSITION BARGES TIGHT TO FACE OF PIER COLUMNS, LASH TOGETHER.
2. PLACE 12x12 CRANE MATS.
3. PLACE SAND OR SIMILAR BEARING SURFACE AS REQUIRED.

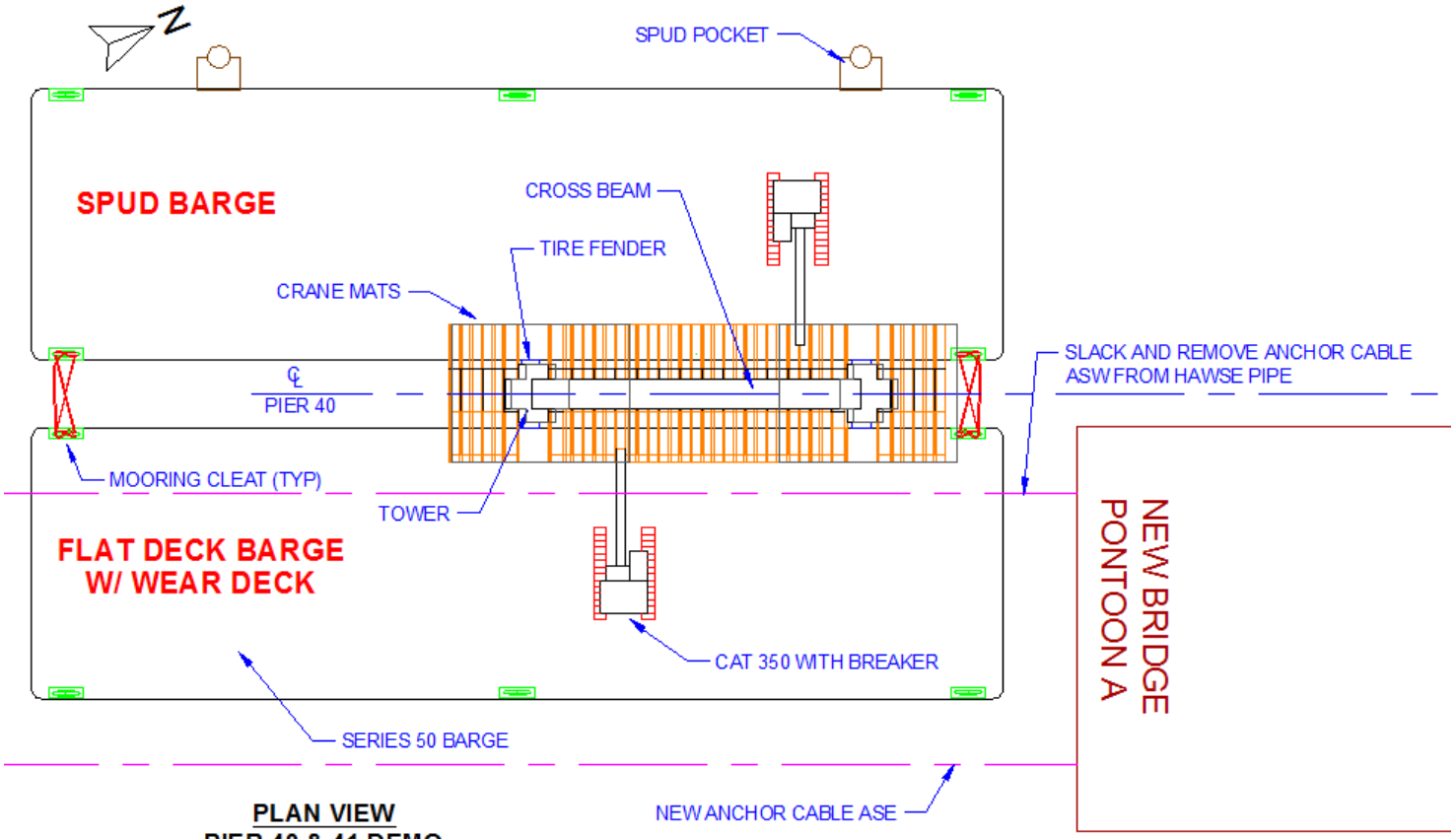


2/01 STAGE 2
1" = 10'-0"

4. WORKING ON THE BARGES, BEGIN PULVERIZING CROSSBEAM CONCRETE STARTING FROM THE TOP AND WORKING DOWNWARD IN ~ 2 FOOT BANDS, AS SHOWN.

Pier 40 & 41 Removal

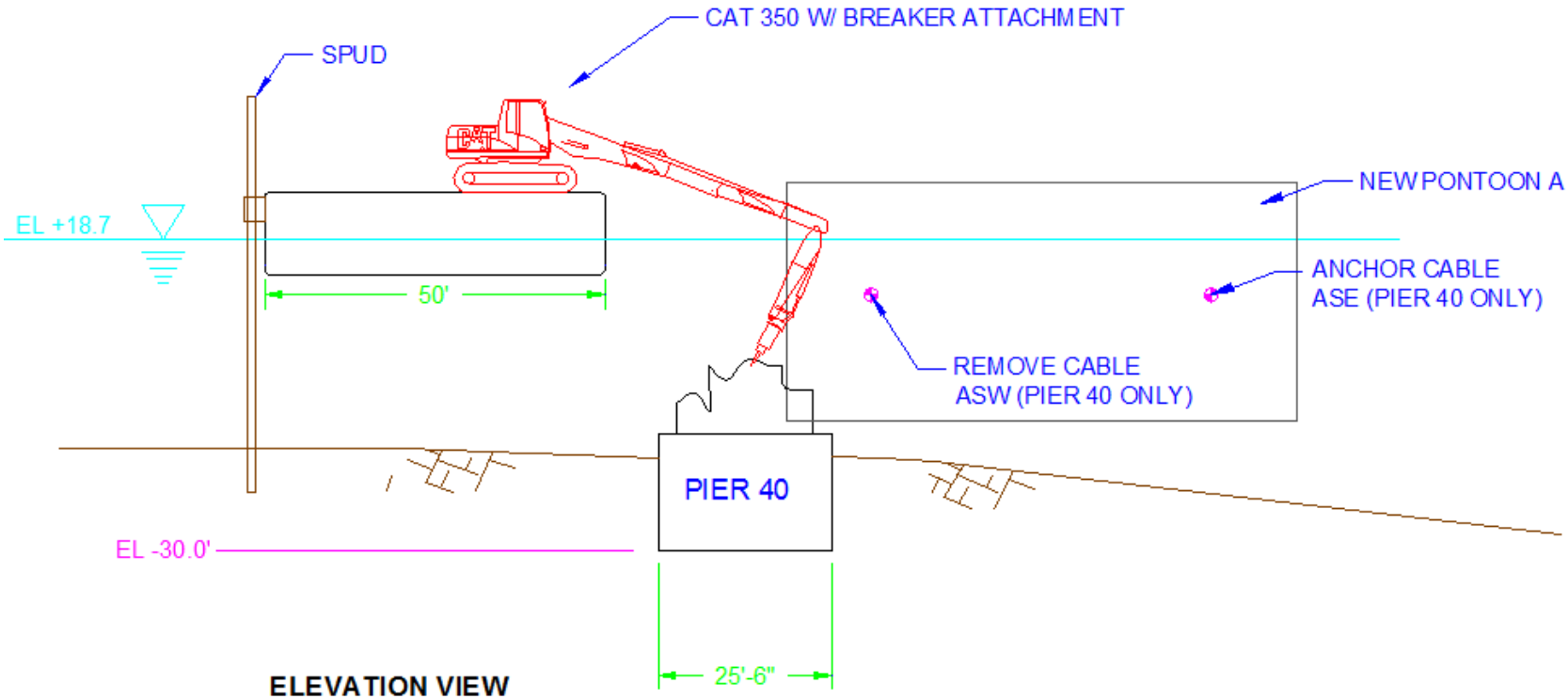
Pier 40 Removal



PLAN VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

SEQUENCE:
1. ONCE THE PIER HAS BEEN DEMOLISHED DOWN TO THE DEK OF THE BARGES, REMOVE THE FLAT DECK BARGE AND ONLY WORK OFF THE SPUD BARGE
2. THE SPUD BARGE WILL NEED TO BE FLEETED TO THE NORTH TO ALLOW ACCESS TO THE UNDERWATER FOOTING

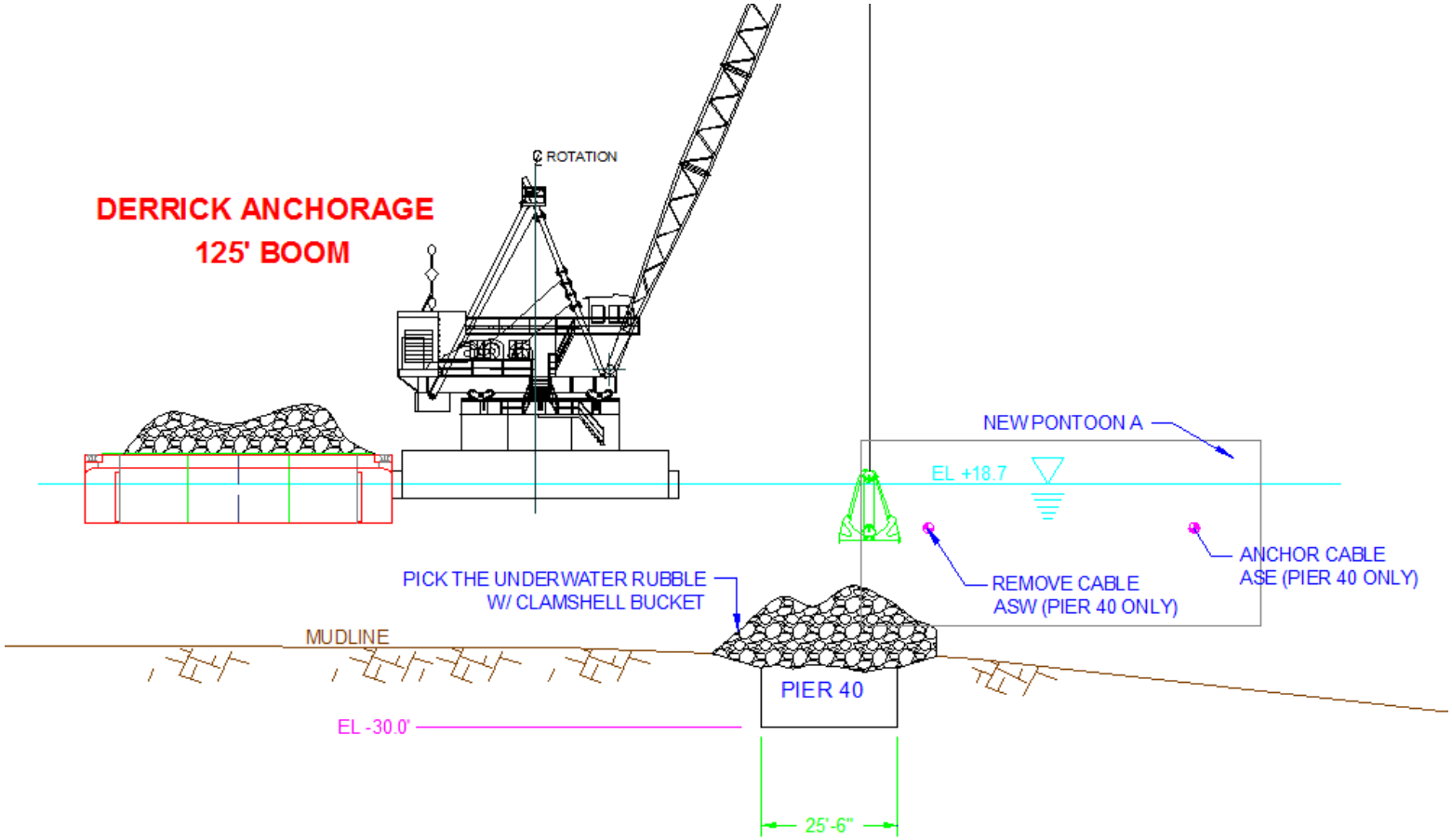
Pier 40 Removal



ELEVATION VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

SEQUENCE:
1. ONCE THE PIER HAS BEEN DEMOLISHED DOWN TO THE DEK OF THE BARGES, REMOVE THE FLAT DECK BARGE AND ONLY WORK OFF THE SPUD BARGE
2. USING BREAKERS AND SHEARS, CONTINUE TO DEMOLISH THE FOOTING UNDERWATER TO 2 FT BELOW MUDLINE
3. CONFIRM FINAL ELEVATION BY TAKING MUDLINE SOUNDING BEFORE AND AFTER DEMOLISHING THE FOOTINGS

Pier 40 Removal



ELEVATION VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

SEQUENCE:
1. USE DB ANCHORAGE OR SIMILAR DERRICK TO CLAMSHEEL UP THE DEBRIS
2. USE AN ROV TO INSPECT THAT THE MATERIAL HAS BEEN REMOVED

Pile Removal – Pile Shear

PRIME MARINE SERVICES, INC.

Model 36 PCPC

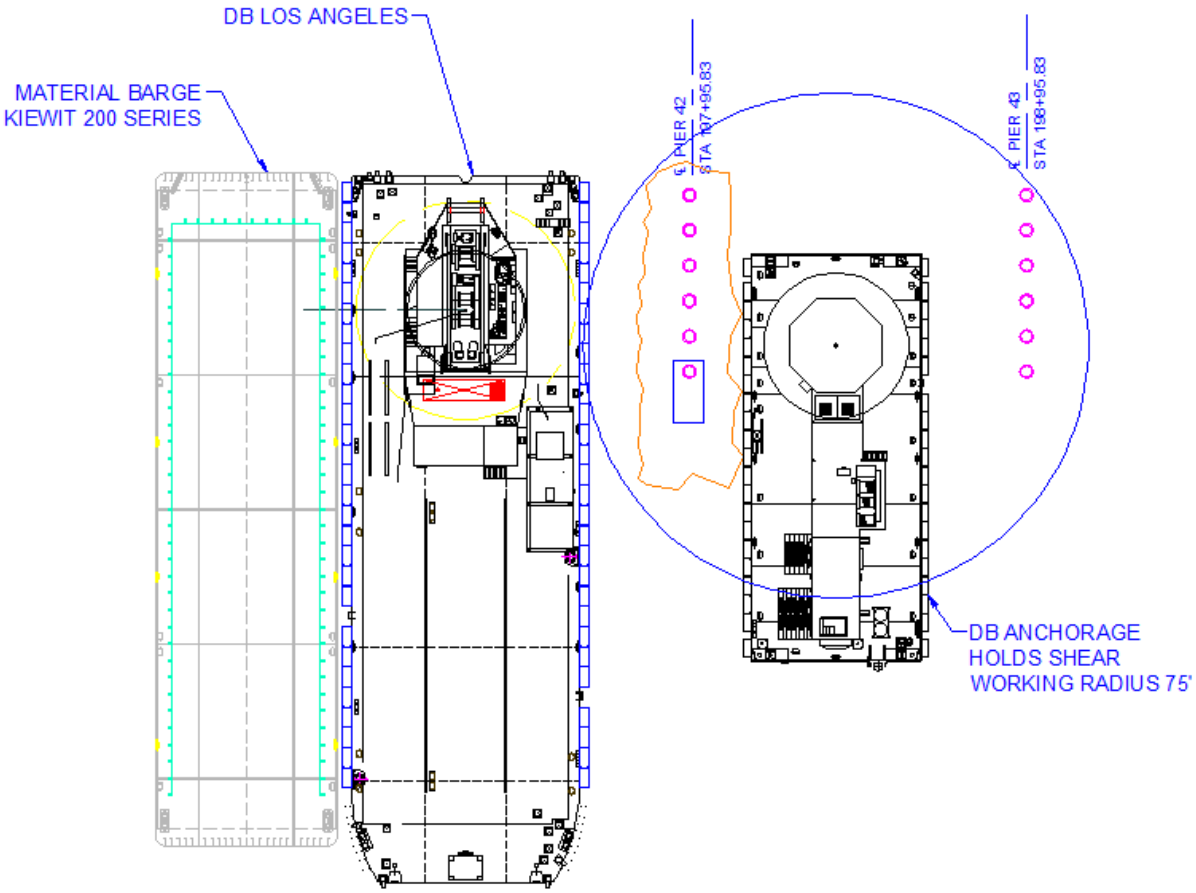
The Model 36 Prime Cutter is a hydraulic gated shears used to cut steel pipe and concrete piles up to 42" in diameter. This tool can be utilized above and below the water and be configured to cut at any angle or direction. The patented design utilizes a gate to close around the member you are cutting. This tool can also be configured to crimp pipe.

Technical Data and Specifications
Model 36 PCPC

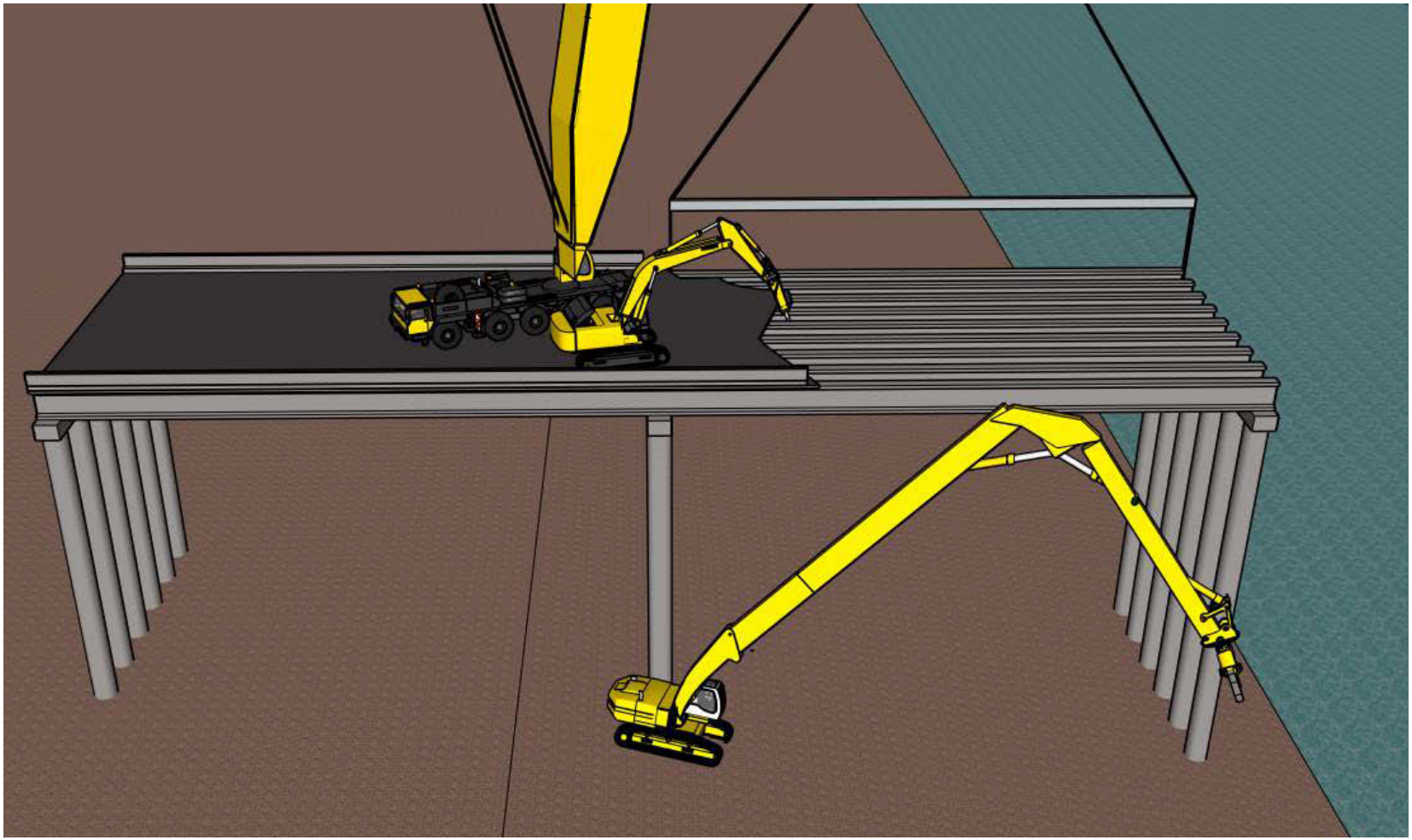
Description		Imperial	Metric
Blade Circuit	Max Operating Pressure	5000 psi	345 bar
	Max Operating Flow (approx.)	75 gpm	284 l/min
Pin Circuit	Max Operating Pressure	2800psi	193 bar
	Max Operating Flow	20 gpm	76 l/min
Gate Circuit	Max Operating Pressure	3500 psi	241 bar
	Max Operating Flow	20 gpm	76 l/min
Weight		34,450 lbs	15,626KG
Dimensions		18' 4" x 8' 10" x 5' 6"	559cm x270cm x168cm

Prime Marine Services, Inc.
312 S. Bernard Rd. Broussard, LA 70518
Phone: (337) 837-6500 Fax: (337) 837-6511
www.primemarineinc.com

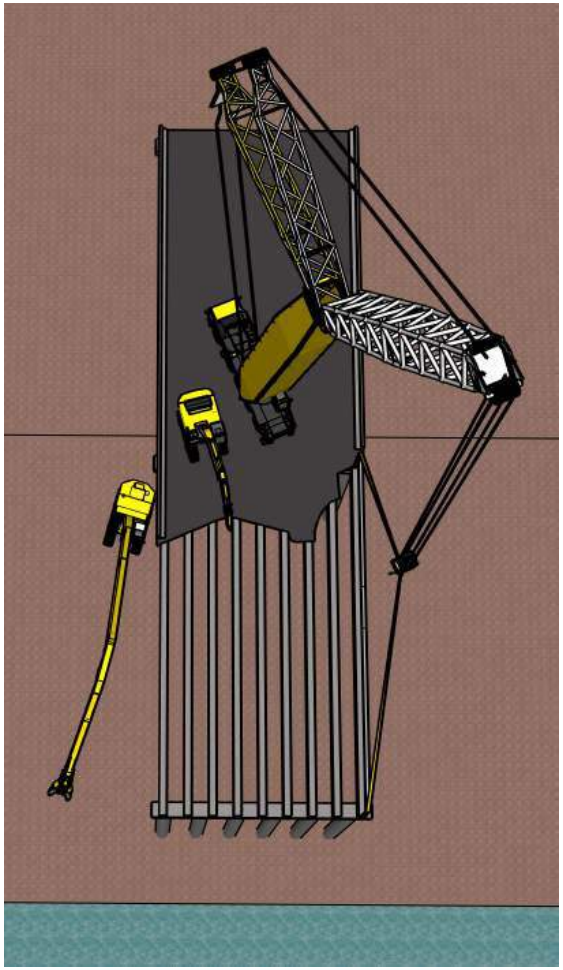
Pile Removal – Pile Shear

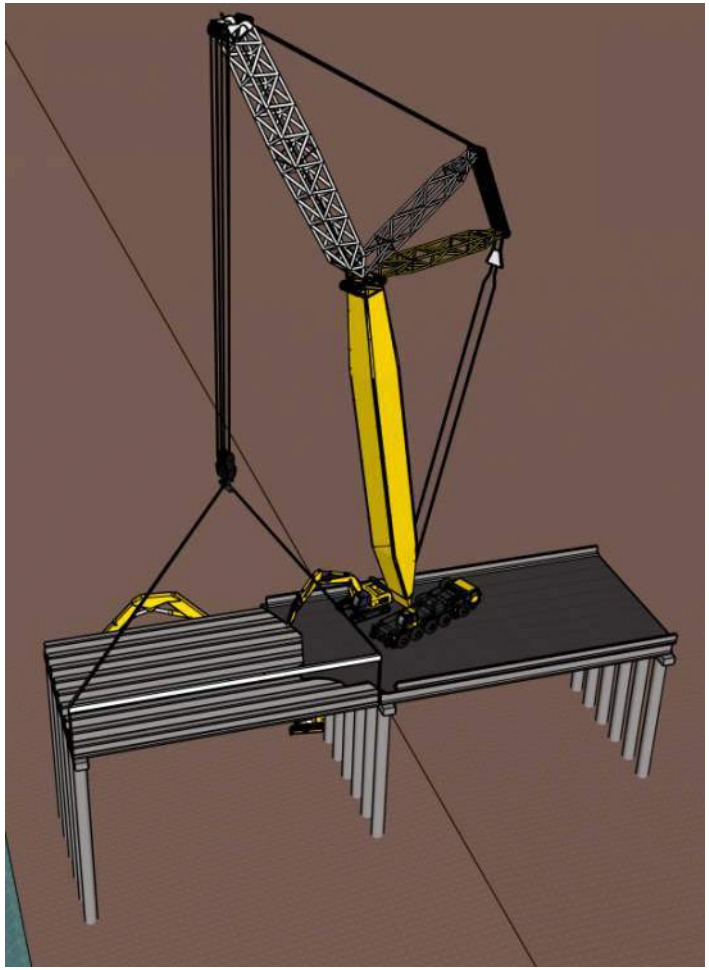


Span 44 & 45 Removal by NorthStar

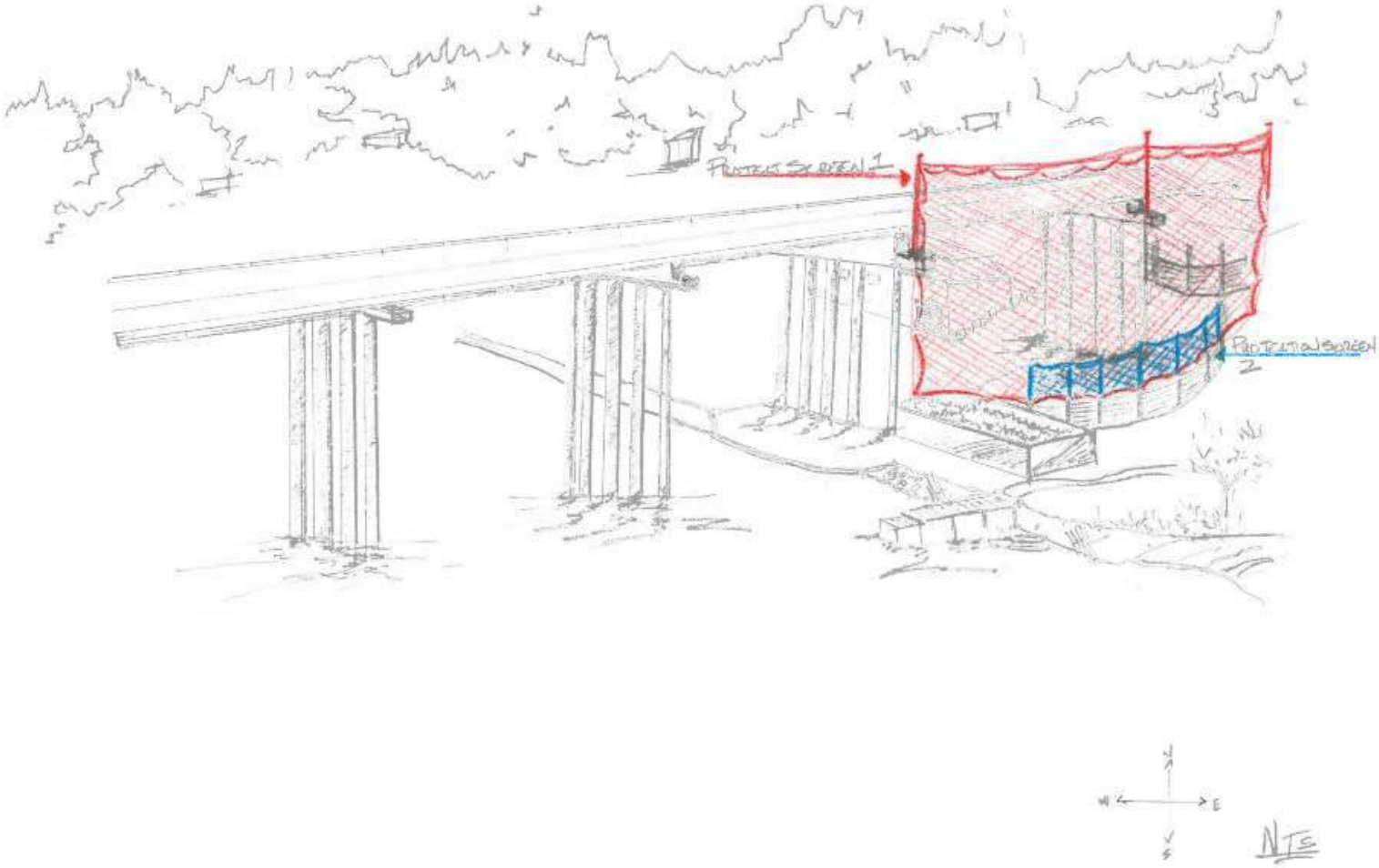


Span 44 & 45 Removal by NorthStar





Span 44 & 45 Removal by NorthStar

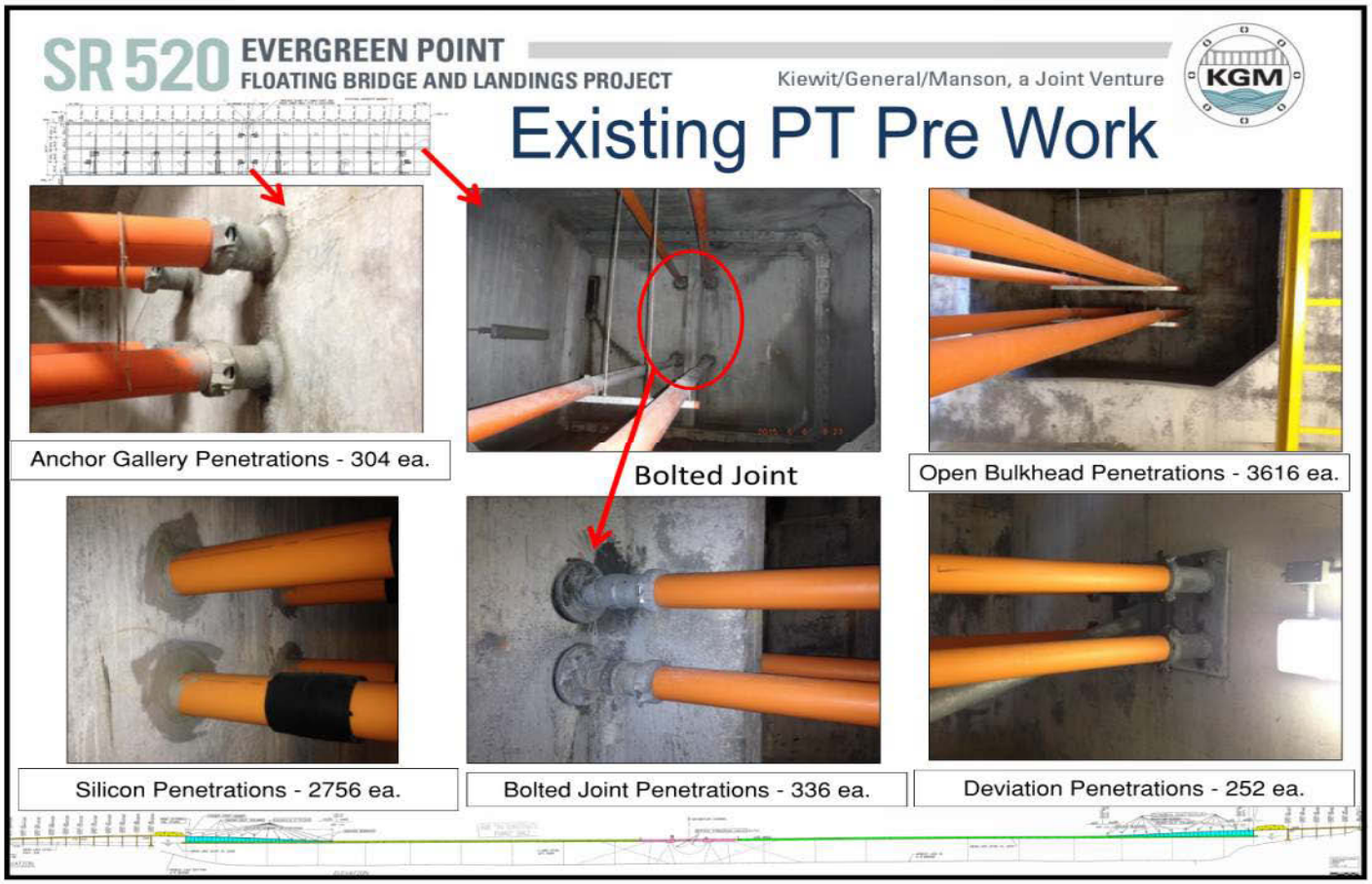


Pontoon Prework

Hydro Blasting

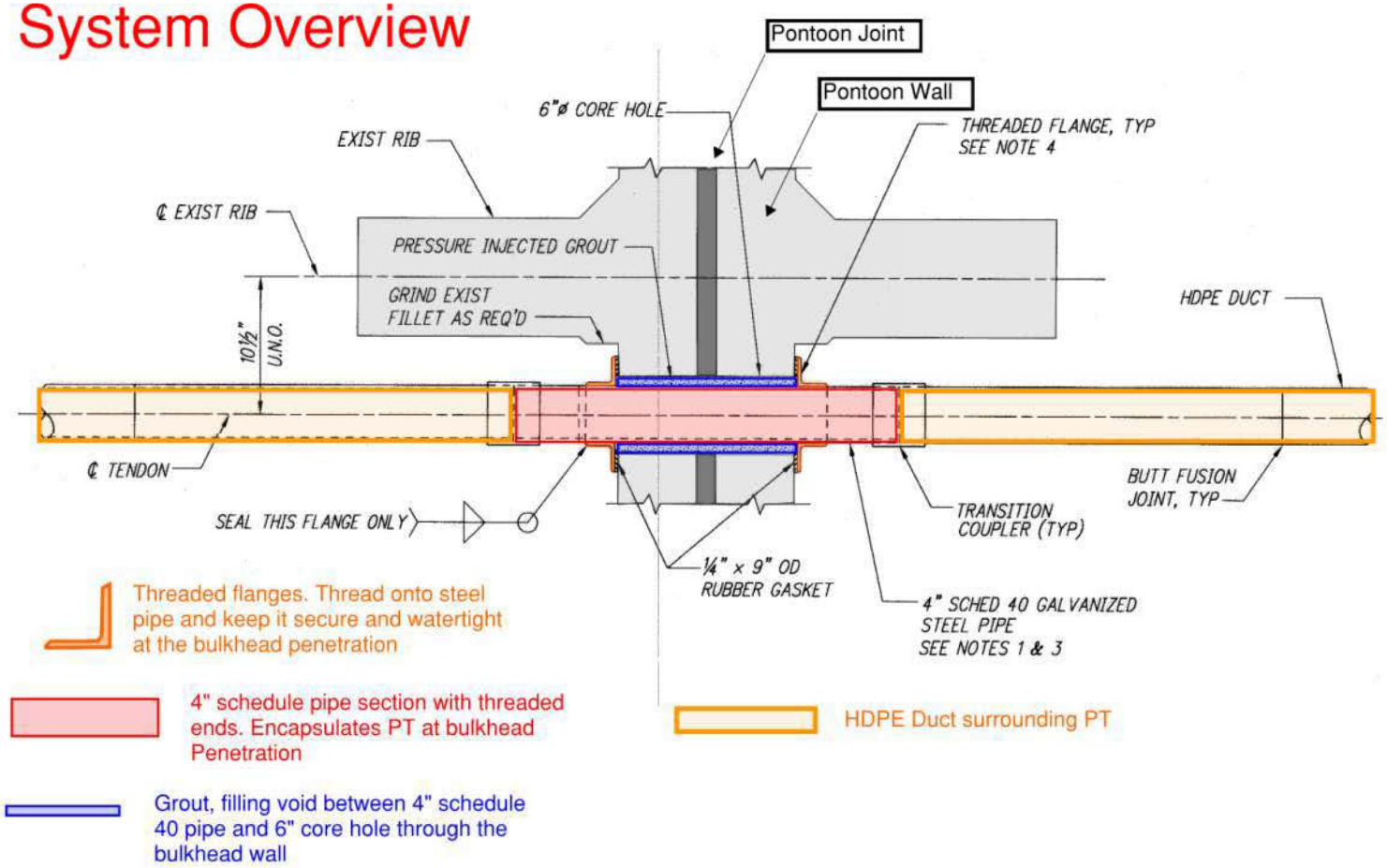
Hydro Demolition – PT Penetrations

- Hydro Demo Locations – 892ea.



Hydro Demolition – PT Penetrations

System Overview



Removal of Draw Pontoons

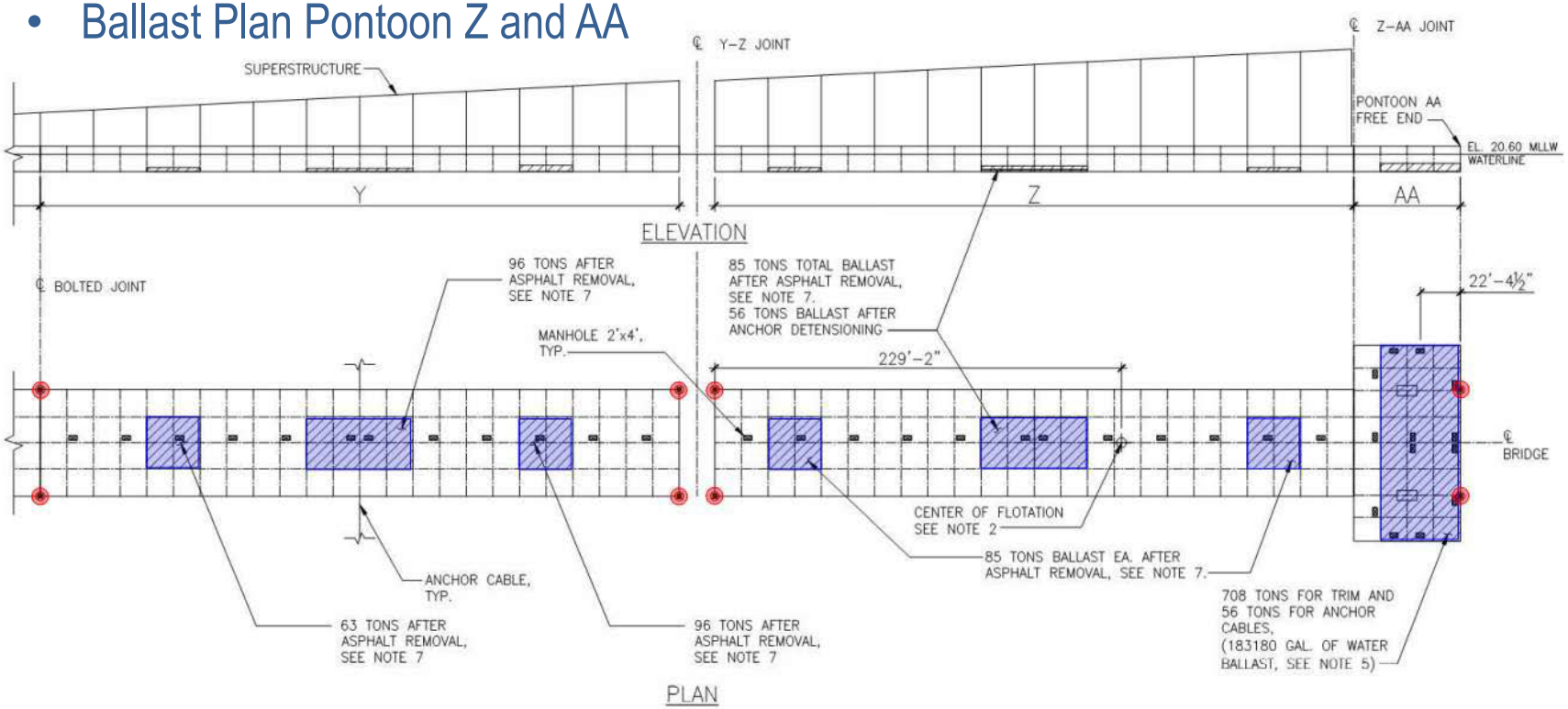
- Draw Pontoons and Lift Spans

Lift Spans

Draw Pontoons

Ballasting Pontoon For Separation

- Ballast Plan Pontoon Z and AA

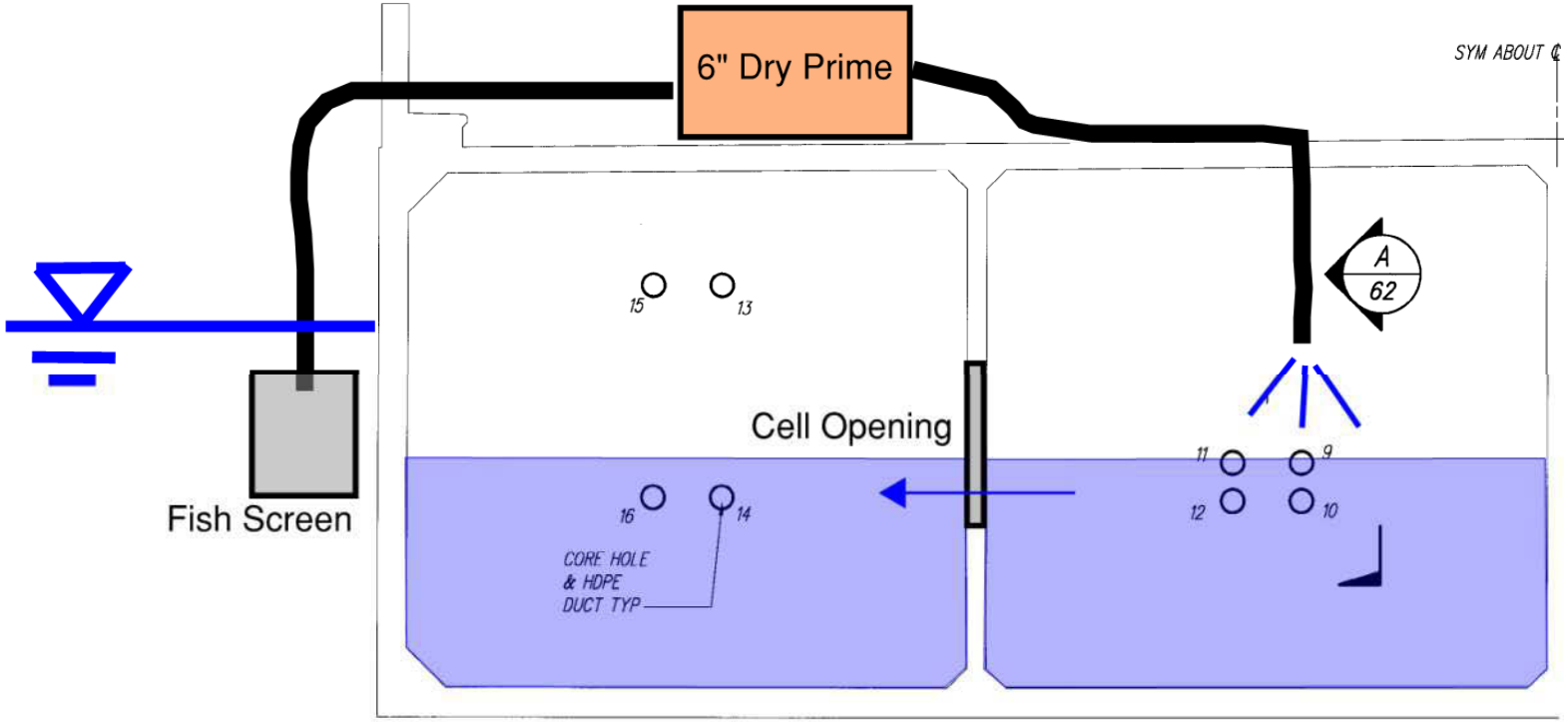


	PONTOON HEIGHT (FT.)	PONTOON DRAFT (FT.)	PONTOON FREEBOARD (FT.)
Y-Z	14.1	10.4	3.7
AA END	15.4	12.1	3.3

LEGEND	
●	PONTOON FREEBOARD MONITORING POINT
▨	BALLAST LOCATIONS

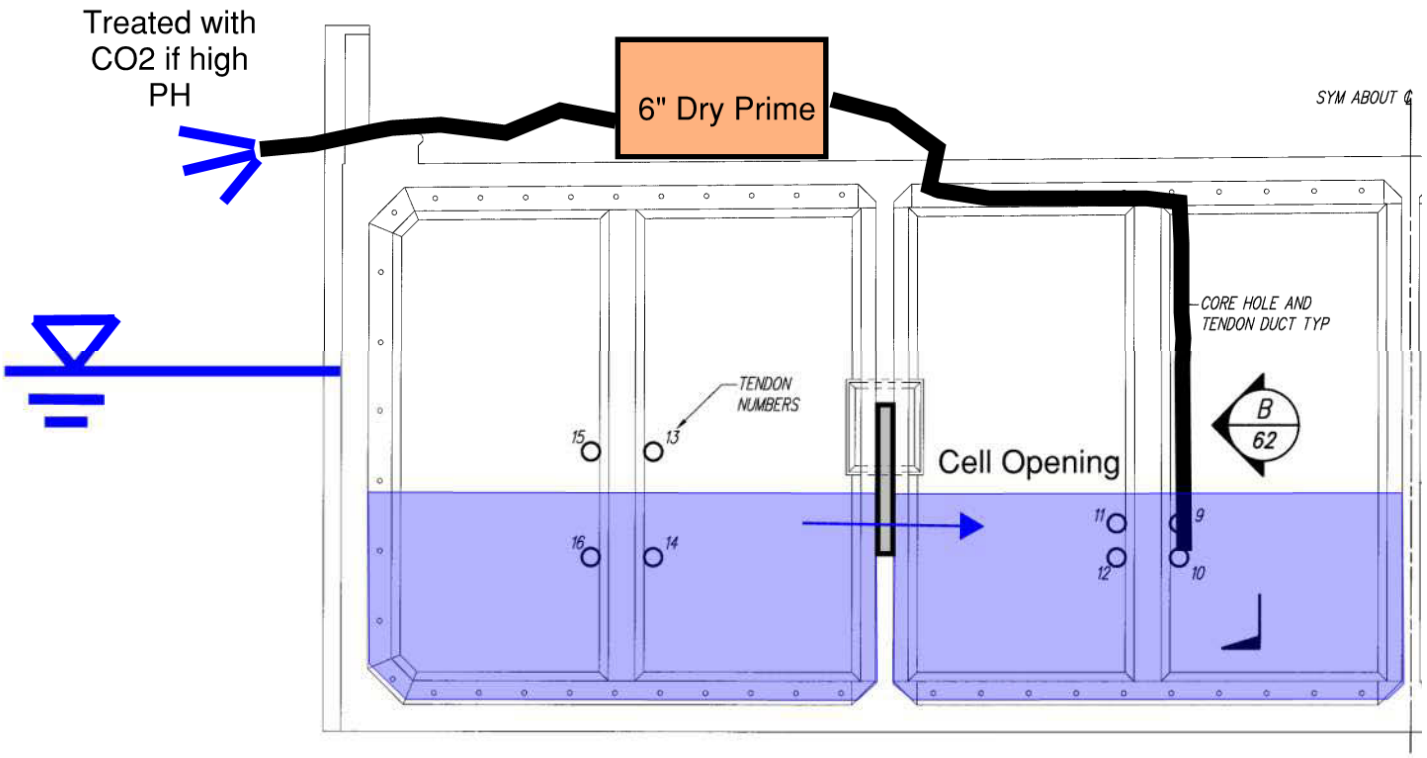
Ballasting Pontoon For Separation

- Ballast Equipment Plan, Place Water

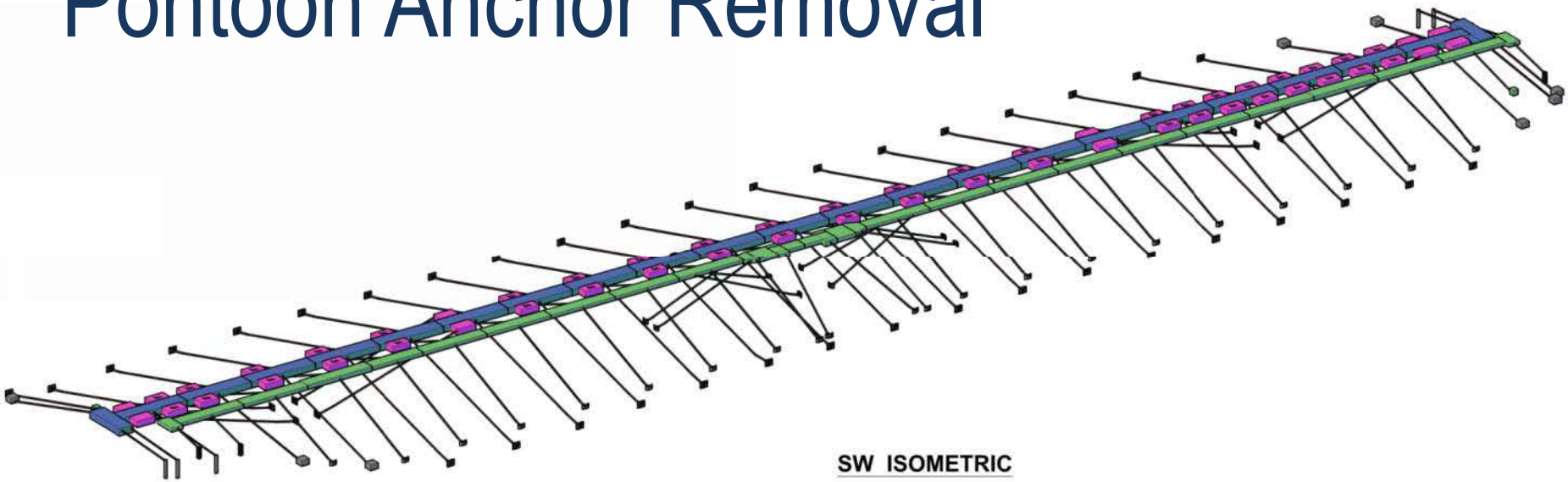


Ballasting Pontoon For Separation

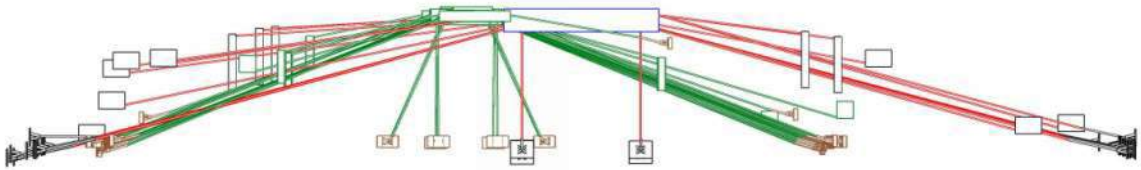
- Ballast Equipment Plan, Remove Water



Pontoon Anchor Removal



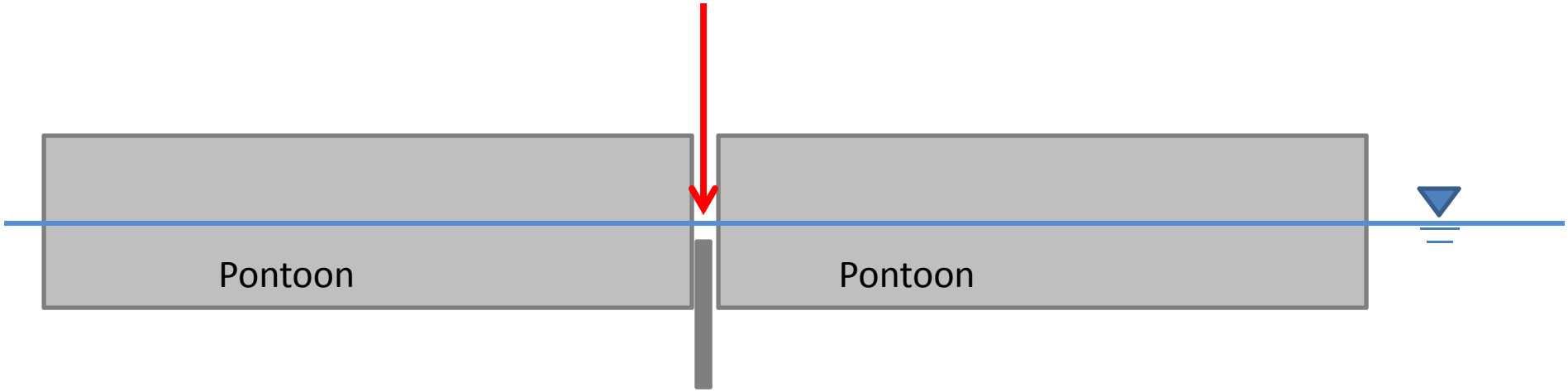
SW ISOMETRIC
Scale: 1" = 250'



EAST ELEVATION
Scale: 1" = 150'

Grout Catching

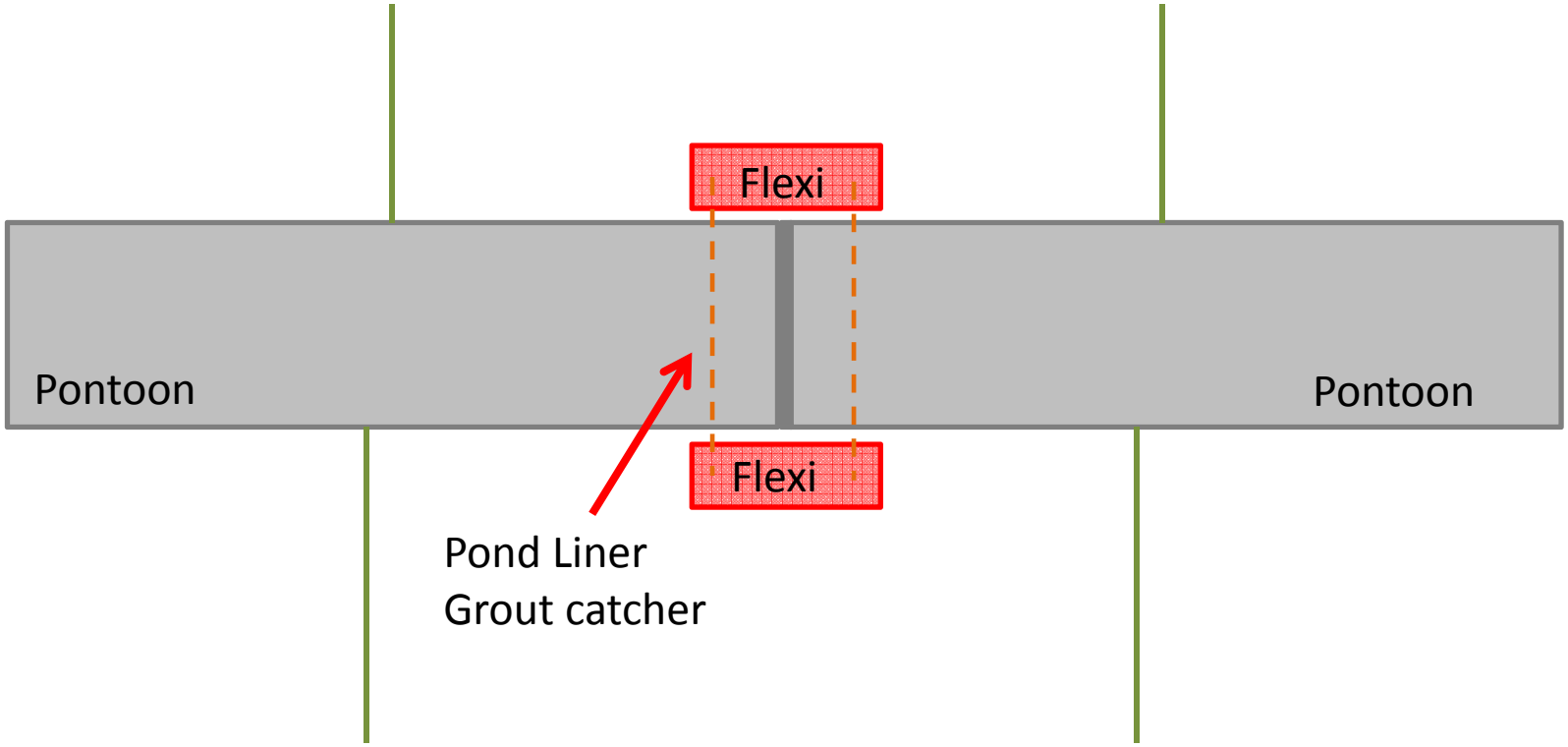
- Need to catch any grout that may fall off of joining face when separating pontoons



Joint Grout cannot fall into lake
We need to contain

Grout Catching

- Two Flexi Floats will hold a pond-liner / Chain-link fence grout diaper under the pontoon joint to be separated



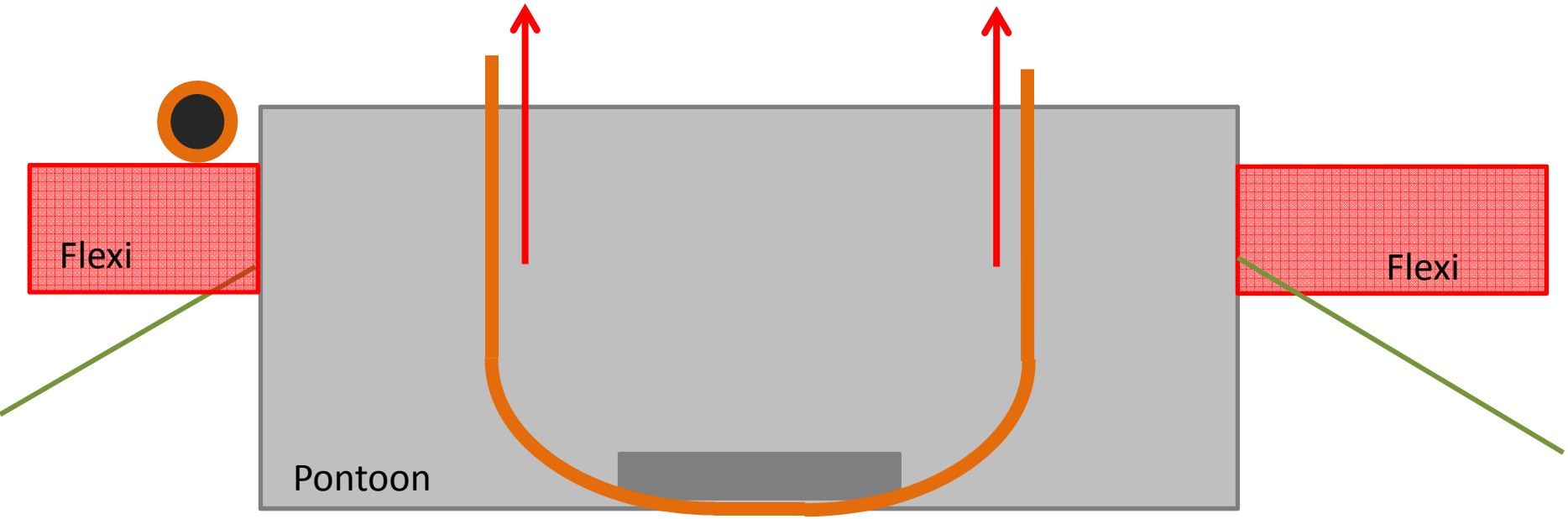
Grout Catching

- Need to catch any grout that may fall off of joining face when separating pontoons

-Pond Liner Grout catcher
-10ft wide heavy mil pond liner affixed to chain-link fence
-Attach to pipe roller on one flexi, and pull under pontoon with air tuggers

Grout Catching

- Picking out debris in pond liner with crane.
- Hoist to pontoon deck of adjacent pontoon, and load any drebis into dumpsters or skip boxes for later removal



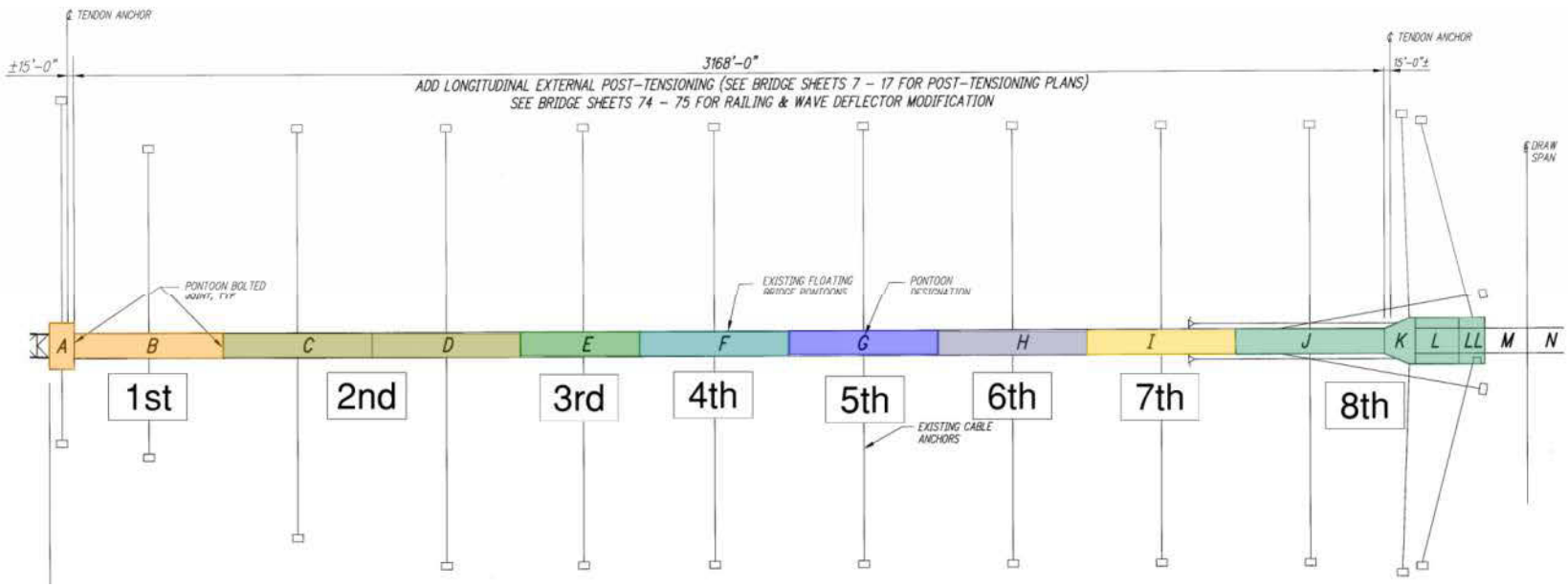
Pontoon Separation

Joint Separation

Engineer of Record - Sam Yao
Plan completed but not currently submitted to Sam Yao for review
Bittner-Shen to provide 2nd engineering check

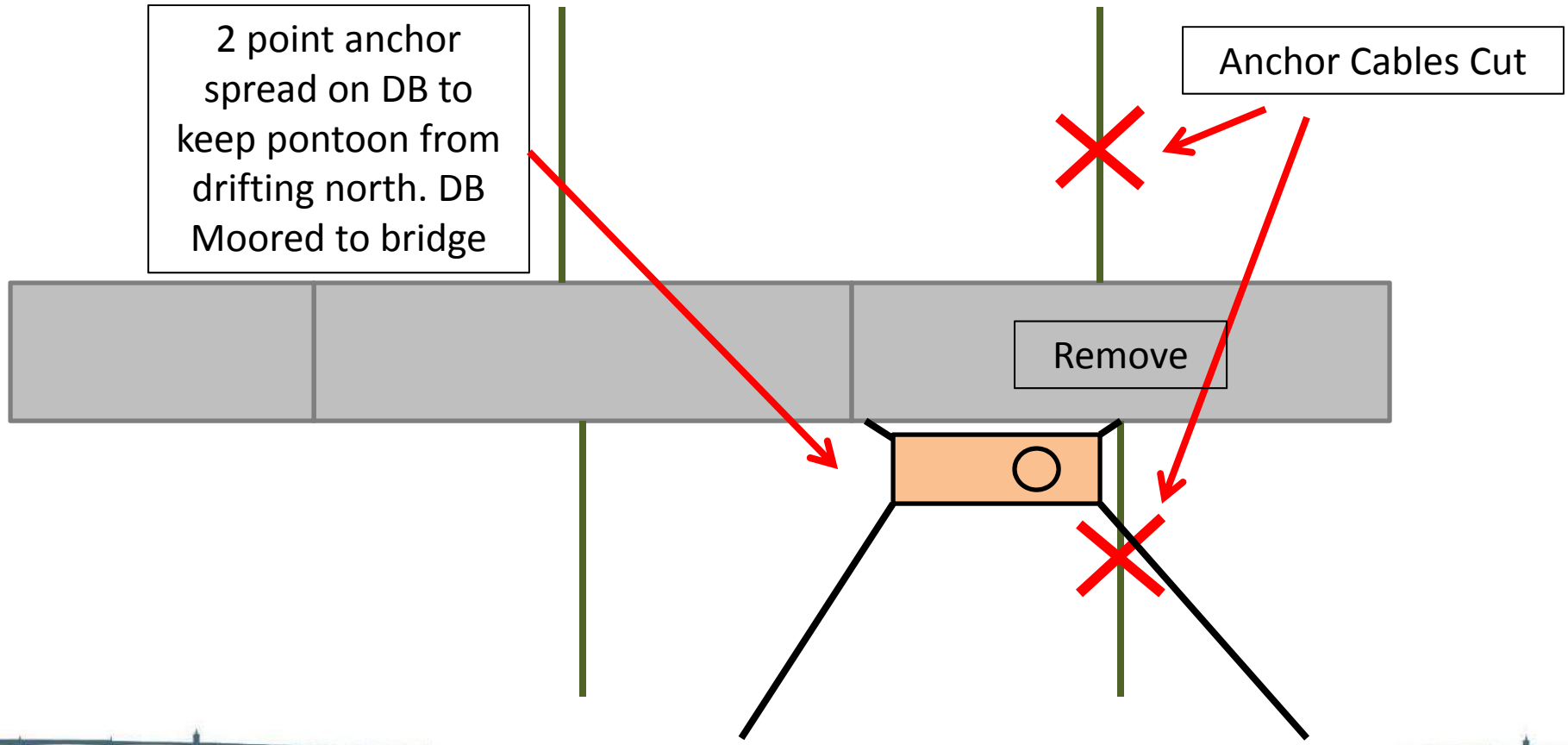
Pontoon Separation Sequence

- Overall pontoon separation sequence
- Starts on west side after transition span removed
- West Side – 7 Joints to break



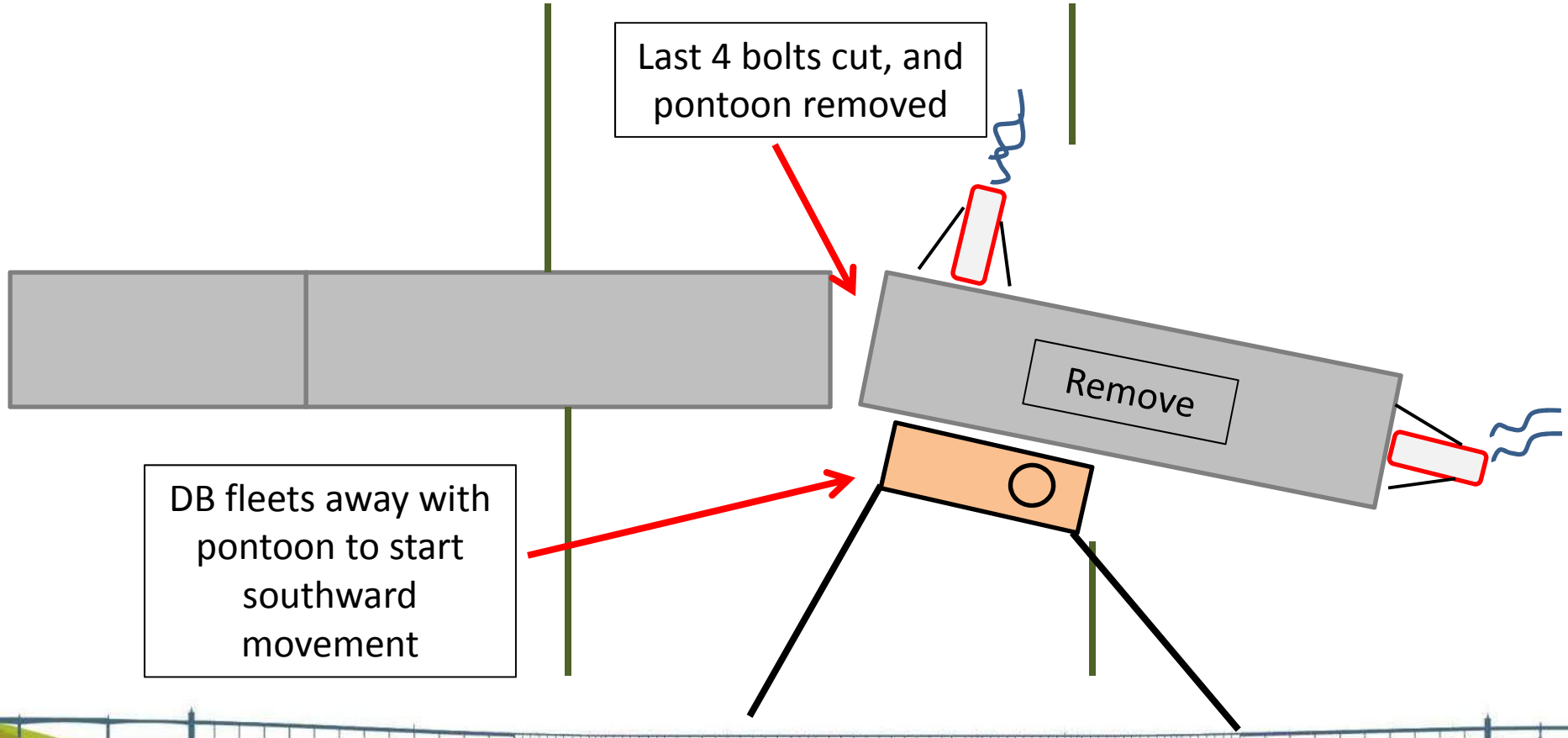
Pontoon Separation Sequence

- Cut anchor cables



Pontoon Separation Sequence

- Make up Tug Boats (Pontoon Towing Plan)
- Remove last 4 bolts, and move pontoon to moorage



Pontoon Separation Sequence

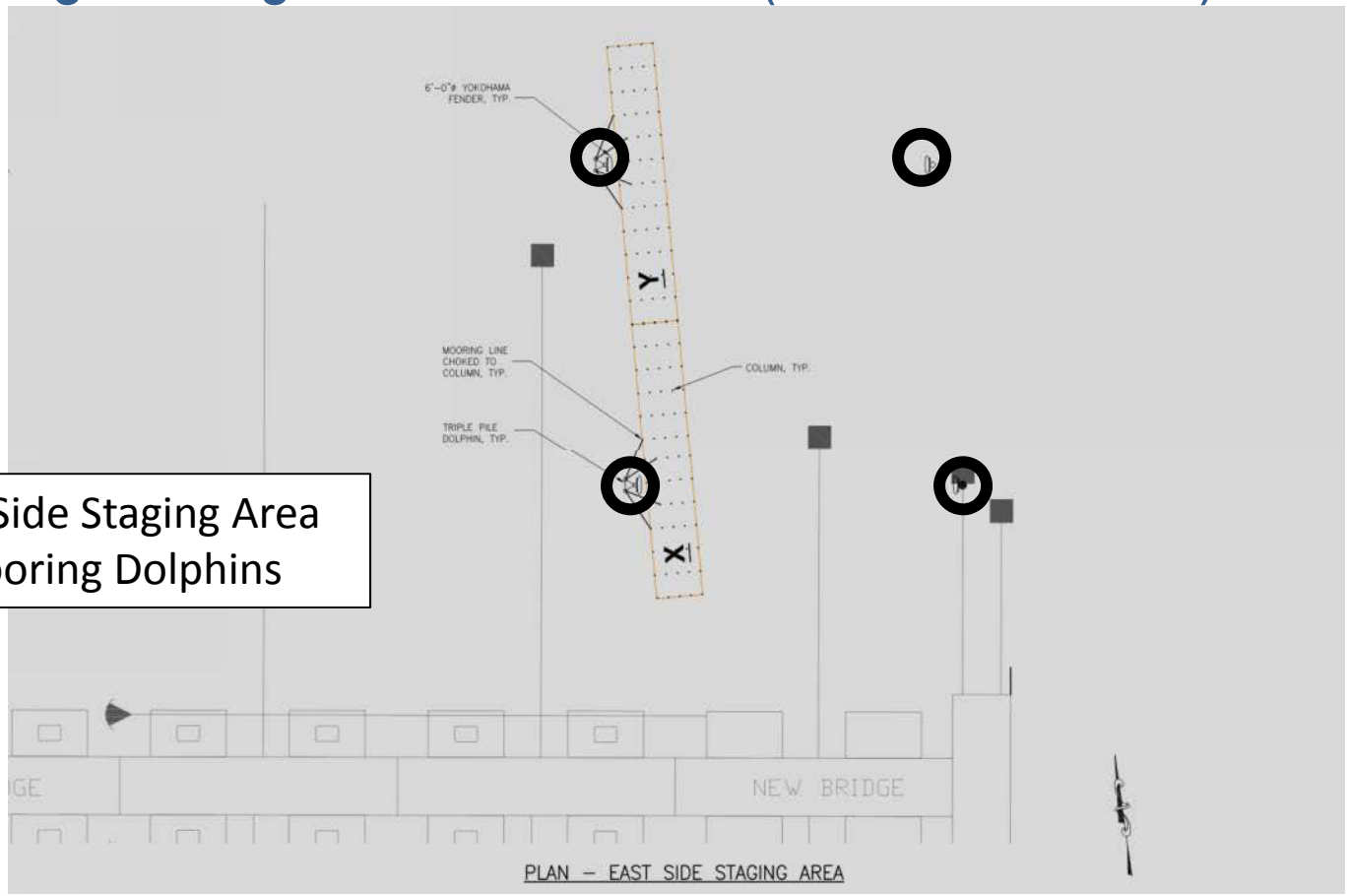
- Make up Tug Boats (Pontoon Towing Plan)
- Remove last 4 bolts, and move pontoon to moorage

Pontoon Superstructure

- West and East end pontoon superstructure must be removed before pontoon separation
- Planned to remove in the east side staging area
- Pontoons will be floated to staging area in a joined pair, superstructure demolished and then the pontoon pair will be separated

Pontoon Superstructure

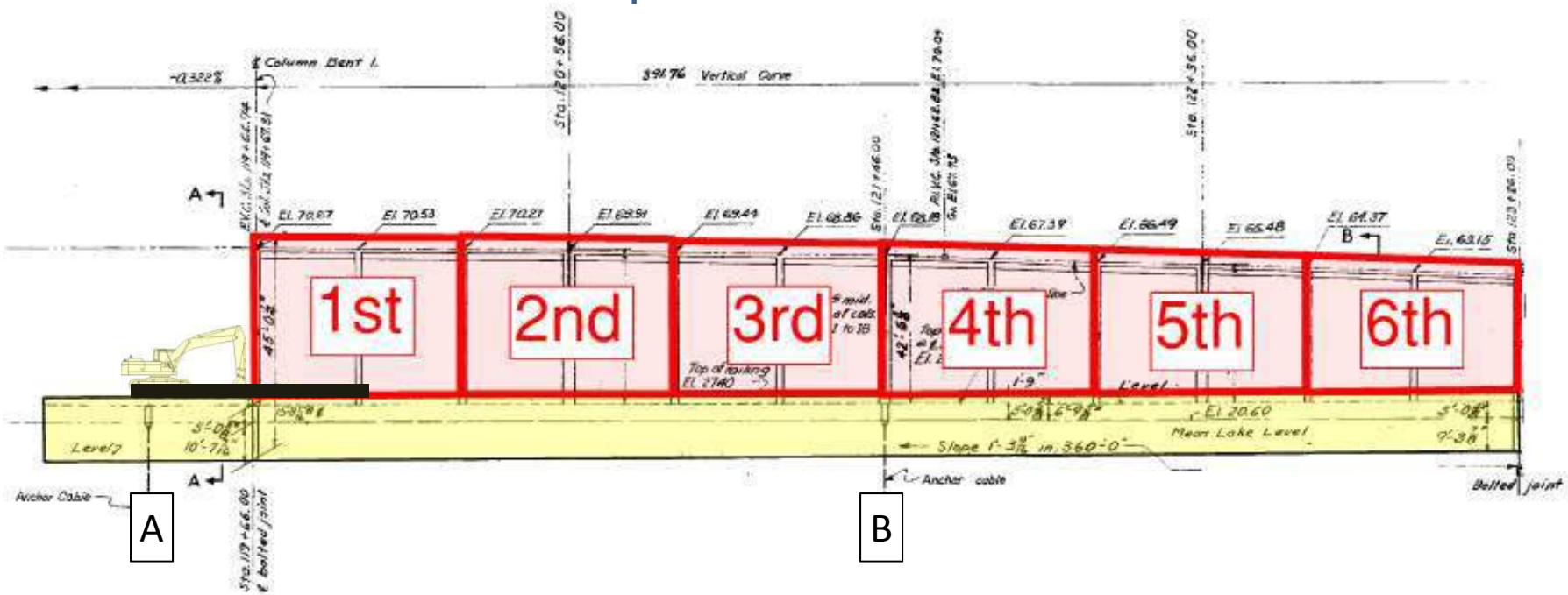
- Moorage Arraignment – X and Y (C and D Similar)



East Side Staging Area
Mooring Dolphins

Pontoon Superstructure

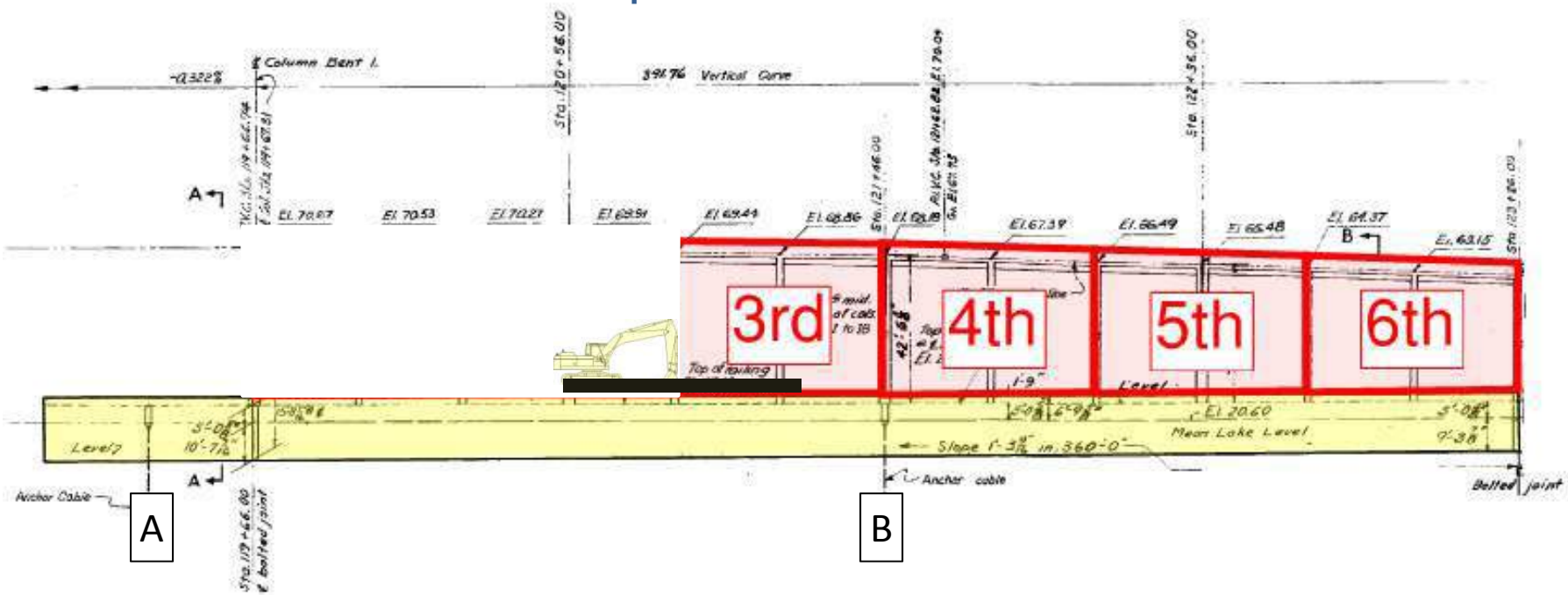
- Pontoon A and B Sequence



Add 60ft of steel plating to protect deck (3/4” thick plate, 60ft x 60ft area)
Excavators, 2ea. Cat 450’s ,demolish superstructure working from A to B

Pontoon Superstructure

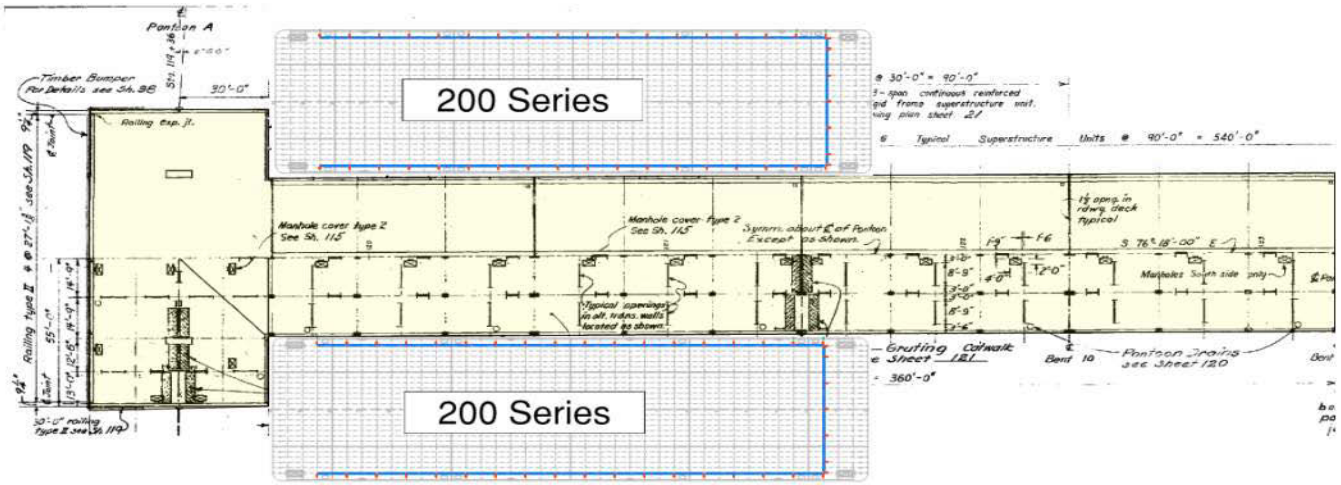
- Pontoon A and B Sequence



Add 60ft of steel plating to protect deck (3/4” thick plate, 60ft x 60ft area)
Excavators, 2ea. Cat 450’s ,demolish superstructure working from A to B

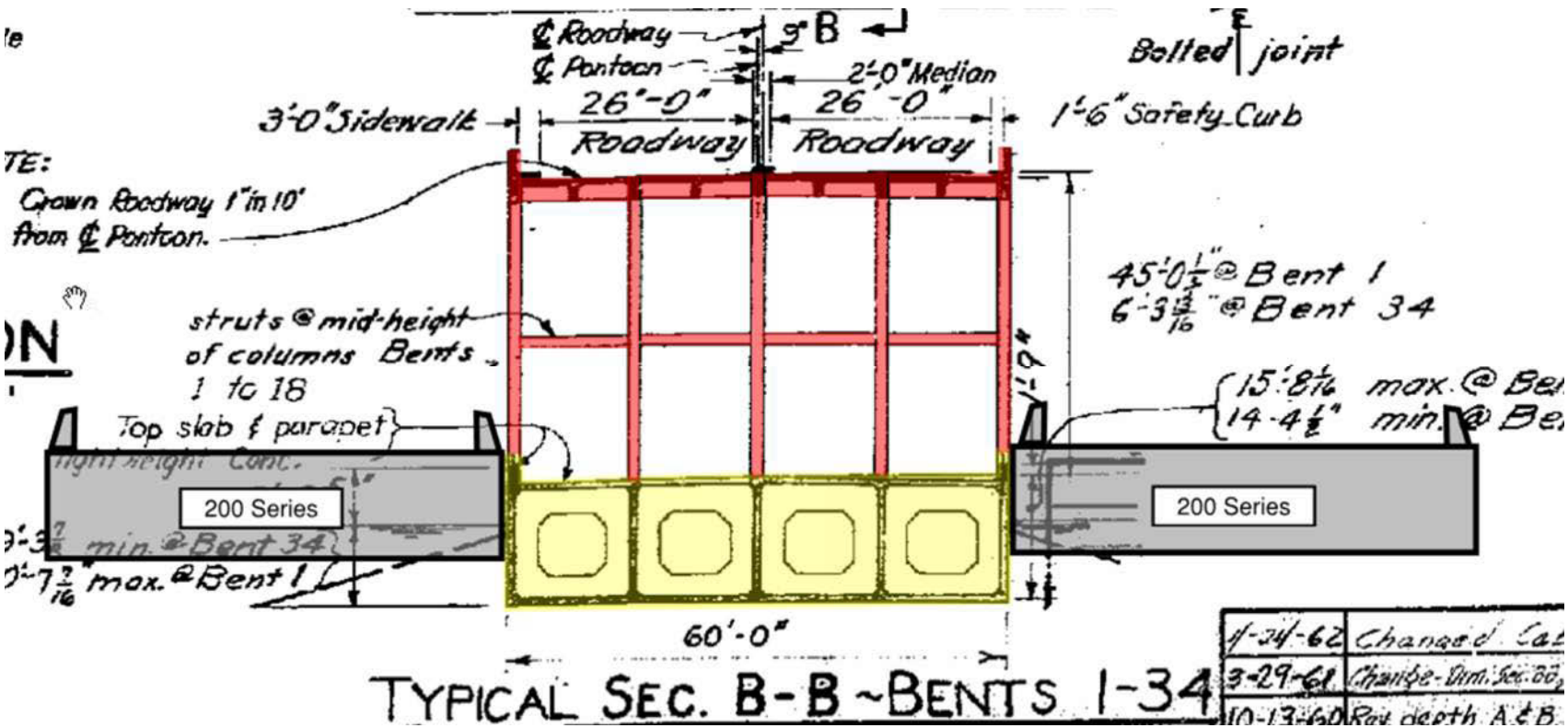
Pontoon Superstructure

- Spoils Offloading
  - 2 Barges with full fences (Kiewit 200 and 204) will sit on either side of the pontoons and move with the excavators
  - Excavators will bucket material onto the barges from the pontoons
  - A bobcat will be on the barges to move material to stockpile



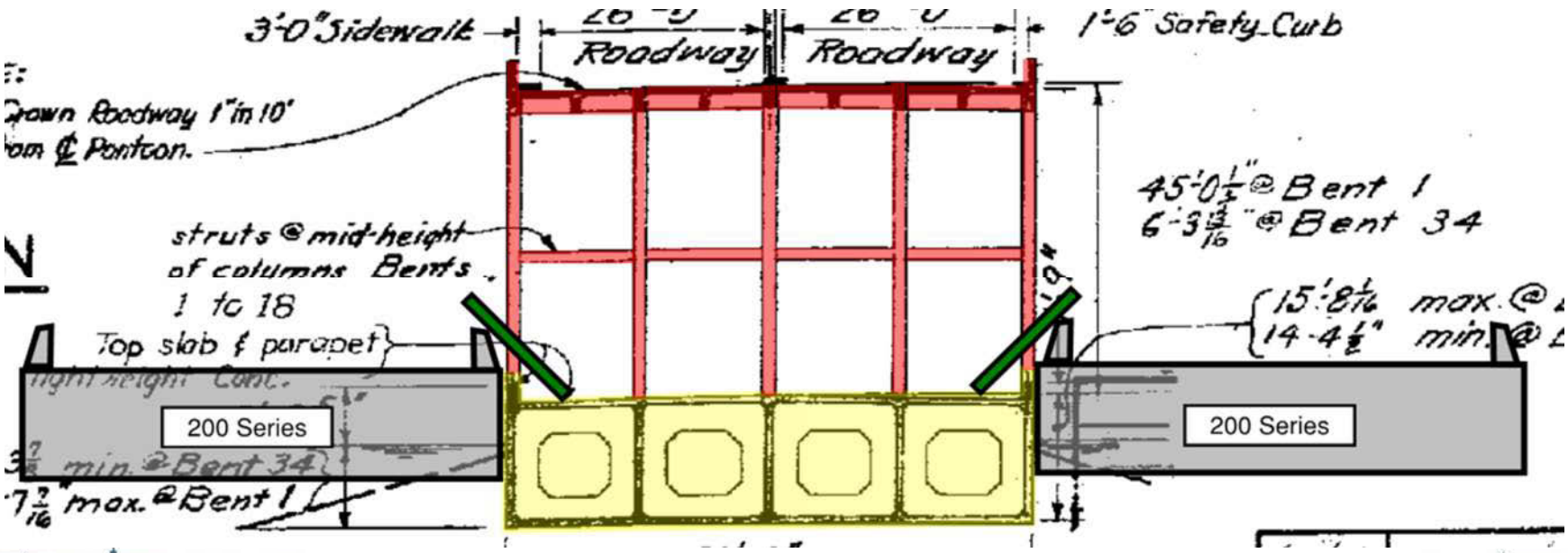
Pontoon Superstructure

- Barge Protections
  - Need to protect barge from falling debris



Pontoon Superstructure

- Add Built up timber protection pieces to span between barge fence and pontoon deck
- Moved with excavators to next work location down the bridge
- 4x6 Strongbacks with 2-3 sheets of 3-4” plywood cover
- 12ft tall and 9-10ft long to span the 30ft column gaps



Pontoon Superstructure – Environmental

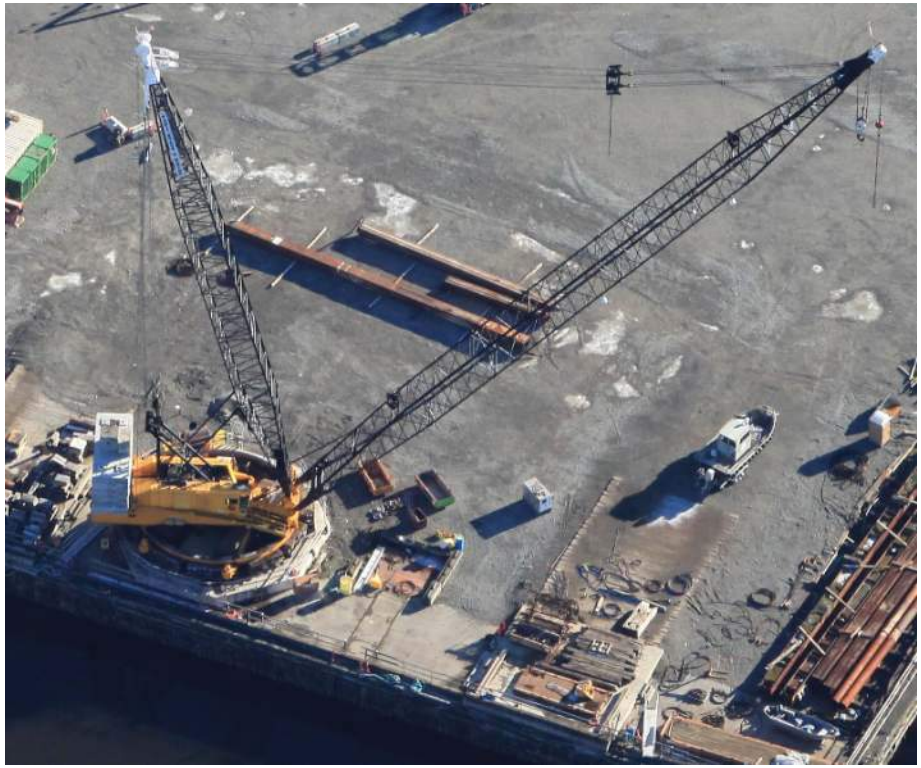
- Need to control any water runoff into the lake
  - Dust Control or contaminated rainwater
- Pontoon deck will have pinned down wood fence
- Debris barge will be loaded to keep a small trim to the bow and scuppers will be covered with filter fabric

Kenmore Yard

Kenmore Yard

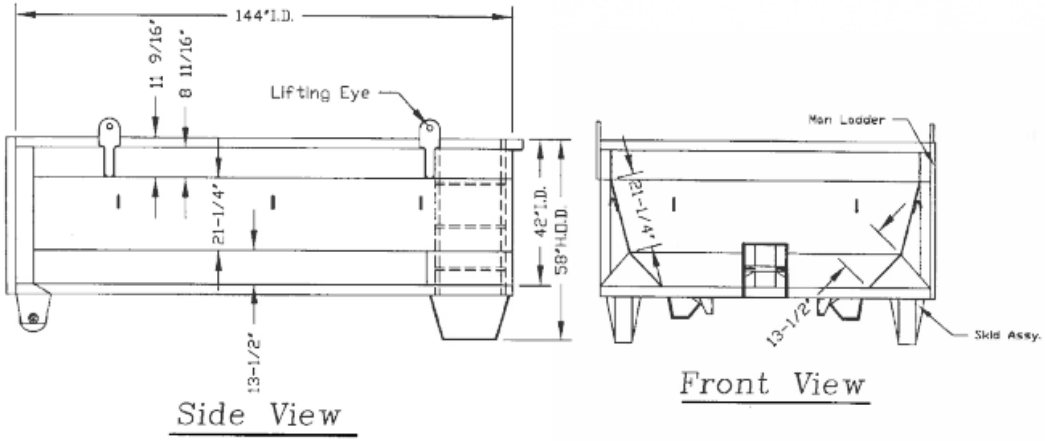
Kenmore Yard

- Equipment load out
- Material offload
  - Approach spans
  - Pontoon Superstructure
- Processing material prior to recycling



Kenmore Yard

- Pontoon superstructure material and material captured on debris barges will be offloaded via boxes provided by NorthStar



Concrete Recycle/Disposal

- Approach Span material will be processed and recycled by NorthStar
  - Stoneway Concrete
  - Renton Concrete Recyclers
- Pontoon Superstructure material will be processed and disposed of by NorthStar
  - Reserve Silica – Inert Waste Landfill
  - KGM currently working with King County for approval
  - Material has above normal concentrations of Arsenic (50-65 ppm)
  - Material passes TCLP
  - PH test did not pass due to sample size

From: Kelley, Penny (ECY)
To: "Sax, Stephen"; john.gage@kiewit.com; Bullamore, Bryant
Subject: RE: Demo Dust Control
Date: Tuesday, April 26, 2016 4:50:00 PM
Attachments: image001.gif
image003.png

Hello,

After internal discussion, the final consensus is the water used for dust control is considered concrete waste/process water and will need to be taken offsite for disposal. Let me know if you have any questions.

Penny Kelley
WSDOT Liaison
Office: 360-407-7298
Cell: 360-280-8856
pkel461@ecy.wa.gov

From: Sax, Stephen [mailto:SaxSJ@wsdot.wa.gov]
Sent: Friday, April 22, 2016 2:36 PM
To: john.gage@kiewit.com; Bullamore, Bryant <BullamB@wsdot.wa.gov>
Cc: Kelley, Penny (ECY) <PKEL461@ECY.WA.GOV>
Subject: RE: Demo Dust Control

John,

I contacted Penny yesterday and discussed this issue with her briefly. She wanted to discuss it with a few of her colleagues and will provide a response next week.

Stephen

From: john.gage@kiewit.com [mailto:john.gage@kiewit.com]
Sent: Thursday, April 21, 2016 1:26 PM
To: Sax, Stephen; Bullamore, Bryant
Subject: Demo Dust Control

Steve/Bryant,

Yesterday we discussed the water used during demo. We would like to discuss with Ecology whether or not we can return that water to the lake if it meets the WQ standards in the 401 (pH, turbidity, sheen).

Can we setup a call with her tomorrow or Monday next week?

John Gage, AEP, CSEM, LEED AP
Environmental Manager | Kiewit/General/Manson, A Joint Venture

SR 520 Evergreen Point Floating Bridge
3015 112th Ave N.E., Suite 100, Bellevue, WA 98004
(p) 425-576-7138 (c) 817-789-2380

From:	Sax, Stephen
To:	Kelley, Penny (ECY)
Cc:	Bullamore, Bryant
Subject:	FW: Demo Dust Control
Date:	Tuesday, April 26, 2016 4:16:14 PM
Attachments:	image001.gif image003.png

Penny,

As a follow up to our conversation last week on this topic, you were going to discuss this with one of your colleagues on this issue and summarize what your decision was.

KGM is waiting for a response.

Thanks.

Stephen

From: john.gage@kiewit.com [mailto:john.gage@kiewit.com]
Sent: Thursday, April 21, 2016 1:26 PM
To: Sax, Stephen; Bullamore, Bryant
Subject: Demo Dust Control

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(p) 425-576-7138 (c) 817-789-2380

From:	Sax, Stephen
To:	Kelley, Penny (ECY)
Cc:	Boyd, Robyn; Bullamore, Bryant; Kucharski, Margaret
Subject:	Reportable Event May 3 2016 final
Date:	Wednesday, May 04, 2016 12:08:00 PM
Attachments:	Reportable Event May 3 2016 final.docx

Penny,

As a follow up to our conversation yesterday 5/3/2106, I have attached a copy of the incident report for the small quantity of paint chips that entered the lake. These chips were believed to have contained lead. The incident is considered a violation of WQC 9011 general condition 4 "*No petroleum products, fresh concrete, lime or concrete, chemicals, or other toxic or deleterious materials shall be allowed to enter waters of the state.*"
There were three barges and several floats staged under the work area for secondary containment at the time of the incident. The wind blew the chips away from the containment area into the lake.

When KGM was notified of the event they immediately stopped the work activities and will be installing a fine mesh netting on the north side of the transition span to prevent any chips or small debris from being blown into the lake.

If you have questions about the incident of information in the report please contact me.

Stephen

Stephen J. Sax

Environmental Compliance Team Lead
SR 520, I-5 to Medina: Stage 1 Evergreen Point Floating Bridge and Landings
Washington State Department of Transportation
3015 - 112th Ave NE, Suite 100, Bellevue, WA 98004-8001
425.576.7133 0ffice
206-713-9783 Cell

Please Reduce, Reuse, Recycle, Rethink

Washington State Department of Transportation

Memorandum

Reportable Environmental Incident Report

Subject: SR 520 Floating Bridge and Landings

Location: Medina over water

Incident Date/Time: 05/03/2016 11:30 AM

Duration: Approximately 2-3 minutes

Report Date: 05/03/2016

Agencies Notified: WSDOT
Notified by KGM on 05/03/2016
WDFW (Stewart Reinbold) Notified by WSDOT on 5/03/2016
Ecology (Penny Kelley) Notified by WSDOT on 5/04/2016

Incident Description: North Star, a KGM subcontractor working on demolition of the existing bridge, was removing the West Transition Span paving. As part of the existing bridge design, the pavement is supported by metal decking which serves as a containment area during removal of asphalt and concrete. Prior to the start of work, KGM staged three barges and several floats under and around the work area as a secondary containment measure to catch any additional rubble falling down. As the operations started it was discovered that the pavement wasn't as thick as anticipated, and the hoe ram began to puncture through the decking, exposing paint containing lead. The wind blew flakes of the lead paint coating off the underside of the decking to the north of the barge and float containment area into the lake. KGM wasn't able to place a barge in that area because of the risk of damaging the anchor cables on the existing bridge. The paint flakes were not retrievable.

Once KGM was notified by WSDOT of the incident the operation was stopped for the day and corrective actions implemented. Additional floats were installed to cover a wider area below.

Corrective Mitigation: KGM personnel shut North Star down immediately upon report of the flakes reaching the water. North Star cleaned up and secured all debris in the area.

Ongoing Prevention of Future Incidents: KGM and North Star will install a netting material on the North side of the Transition Span. This will catch any windblown lead paint flakes or concrete objects that would have previously missed the secondary barge containment. The operation will not continue until these additional BMP measures are in place.

From:	Sax, Stephen
To:	Kelley, Penny (ECY)
Cc:	Bullamore, Bryant; Boyd, Robyn; john.gage@kiewit.com; MacDonald, Chris (Consultant); Becher, Dave; Meadows, Greg (Consultant)
Subject:	Prep materials for 5/28 FB&L Bridge Demo meeting
Date:	Friday, May 22, 2015 10:30:16 AM
Attachments:	Demo Ecology Meeting Agenda.docx Demo WQMP Revision (just revision).docx BRIDGE DEMO SCHEME for ETF 04.17.15.pdf

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Hi Penny,

In preparation of the bridge demolition meeting scheduled for Thursday May 28th KGM has prepared several documents for discussion. Attached are the updated water quality monitoring and protection plan with a description of the activities and BMPs, the bridge demo sequencing plan and an agenda.

Hopefully you will have an opportunity to review this material prior to the meeting.

Stephen

Stephen J. Sax

Environmental Compliance Team Lead
SR 520, I-5 to Medina: Stage 1 Evergreen Point Floating Bridge and Landings
Washington State Department of Transportation
3015 - 112th Ave NE, Suite 100, Bellevue, WA 98004-8001
425.576.7133 0ffice
206-713-9783 Cell

Please Reduce, Reuse, Recycle, Rethink

Kiewit/General/Manson, a Joint Venture
SR 520 Floating Bridge and Landings Project

520 Existing Bridge Demo Ecology Meeting
May 28, 2015, 10:00 AM– 11:30 AM

At the Project office in Bellevue

AGENDA

- Overview of Bridge Demo and Schedule including graphics with Ecology
  - Review each work activity, BMPs and required WQ monitoring
- Review Updates to WQMP
- 401 Clarifications and Updates
  - Underwater concrete cutting
  - Pier Demo
  - Underwater demo hammer
- Needed submissions for Ecology Update
- Questions and Comments
- Action Items

Evergreen Point Conference Room

2.1.18 Existing Bridge Demolition - Column Demolition

In order to demolish the existing concrete approach span column piles, the operation will require in-water work and modifications to the lake bed. A derrick crane will be deployed to support and handle the column removal. The crane will use a clamshell bucket to remove lake bed material away from the base of the columns so that the columns are exposed and can be cut 2 feet below mudline. The total area of excavation is 20' by 60'. The material will be side-cast approximately 50 ft. away from the column without the clamshell bucket extending above the water surface. Then, the pile will be rigged to the derrick crane. Once the crane is holding the weight of the pile, the pile will be cut with an underwater shear and underwater wire saw at the 2 feet below mudline elevation. The pile will be hoisted onto the barge and transported to Kenmore for offload. Material will be offloaded using a ramp and a loader. From there, the material will be broken down for recycling, or loaded and transported off site for disposal to an approved receiver. The derrick crane will use the clamshell bucket to restore the lake bed to the original mudline elevation by moving the sidecast material into the void left by the pile. It is anticipated that the side cast materials will be adequate to fill in the void left by the hollow piles. Throughout the operation water quality monitoring will be performed as described in Table I.2.

In addition to the BMPs listed in Section 2.1 above, the following BMPs will be implemented:

- Clam shell buckets will remain under water while side casting lake bed materials to minimize turbidity.
- Barges will be staged near the column removal area to catch any debris or slurry.
- If turbidity levels exceed the thresholds described in Table I.2 KGM will deploy a turbidity curtain around the operation and will continue to monitor water quality levels until the return below the threshold.
- If pH levels exceed KGM will install a pump near the discharge point to capture the slurry being generated by the cutting operation. The pump will have a fish screen on it. The discharge would be pumped into a filter bag which traps the cementitious particles and lets the water filter out. The water will then be tested and treated for pH with a CO2 injector as needed before being discharged to the lake.

2.1.19 Existing Bridge Demolition - Pier and Footing Demolition

Prior to demolition of Piers 40 and 41, the lake bed material will be excavated and side casted to allow for removal of the concrete debris to 2 feet below the mudline. Approximately 800 sf per footing will have to be removed to allow full access to remove the footings form the lake bed. Once the material is side cast, a material barge will be moored on both sides of the transition pier and decked with crane mats between the barges for containment of the concrete debris form demolishing the pier. A long reach excavator with a breaker attachment will be utilized to demolish the transition pier until the pier is demolished down to the deck level of the material barges. Once the pier has been demolished to barge deck level, the long reach excavator with breaker attachment will continue to break the pier and footing below water line. Approximately 24 ft. of column (125 CY) and 8 ft. of footing (400 CY) will be removed underwater for each pier. The pier footings will be demolished down to 2 ft. below existing mudline. The long reach excavator with breaker attachment will work in tandem with a derrick crane so that once the material begins to stockpile underwater the derrick crane will use a clam shell to remove broken pieces of concrete out of the lake and onto a material barge where it will be transported off to Kenmore for offload. Material will be offloaded using a ramp and a loader. From there, the material will be broken down for recycling, or loaded and transported off site for disposal to an

Comment [pk1]: How deep is the water in this location?

Comment [pk2]: How will the crane operator "see" to do this operation?

Comment [pk3]: What happens if the material does not fill up the void? Is there a regulatory requirement that I should be aware of requiring voids to be completely filled and would thus require more material brought in if the side cast material is not sufficient?

Comment [pk4]: Where is table I.2? It will need that to be updated for review.

Comment [pk5]: Will need a good explanation of how this would be set up. Visuals would helpful, even if only something hand drawn.

Comment [pk6]: How far away will the material be side cast and will that distance be sufficient to keep it separate from concrete rubble/debris

Comment [pk7]: Will need some visuals to help understand how this set up will work.

Comment [pk8]: Have you tested the concrete to make sure the demo method of choice will work?

Comment [pk9]: How does the breaker attachment work? Are the pieces broken off large? Does the crane have to dig into the lake bed to pick up concrete demo debris or are the pieces large enough to pick up without disturbing the lake bed? Will the crane pick up more than one piece at a time?

approved receiver. The derrick crane will use the clamshell bucket to restore the lake bed to the original mudline elevation by moving the side cast material into the void left by the pile. It is anticipated that the side cast materials will be adequate to fill in the void left by the pier footings. Throughout the operation water quality monitoring will be performed as described in Table I.2.

Comment [pk10]: Want to make sure that side cast material does not mix with concrete demo debris.

In addition to the BMPs listed in Section 2.1 above, the following BMPs will be implemented:

- Equipment used below the water will utilize vegetable oil in all hydraulics.
- Hydraulic hoses will be housed in the excavator to prevent wear and damage of the hoses.
- An oil boom and turbidity curtain will be deployed during all underwater work and will remain in place until the lake bed is restored.
- Clam shell buckets will remain under water while side casting lake bed materials to minimize turbidity.

Comment [pk11]: Not sure I can visualize this set up – will need some explanation.

2.1.20 Existing Bridge Demolition - Anchor Pile Demolition

Four anchor piles on the existing bridge that require removal as part of the bridge demolition. They are required to be cut to 2 ft. below mudline and removed. The anchor piles are in water depths from approximately 40 ft. to 70 ft. This work begins by mooring a derrick crane next to the pile. The derrick crane will clam shell and side cast the material around the anchor pile to expose the pile to 2 ft. below mudline. After the soil is removed, a crane will be rigged to the pile with assistance from a diver. Once the crane is holding the weight of the pile, divers will cut the pile at least 2 ft. below the original grade. The pile will be hoisted out of the water and set onto a barge. It will be transported to an offsite recycling facility (Schnitzer, Seattle Iron, or similar.). The derrick crane will use the clamshell bucket to restore the lake bed to the original mudline elevation by moving the side cast material into the void left by the pile. It is anticipated that the side cast materials will be adequate to fill in the void left by the pier footings. Throughout the operation water quality monitoring will be performed as described in Table I.2.

In addition to the BMPs listed in Section 2.1 above, the following BMPs will be implemented:

- Equipment used below the water will utilize vegetable oil in all hydraulics.
- Clam shell buckets will remain under water while side casting lake bed materials to minimize turbidity.
- If turbidity levels exceed the thresholds described in Table I.2 KGM will deploy a turbidity curtain around the operation and will continue to monitor water quality levels until the return below the threshold.

Comment [pk12]: Has stopping work to deploy a turbidity curtain been built into the schedule? Also, will the curtain circle the work area entirely?

2.1.21 Existing Bridge Demolition - Pontoon Separation

All pontoons on the existing bridge must be separated to allow removal from Lake Washington. The first step in separation would be to disengage the retro-fit post-tensioning (PT) inside the pontoons. After the retrofit PT is disengaged and removed from the grouted joint between the pontoons, the joining bolts will be removed in a specific sequence; all of the bolt sleeves will be plugged to prevent water intrusion inside the pontoons. Once bolts and PT are removed, a containment system consisting of a half pipe and seal will be installed on the pontoon joint and the pontoons will be pulled apart using tug boats and the grout in the joint is expected to separate with little or no effort. This is based on past experiences with pontoon grouted joint

Comment [pk13]: Why is the containment system being installed after the bolts and PT system are removed? Is there a chance the pontoons could break apart before the containment system is in place? Will the containment system encircle the entire joint or will it be on the bottom of the pontoon? How can you break the pontoons apart without compromising the containment seal?

separation on this project and at the I-90/Lacey V. Murrow Floating Bridge pontoon separations. A tug boat and derrick crane will be used to remove the free pontoon. Then the pontoon will be transported to temporary moorage on the lake (buoys, West Side Staging Area, East Side Staging Area). Some pontoons will require additional demolition work, such as removing the elevated roadway, prior to leaving the lake. Finally, the pontoons will be transported out of the lake for demolition or transfer to a third party purchasing the pontoon. Currently, 21 of the 31 pontoons have been sold. The remaining 10 pontoons will be demolished at the Port of Tacoma CTC basin. Throughout the operation water quality monitoring will be performed as described in Table I.2.

In addition to the BMPs listed in Section 2.1 above, the following BMPs will be implemented:

- A containment and debris catchment system will be installed along the pontoon joint being separated to prevent debris from falling into the lake.
- Bolt holes and post tensioning holes will be plugged to minimize water entering the pontoon cells.

Comment [pk14]: What will the holes be plugged with?

2.1.22 Existing Bridge Demolition - Pontoon Ballasting

Ballast water may need to be added to the pontoons. This would be to facilitate separation of pontoons, or to make the pontoons stable as elevated road deck is removed from the pontoons. In addition, the existing pontoons have active pumps that remove water when it is leaking into the cells from cracks in the concrete. More leaks may develop from cracks during pontoon removal. This “additional ballast” may need to be pumped out. All ballast water will come from the lake and will be pumped back into the lake. Similar to current ballast requirements, any water that is pumped out of the pontoon cells will be tested to confirm pH is within allowable limits and the water will be treated with CO2 to regulate the pH. Throughout the operation water quality monitoring will be performed as described in Table I.2.

In addition to the BMPs listed in Section 2.1 above, the following BMPs will be implemented:

Comment [pk15]: I assume ballasting will occur throughout the pontoon demo/separation work - correct?

- CO2 will be used to regulate pH if needed.
- Pumps will be equipped with screens to prevent fish from getting injured form the pumping.

2.1.23 Existing Bridge Demolition - Anchor Cable Removal

Comment [pk16]: What water depths are we working in for this piece of the demo work?

Existing pontoons are held in place with anchor cables that stretch to under water anchors. There are three types of anchors: Jetted fluke (shown above), gravity, and pile. The jetted anchor has an eye that extends from its underground location to the anchor cable. The gravity anchors are heavy concrete structures that hold the tension from the bridge with their mass and friction on the lake floor. An eye bar extends from the bottom of the gravity anchor to the anchor cable. Finally, there are four pile anchors that are driven in pairs of steel H pile that anchor the cables. Pile anchors, along with all cable attachments will be removed as described below. In all cases, the anchor cable is held to the anchorage with sockets.

KGM will utilize two methods to remove anchor cables.

- During pontoon separation, a hydraulic cutting tool will cut the cable at the socket. The cable will then be spooled up and disposed of off-site. The eye bar and socket will remain in place.
- During pontoon separation, the cables will be placed on a buoy. Later, a diver will cut the eye bar at mudline. Part of the eye bar, the socket, and the cable will be spooled up and disposed of off-site. The other portion of the eye bar will remain in place.

In addition to the BMPs listed in Section 2.1 above, the following BMPs will be implemented:

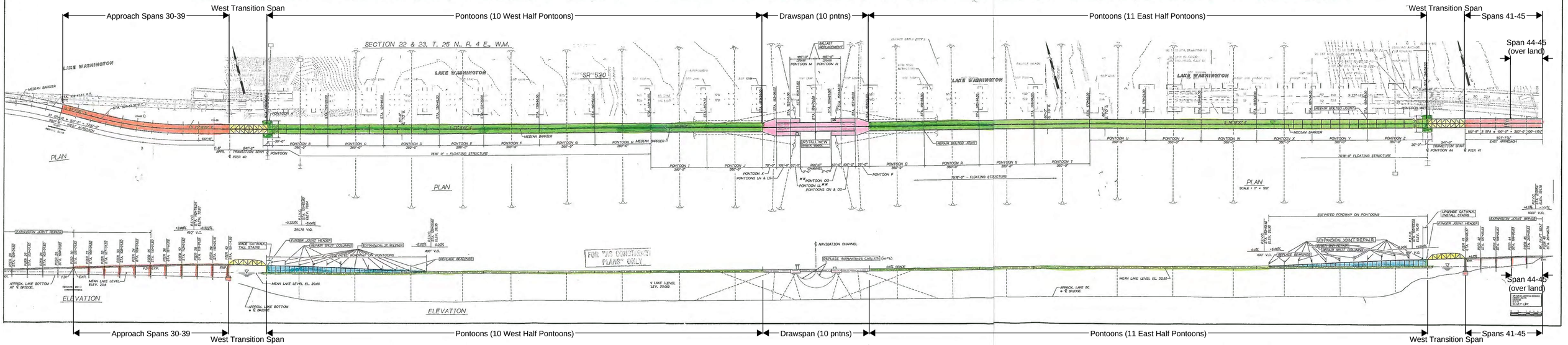
- Equipment used below the water will utilize vegetable oil in all hydraulics.
- The operation will not impact or disturb and sediments.

Comment [pk17]: Will divers use the hydraulic cutting tool?

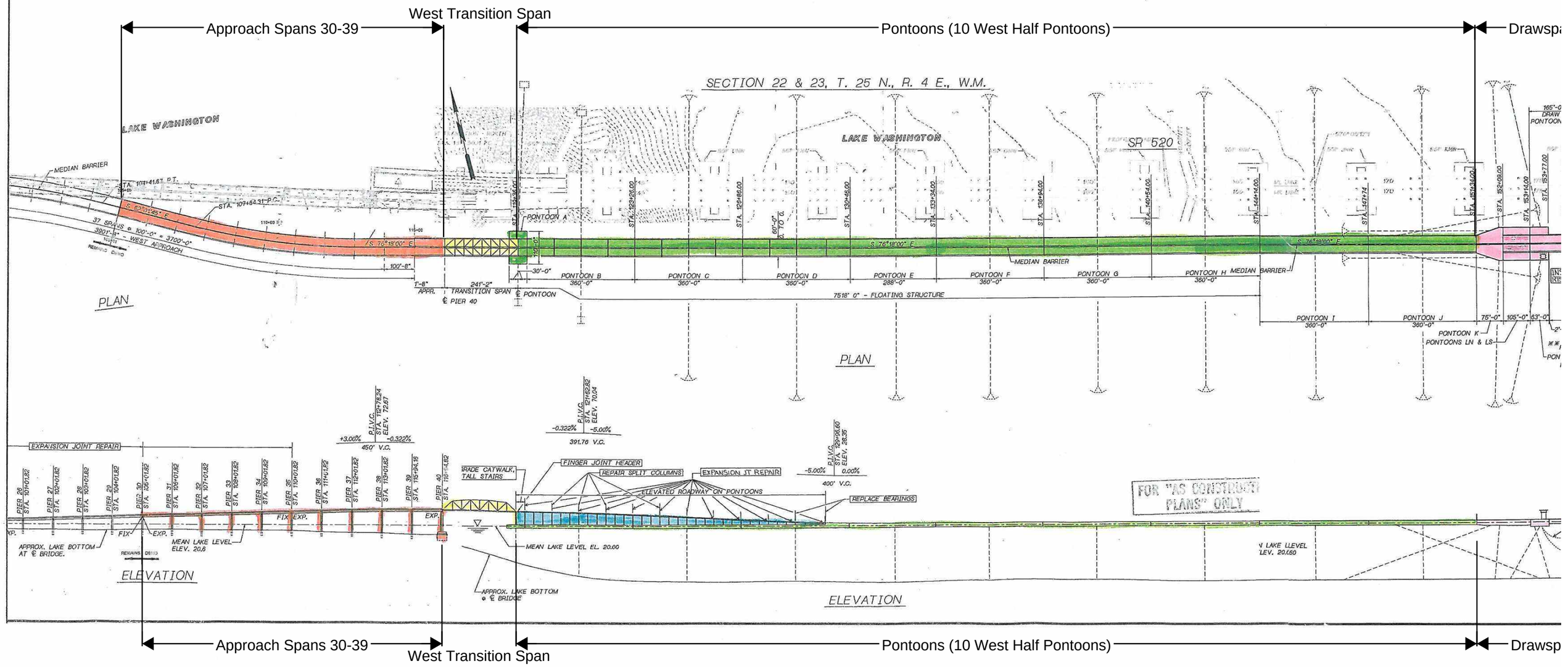
Comment [pk18]: This statement is confusing because above it is stated that four pile anchors will be removed along with the cable – how can that be done without disturbing sediments?

- TRANSITION SPANS
- APPROACHES
- PONTOONS
- DRAWSPAN
- SUPERSTRUCTURE

SR 520 - EVERGREEN POINT FLOATING BRIDGE AND LANDINGS PROJECT

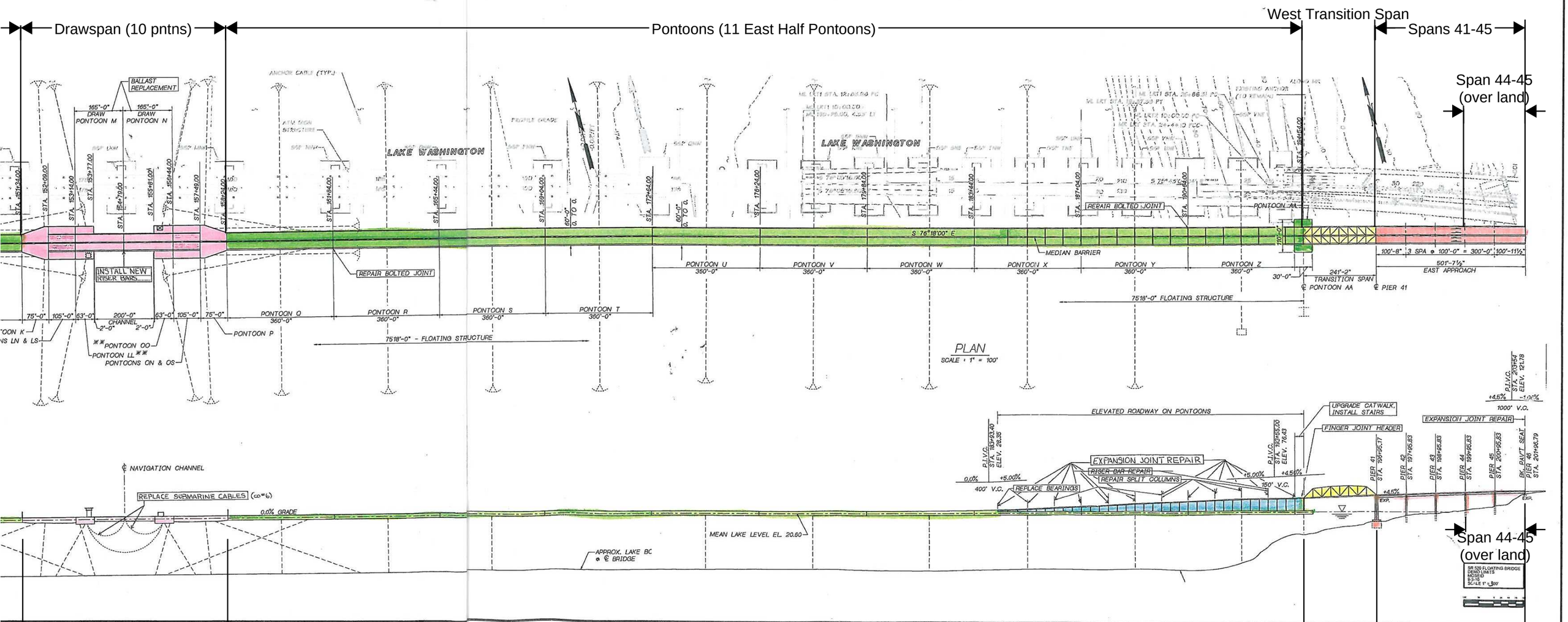


SR 520 - EVERGREEN POINT FLOATING



TRANSITION SPANS
APPROACHES
PONTOONS
DRAWSPAN
SUPERSTRUCTURE

TING BRIDGE AND LANDINGS PROJECT



Drawspan (10 pntns)
Pontoons (11 East Half Pontoons)
West Transition Span
Spans 41-45

DEMO 520 FLOATING BRIDGE & APPROACHES
PRELIMINARY DEMO SEQUENCES

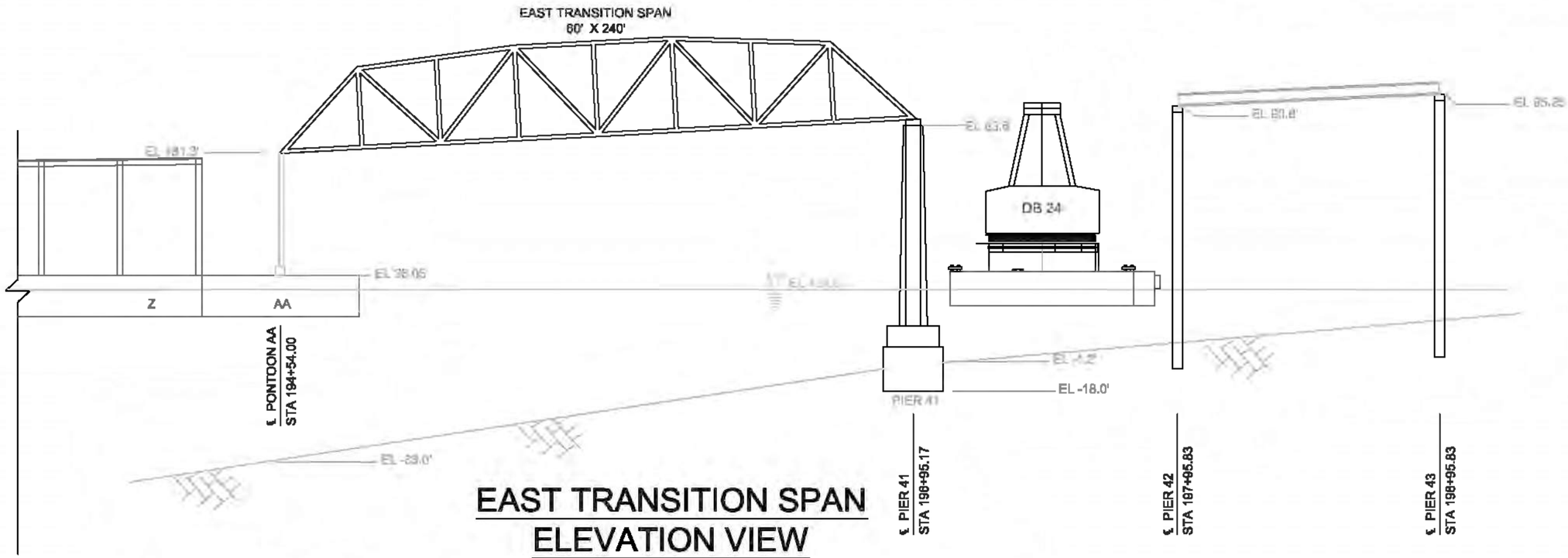
INDEX:

DEMO TRANSITION SPANS - PAGE 2-3
DEMO TYPICAL SPANS - PAGE 4-10
DEMO PIER 40/41 - PAGE 11-15
DEMO PONTOONS - PAGE 16-19
SCHEDULE - PAGE 20

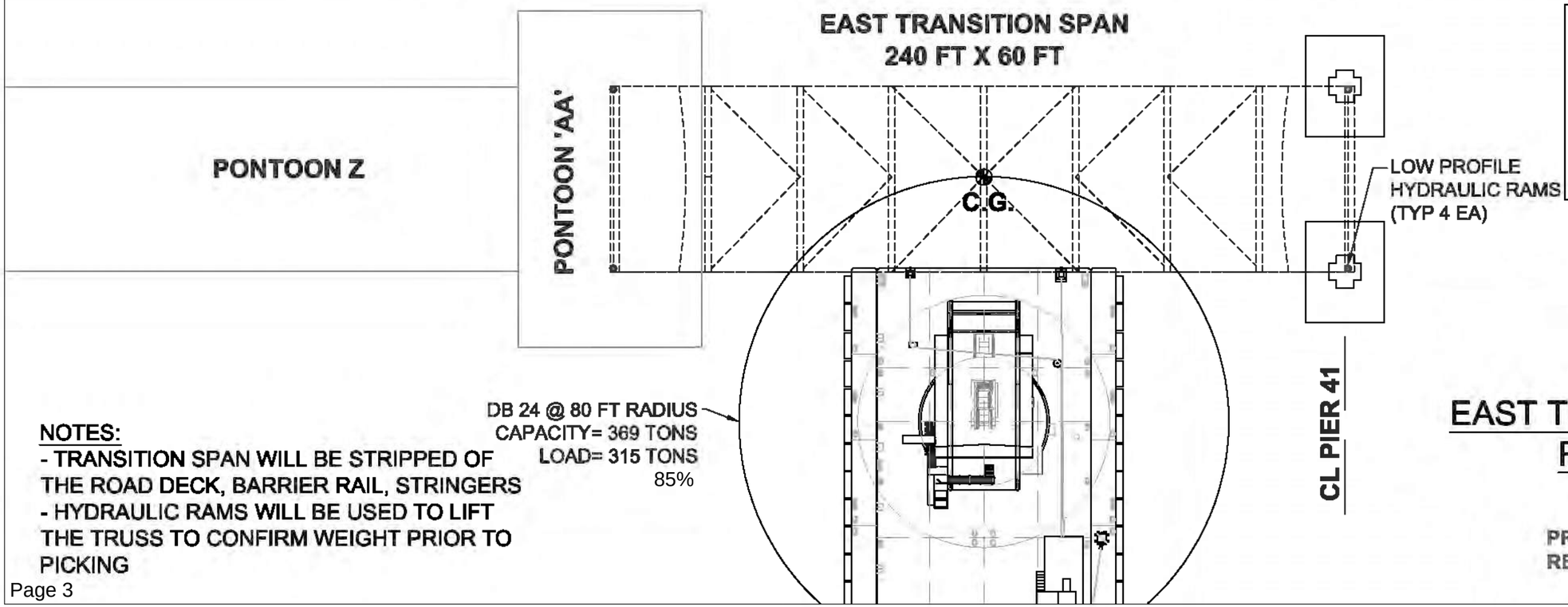
DEMO TRANSITION SPAN

0) DEMO SPAN 41 SO DB 24 CAN REACH SOUTH SIDE OF BRIDGE
1) REMOVE ROAD DECK AND FLOOR BEAMS TO REDUCE FROM 1000 TONS TO <315 TONS
   +BARGE WILL BE PLACED UNDER TRUSS TO CAPTURE FALLING DEBRIS
2) PICK EAST SPAN WITH DB 24
3) DEMO ON BARGE
4) PICK WEST SPAN
5) DEMO ON BARGE
6) OFF LOAD TO SCHNITZER FOR SALVAGE

NOISE PERMITS
TEMPORARY BLOCK NAV CHANNEL



EAST TRANSITION SPAN ELEVATION VIEW



Potential Issues:
Noise
Hot work
Blocking channel during...
Stripping deck (partial)
Picking truss (full)
Timeframe: April 2016

EAST TRANSITION SPAN PLAN VIEW

NOTES:
- TRANSITION SPAN WILL BE STRIPPED OF THE ROAD DECK, BARRIER RAIL, STRINGERS
- HYDRAULIC RAMS WILL BE USED TO LIFT THE TRUSS TO CONFIRM WEIGHT PRIOR TO PICKING

PRELIMINARY DRAWING FOR REFERENCE ONLY

No.	Date	By	Revision

BRIDGE DEMO

TRANSITION SPAN PICK

SR 520 Floating Bridge and Landings

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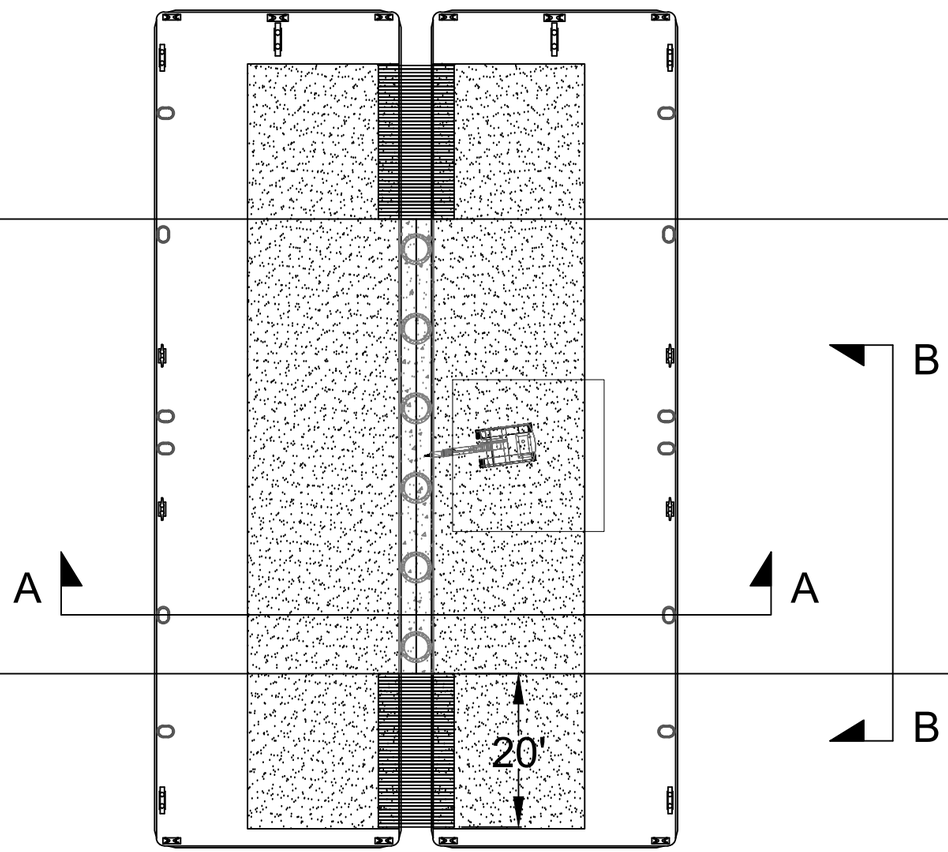
DEMO APPROACH SPANS 30-39, 41-45

ORDER OF DEMO:
SUB 1) REMOVE BARRIER FROM NORTHER EDGE OF APPROACH
SUB 2A) REMOVE CONCRETE FROM SPAN 41 TO LIGHTEN TO LESS THAN 50 TON PICKS
SUB 2B) STRIP DECK FROM TRANSITION SPANS
SUB 2C) PREP, DEMO AND DISPOSE SPANS 44-45 IN PLACE OVER LAND
KGM 3A) REMOVE TRANSITION SPANS (SEE TRANSITION SPAN PLAN)
SUB 4A) CUT SPANS 30-39, 42-43 INTO NINETHS
SUB 4B) REMOVE PIER 41
KGM 5) REMOVE SPANS 30-39,42-43
SUB 6) REMOVE PIER 40

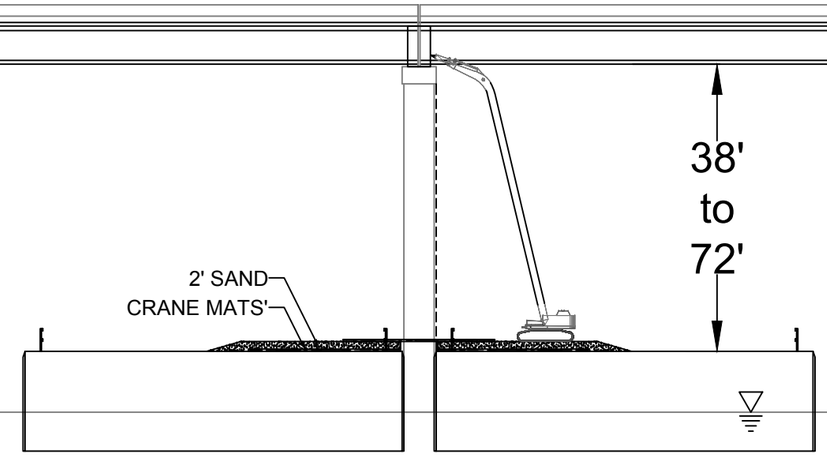
+NOISE PERMITS
+VIBRATION MONITORING

TYPICAL SPAN DEMO SEQUENCE:
1) SAWCUT SUPERSTRUCTURE INTO 9 PIECES (SUB)
2) REMOVE INTEGRAL DIAPHRAGMS AT THE CROSSBEAMS WITH PLUNGE CUTS AND/OR LONG REACH EXCAVATOR (SUB)
3) RIG INTO THE DECK SECTION (KGM)
4) SEPARATE RIGGED SECTION AT THE INTERMEDIATE DIAPHRAGM (SUB)
5) PICK OFF THE 9 DECK SECTIONS (KGM)
6) PRE-DIG AROUND HOLLOW COLUMNS (KGM)
7) RIG CAP & SHEAR OFF HOLLOW COLUMNS 4' FROM THE BOTTOM OF CAP (SOLID PLUG POURED FOR FIRST 3') (KGM)
8) RIG PILE & SHEAR OFF HOLLOW COLUMNS 2' BELOW MUD LINE (KGM)
9) FILL HOLE WITH APPROVED ROCK/SOIL (KGM)
10) DEMO & DISPOSE OF CONCRETE AT KENMORE (SUB)

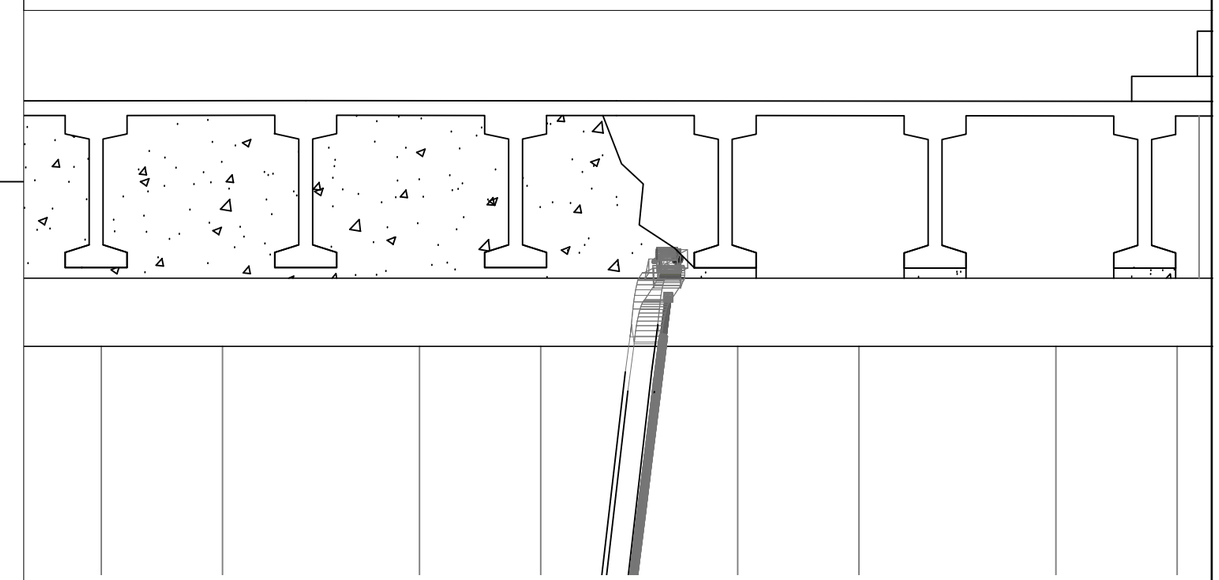
NOISE PERMITS



PLAN
SCALE: 1" = 20'



SECTION
SCALE: 1" = 20'

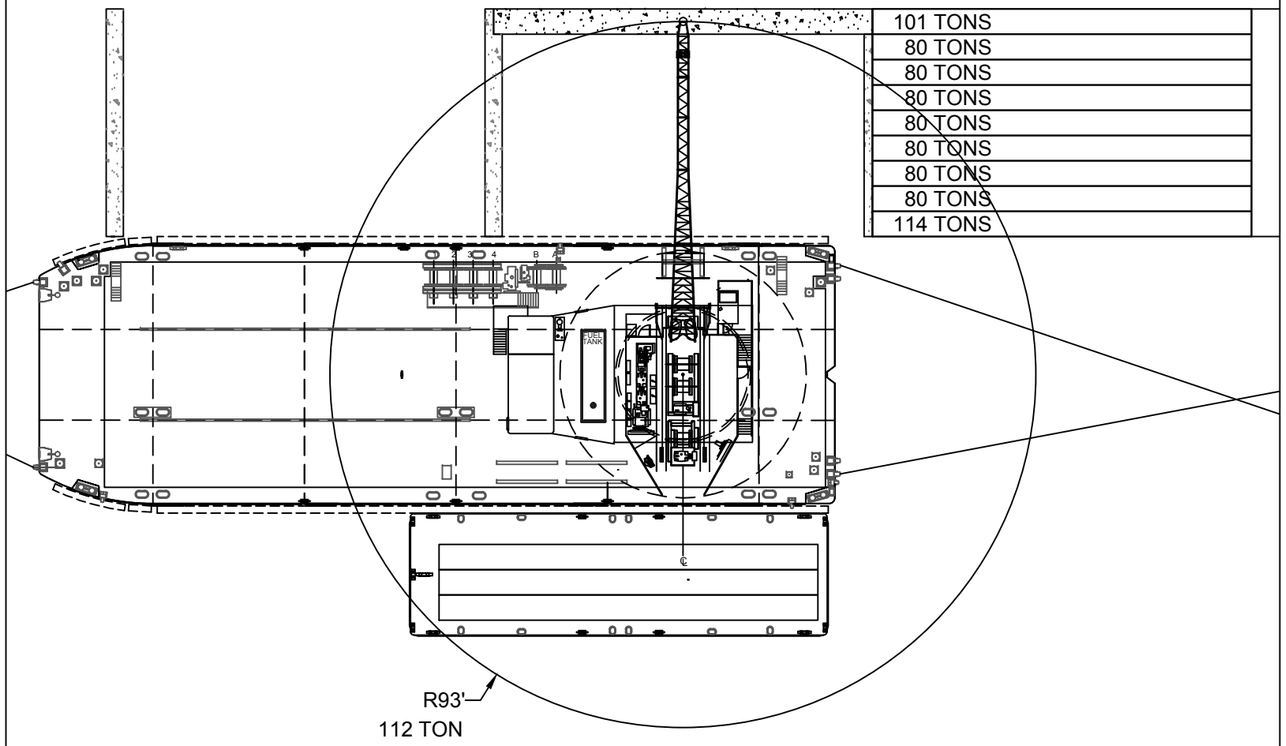


SECTION B-B
SCALE: 1" = 5'

DEMO DIAPHRAGMS

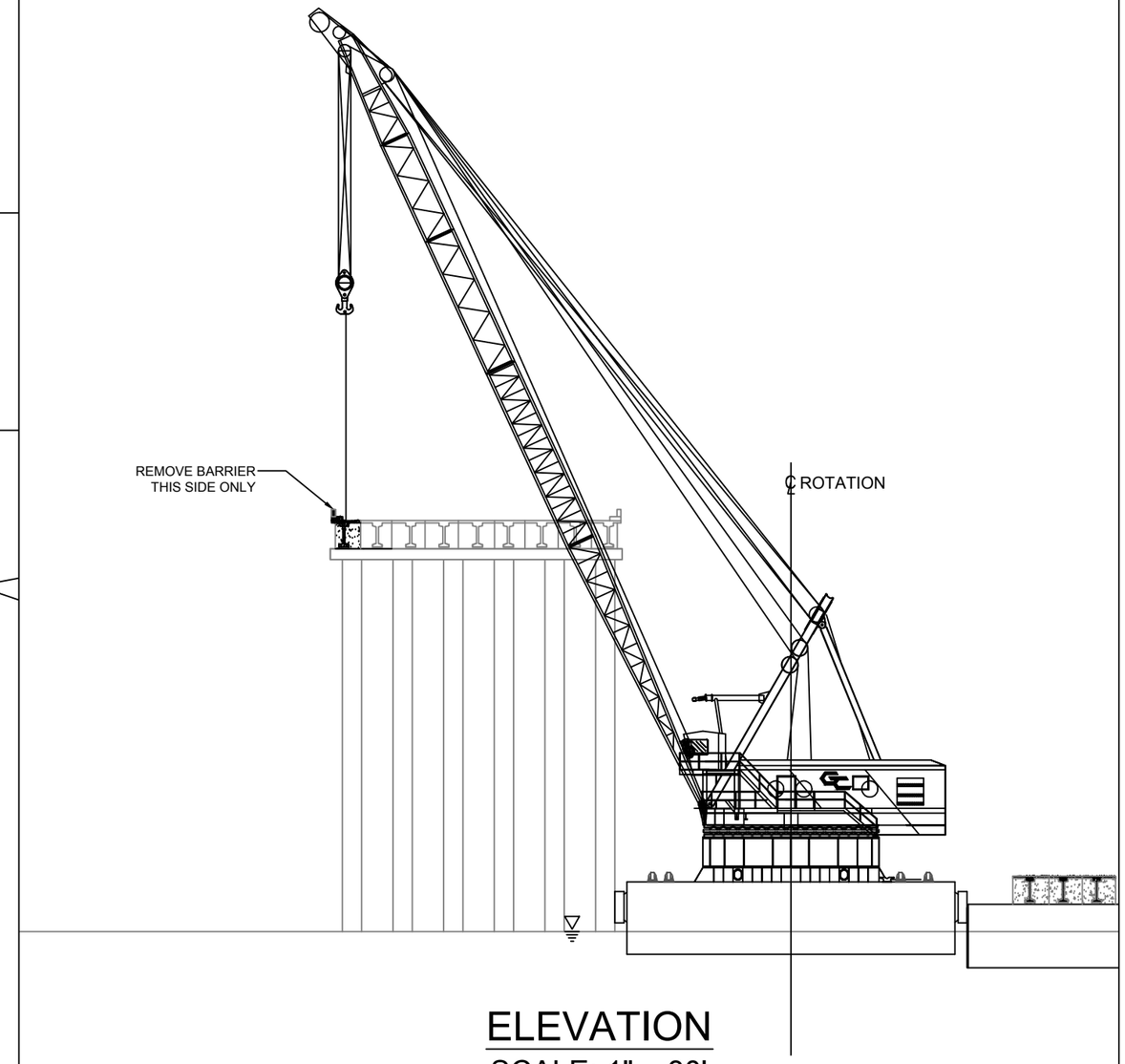
PIERS 31-34, 36-39, 42-43

Potential Issues:
Noise
Hot work
Dust control
Slurry / water control
Timeframe: April-July 2016



PLAN

SCALE: 1" = 40'



ELEVATION

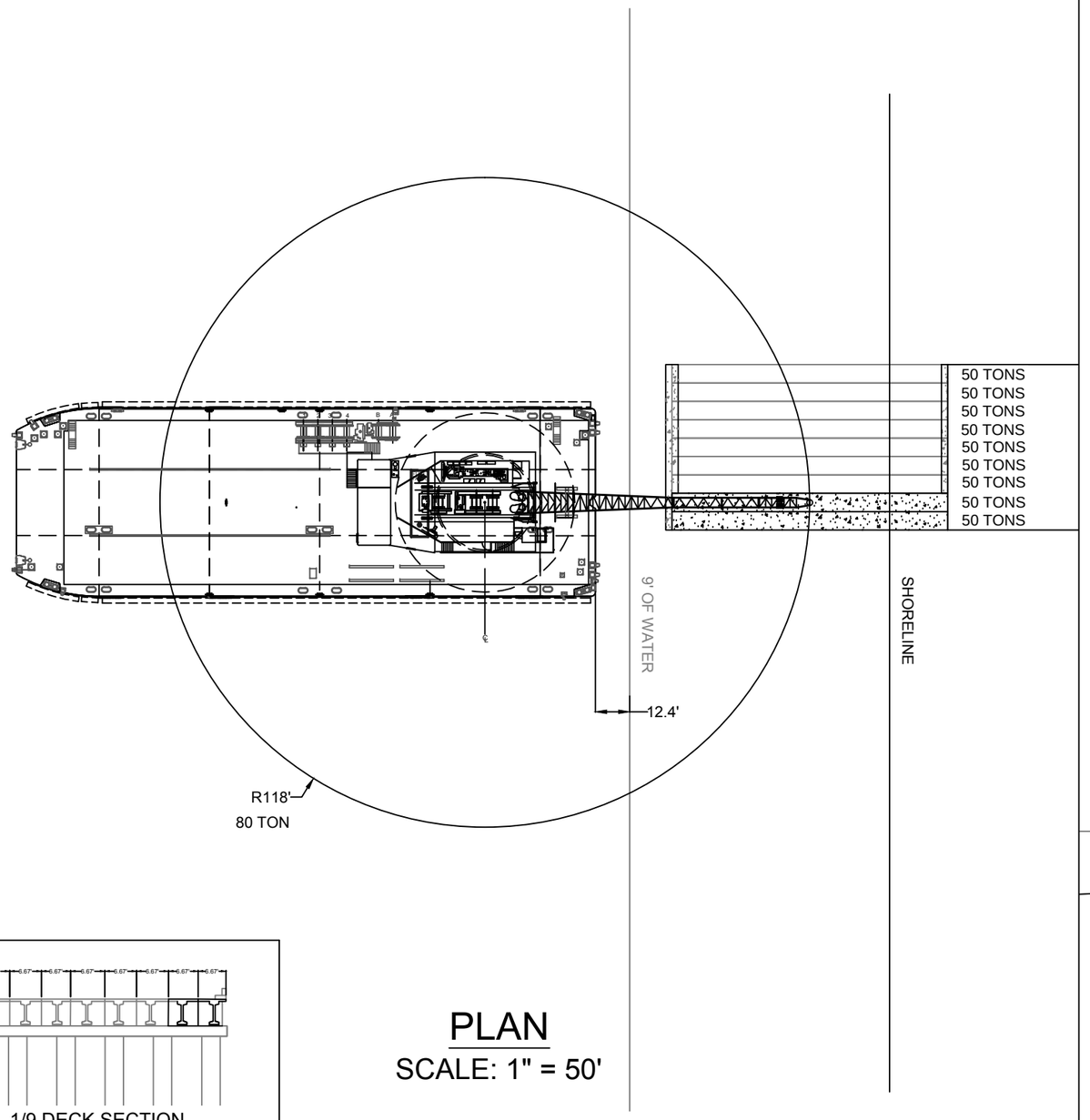
SCALE: 1" = 30'

DB LA = 112 T CAP.
PICK = 101 T
% = 90 %

DEMO DECK - PICK IN NINTHS

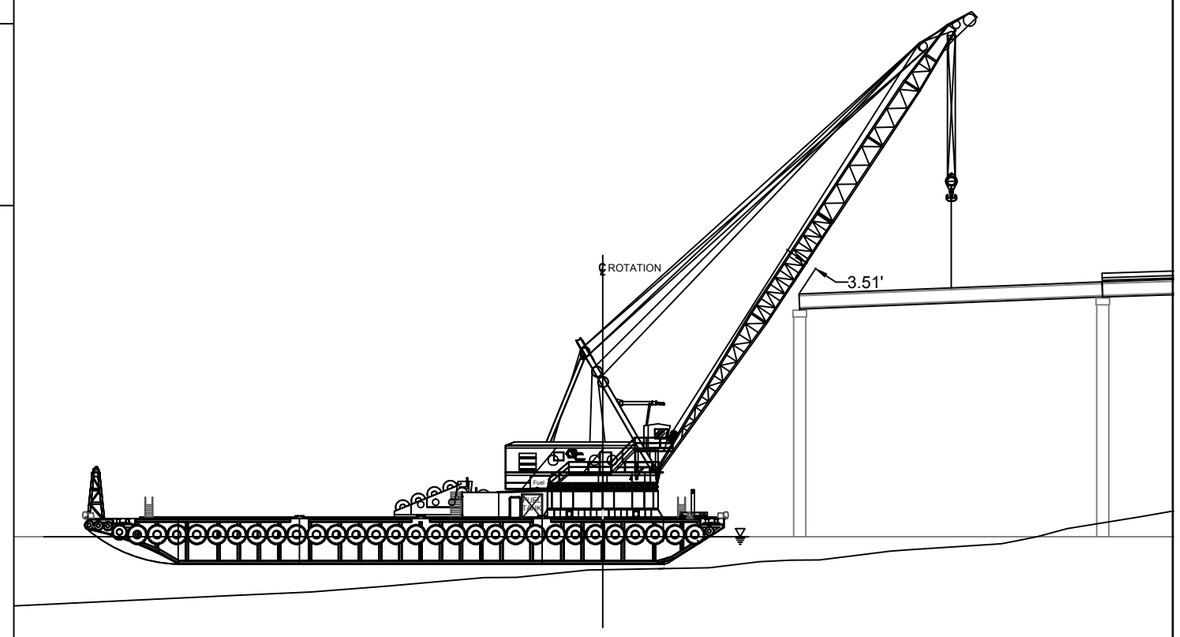
SPAN 30-39, 42

Potential Issues:
Noise
Hot work
Dust control
Slurry / water control
Timeframe: April-July 2016



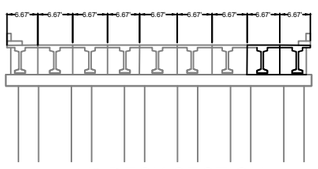
PLAN

SCALE: 1" = 50'



ELEVATION

SCALE: 1" = 50'



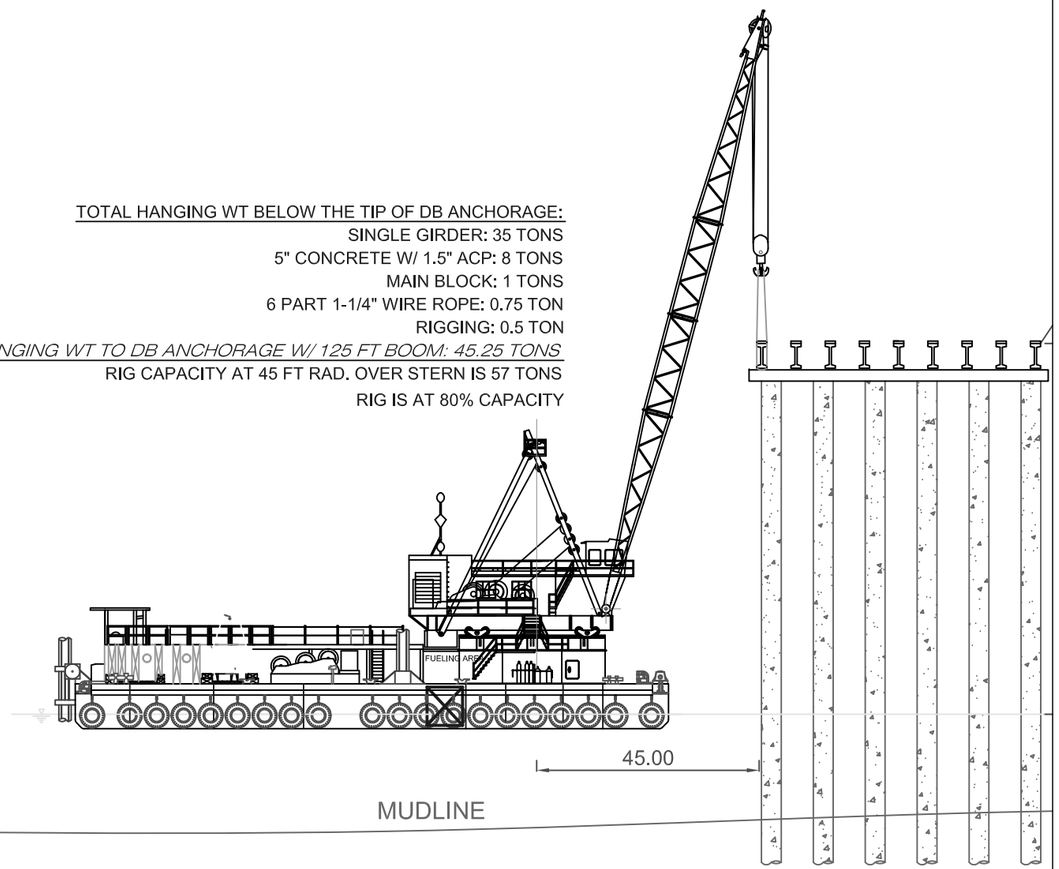
1/9 DECK SECTION
SCALE: 1" = 30'

DB LA = 80 T CAP.
PICK = 50 T
% = 63%

DEMO SPAN 43 DECK

Potential Issues:
Noise
Hot work
Shallow water
Timeframe: April-Sept. 2016

TOTAL HANGING WT BELOW THE TIP OF DB ANCHORAGE:
SINGLE GIRDER: 35 TONS
5" CONCRETE W/ 1.5" ACP: 8 TONS
MAIN BLOCK: 1 TONS
6 PART 1-1/4" WIRE ROPE: 0.75 TON
RIGGING: 0.5 TON
TOTAL HANGING WT TO DB ANCHORAGE W/ 125 FT BOOM: 45.25 TONS
RIG CAPACITY AT 45 FT RAD. OVER STERN IS 57 TONS
RIG IS AT 80% CAPACITY



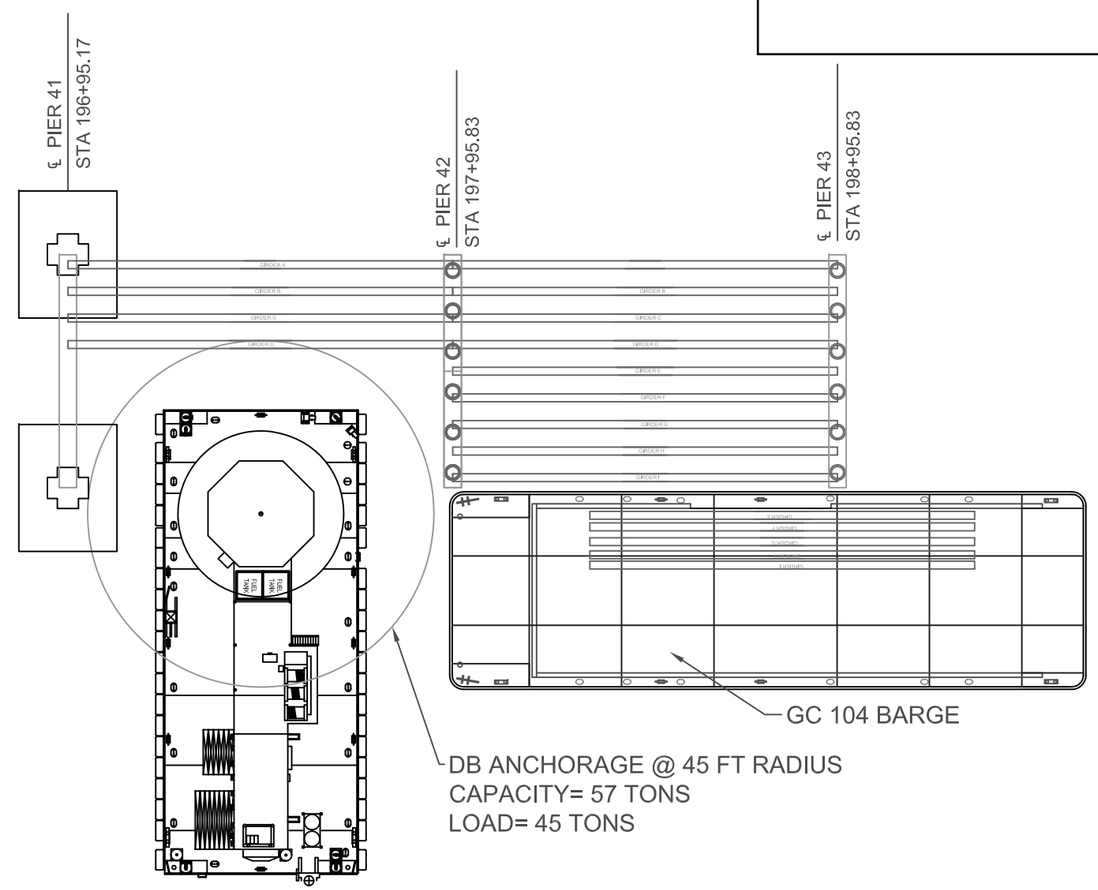
PLAN VIEW
DEMO- PICKING SPAN 41

SEQUENCE:
1. STRIP THE ACP DECK, BARRIER RAIL & CONCRETE ROAD DECK
2. TEMP SUPPORT BETWEEN GIRDERS
3. WEIGHT NEEDS TO BE LESS THAN 50 TONS (BARE GIRDER WEIGHT= 35 TON)
4. RIG INTO THE GIRDER

PRELIMINARY DRAWING FOR REFERENCE ONLY

Shown →

Similar to Pick in Ninths:
Pick in Ninths = $155 / CY



PLAN VIEW
DEMO- PICKING SPAN 41

SEQUENCE:
1. AFTER ALL THE GIRDERS ARE REMOVED, DB 24 CAN BE TOWED UNDER THE NEW BRIDGE AND BETWEEN PIER 41 AND PIER 42

No.	Date	By	Revision

BRIDGE DEMO
TRANSITION SPAN PICK

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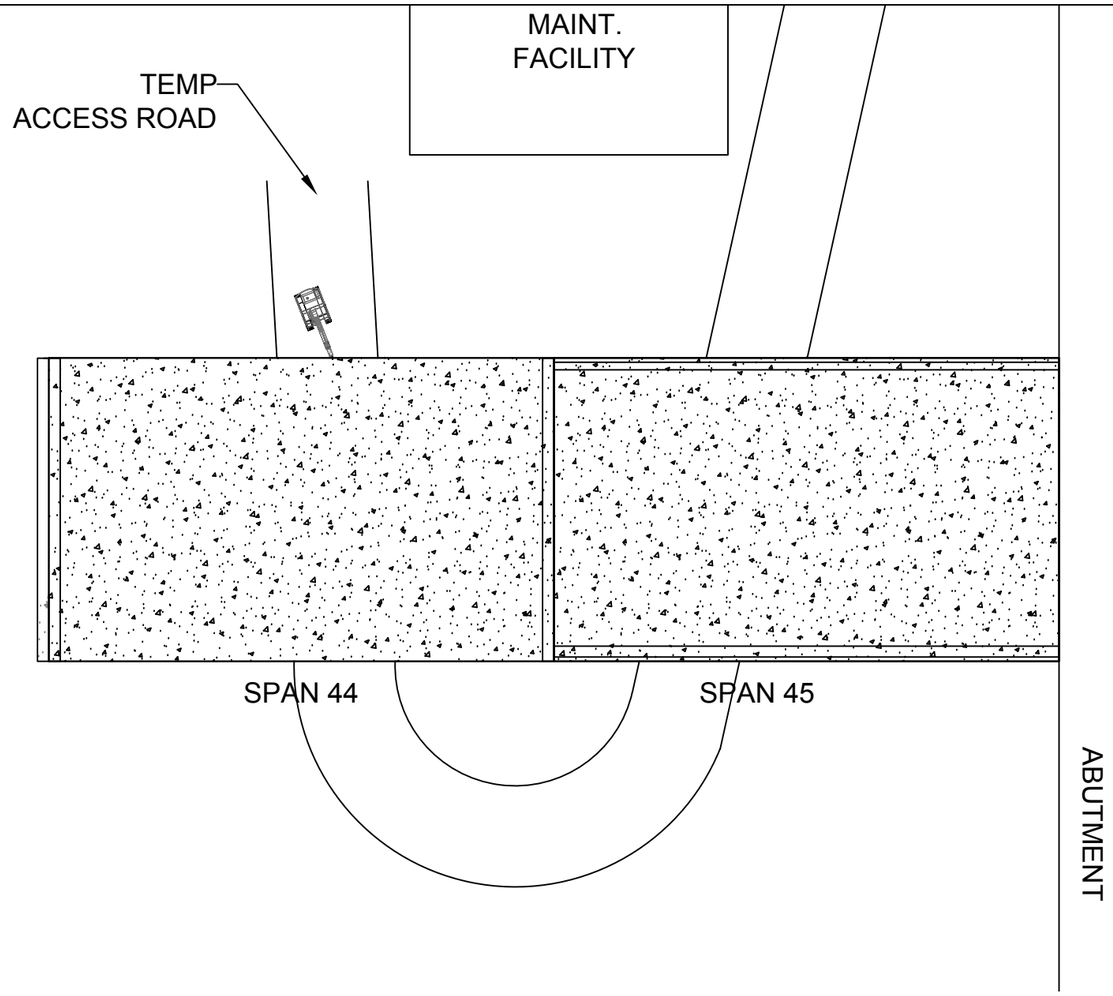
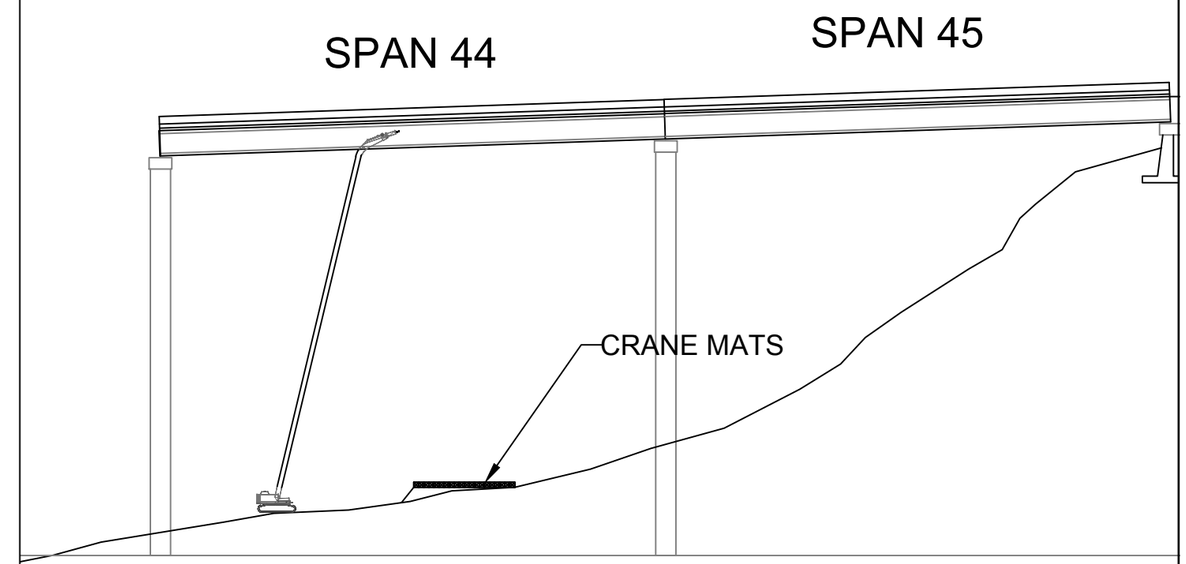
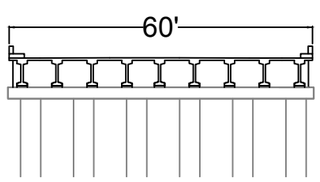


*DEMO SPANS 44-45 IN PLACE ALLOWING A CONTROLLED FALL OF THE GIRDERS





1/5 DECK SECTION
SCALE: 1" = 30'

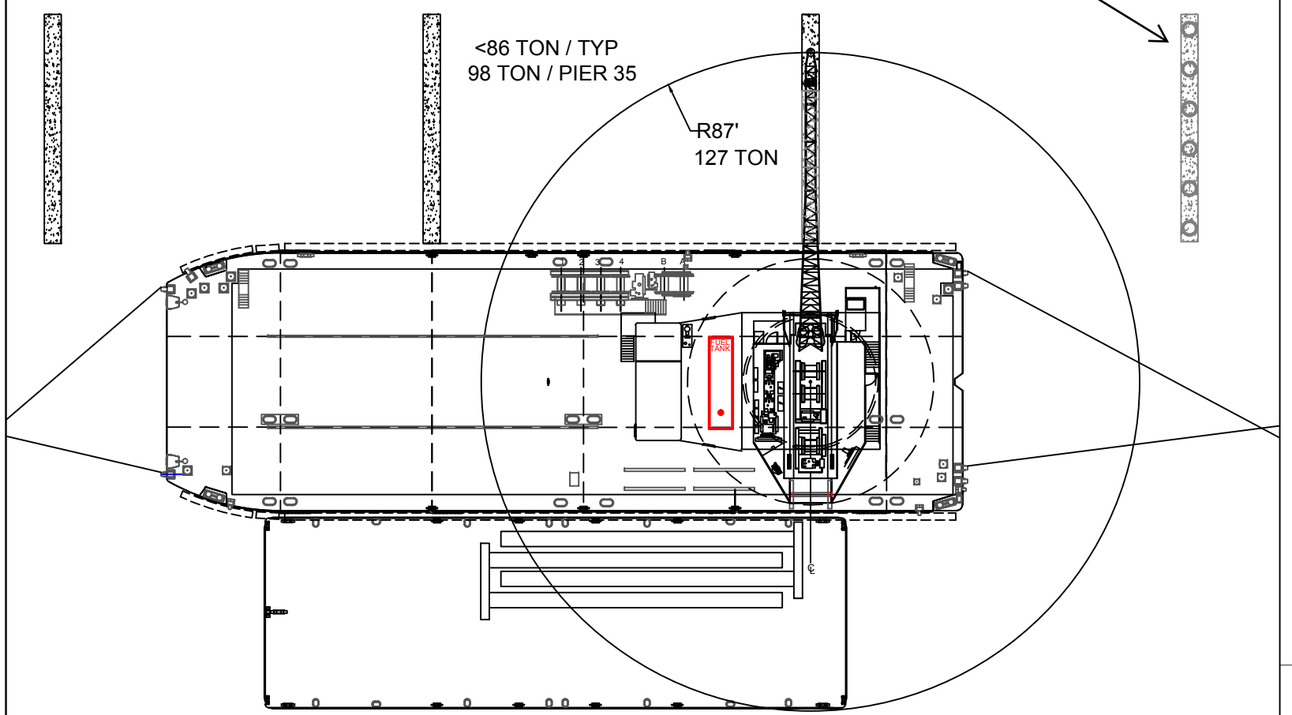
PLAN
SCALE: NTS

ELEVATION
SCALE: 1" = 30'

Potential Issues:
Noise
Hot work
Vibration Monitoring
Nearby structures
Access to maint. building
Dust control
Slurry / water control
Timeframe: April-May 2016

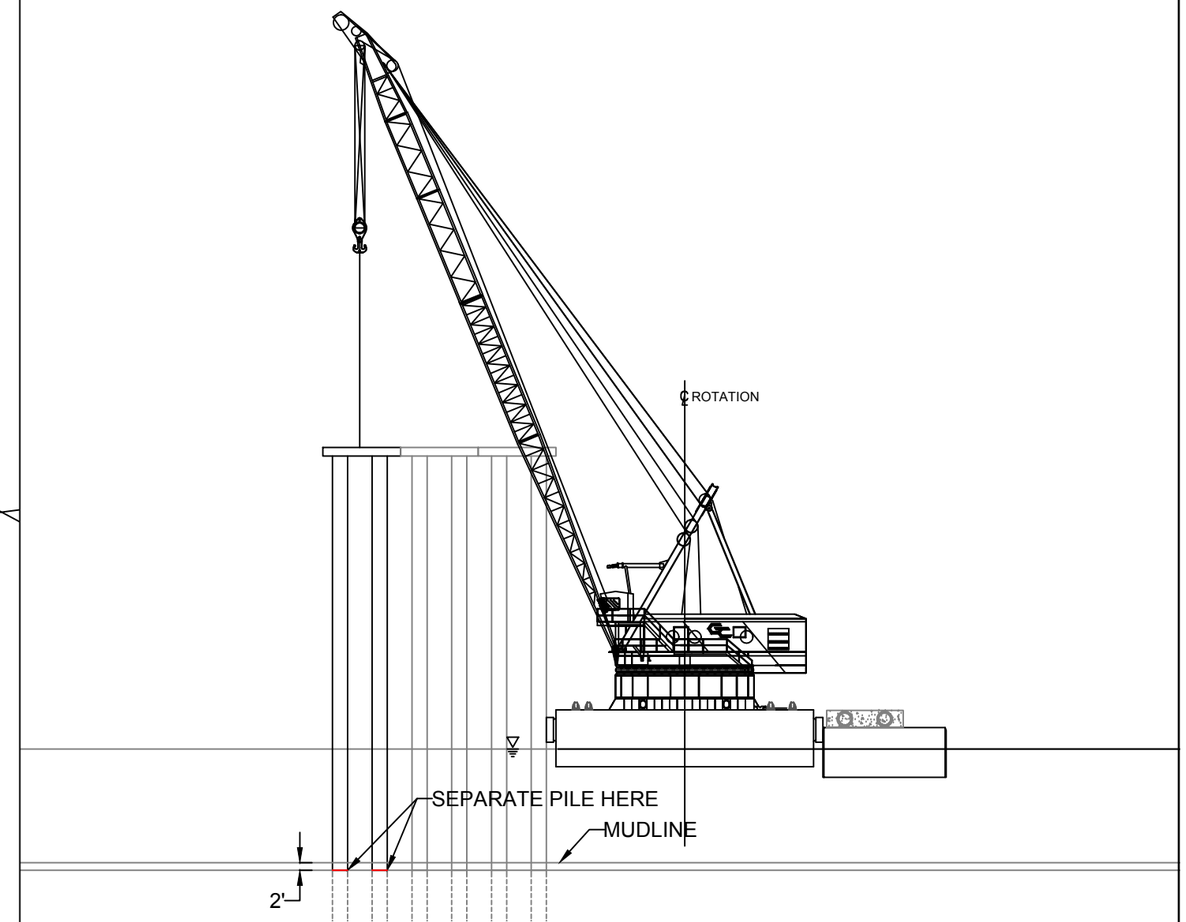
DEMO SPAN 44-45

REMOVE SOIL TO 2 FT.
BELOW MUDLINE PRIOR
TO STARTING CAP WORK



PLAN
SCALE: 1" = 40'

NOTE: PILE ARE CUT 2 FT. BELOW MUDLINE
USING UNDERWATER WIRESAW (NEXT PAGE)
OR SHEAR (PAGE 9B)



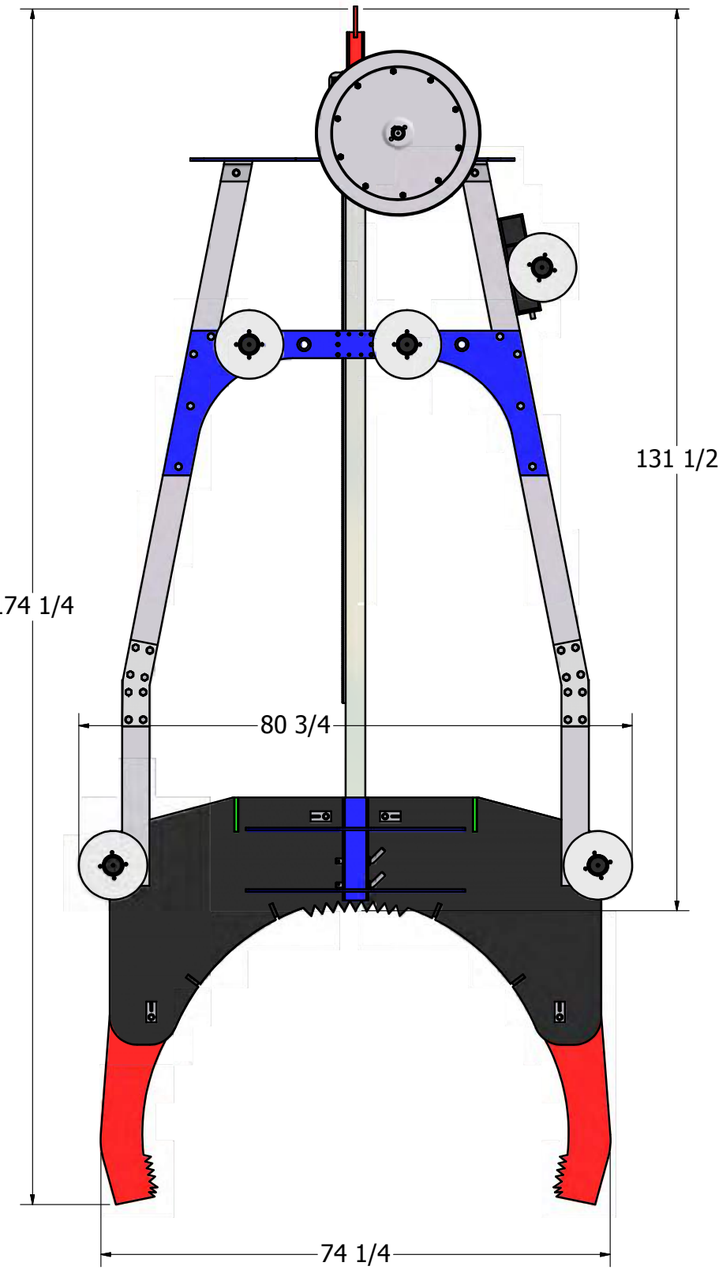
ELEVATION
SCALE: 1" = 40'

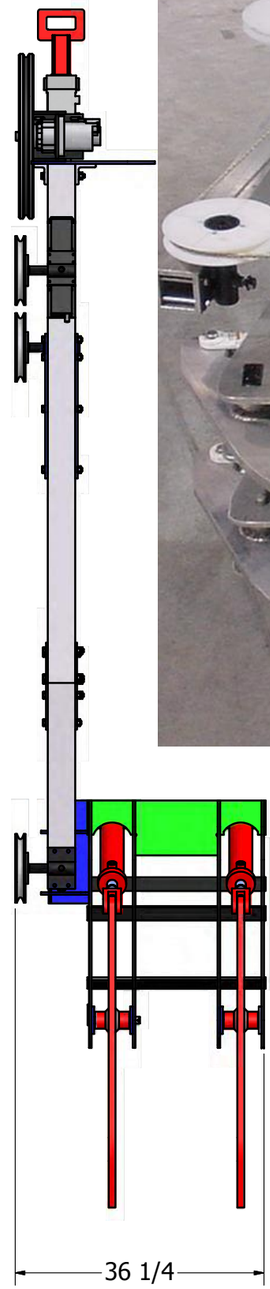
DB LA	=	127 T CAP.
MAX PICK	=	98 T
%	=	77 %

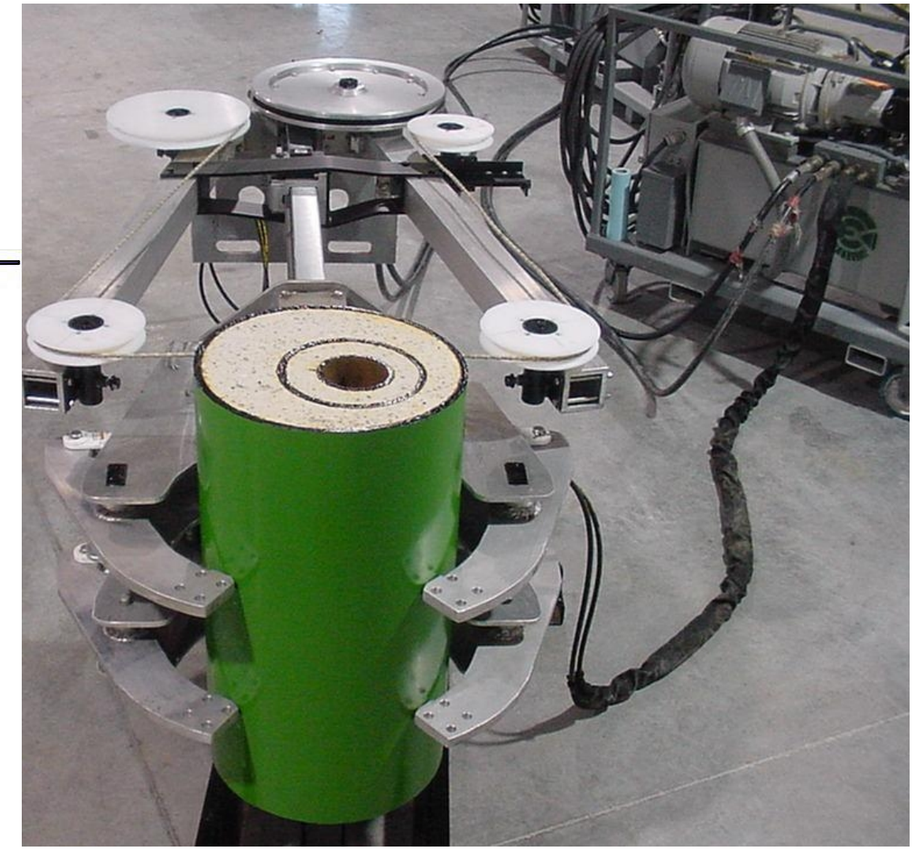
DEMO CROSS BEAMS

PIER 31-39, 42-43

Potential Issues:
Noise
In water work
Turbidity
Underwater wiresaw
Moving / returning soil
Timeframe: July-Sept. 2016







CUTTING EDGE SERVICES CORP.		
DRAWN BY: JLS	CHECKED:	CLIENT: JH Kelly
DRAWING NUMBER: CE-2856-11	REVISION: 0	LOCATION: BP Cherry Point
DRAWING TITLE: 56" Diamond Wire Saw		DATE: Nov 27, 2012

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Shear can remove 48 in. hollow pile underwater

DEMO PIER 40/41

DEMO WITH MACHINES FROM BARGES
- -ALL MATERIAL WILL BE DEMOLISHED & CAPUTRED ONTO A BARGE FROM TOP OF PIER TO BARGE DECK ELEVATION
- -FROM BARGE DECK ELEVATION TO 2 FT. BELOW MUDLINE, ALL MATERIAL WILL BE DEMOLISHED INTO THE LAKE AND CLAMBSHELLED OUT

-NOISE PERMIT
-IN WATER WORK WINDOW?

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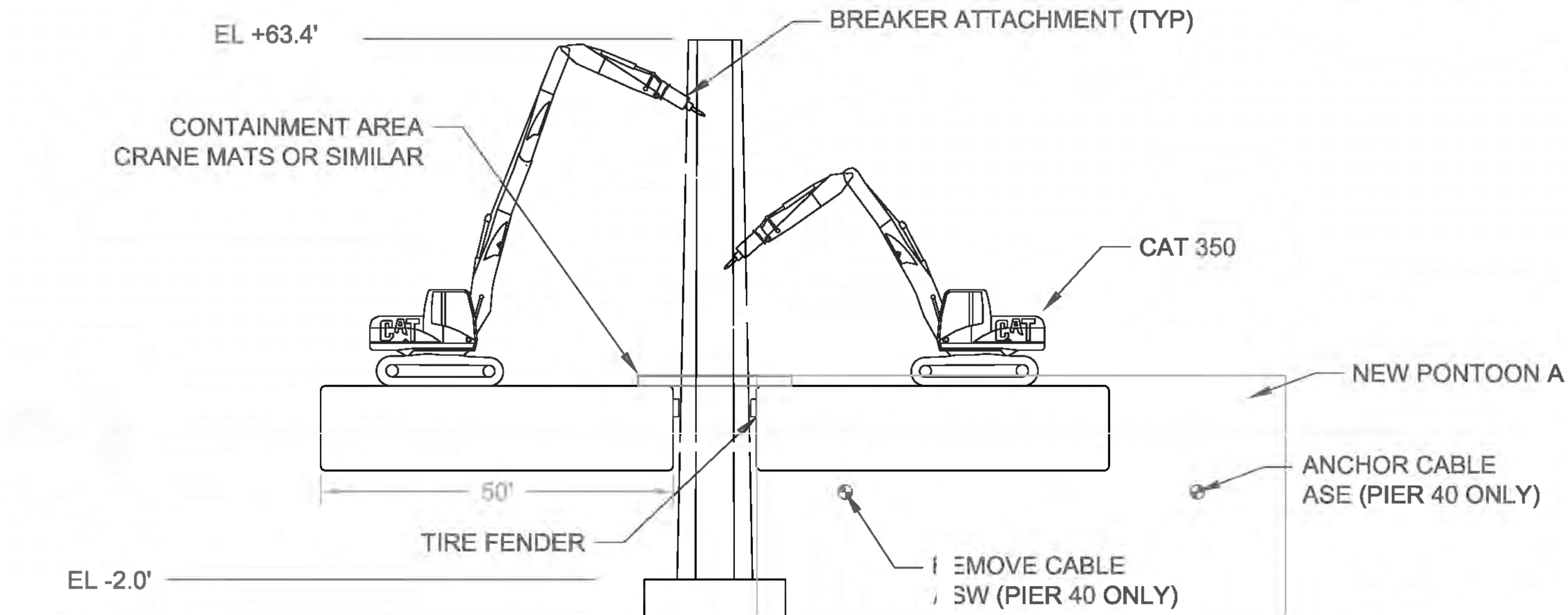

Potential Issues:
Noise
Hot work
Dust control
Slurry / water control
Timeframe: July-Sept. 2016

ELEVATION VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

EQUENCE:
DE-TENSION NEW ANCHOR CABLE ASW AND REMOVE FROM THE AWSE PIPE (PIER 40 ONLY)
PULL ANCHOR CABLE ASW TOWARD THE ANCHOR OR MOVE OUT F THE WAY OF THE FOOTING TO PREVENT DAMAGE
SANDWICH THE PIER BETWEEN 2 BARGES
4. PLACE CRANE MATS BETWEEN THE 2 BARGE TO CAPTURE FALLING DEBRIS
5. USING BREAKERS AND SHEARS DEMOLISH THE PIER DOWN TO THE DECK OF THE BARGES

KGM

No.	Date	By	Revision

BRIDGE DEMO
PIER 40 & 41 DEMO

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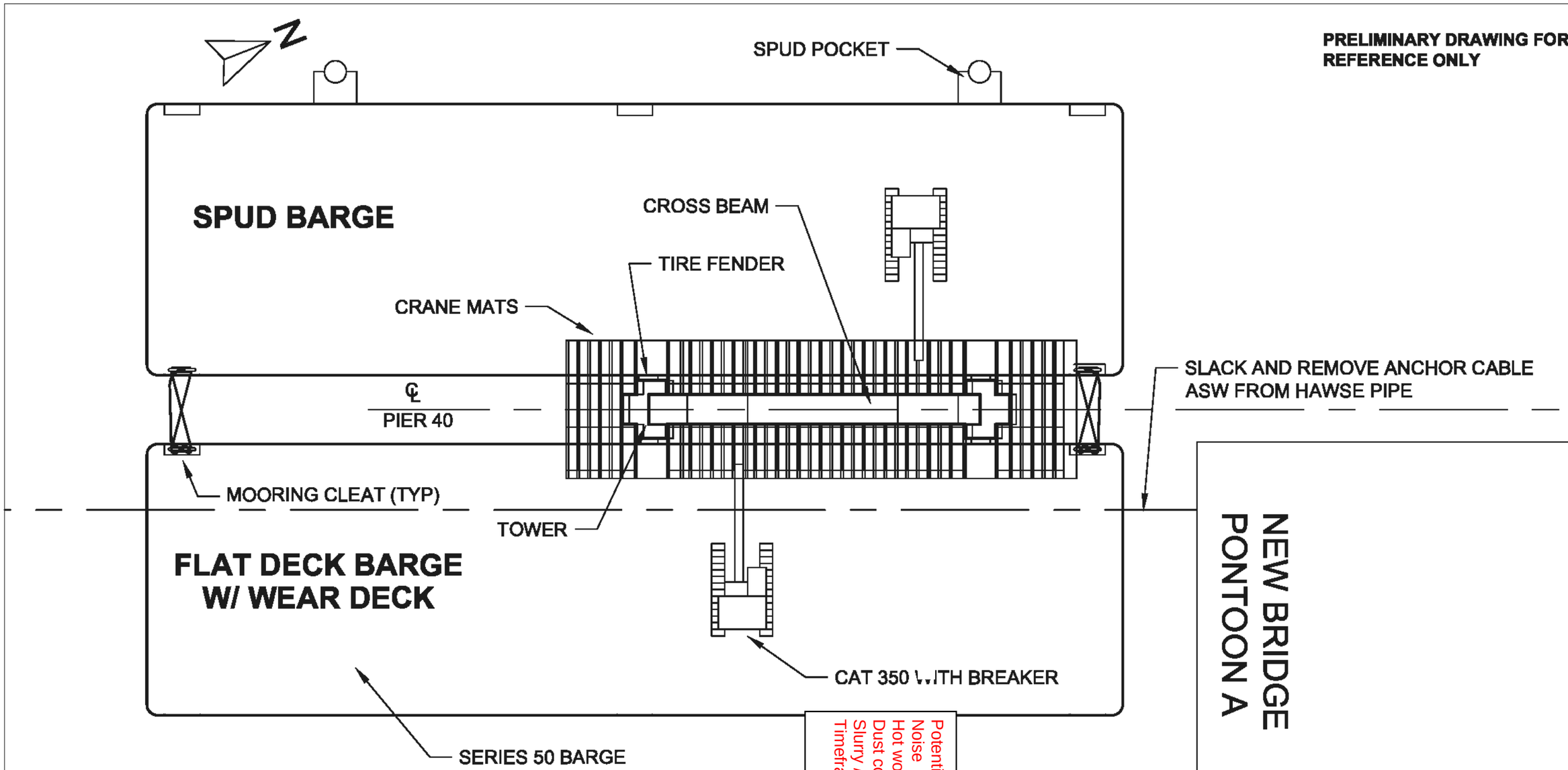

Potential Issues:
Noise
Hot work
Dust control
Slurry / water control
Timeframe: July-Sept. 2016

PLAN VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

NE LE ASE

NCE:
: THE PIER HAS BEEN DEMOLISHED DOWN TO THE DEK OF
RGES, REMOVE THE FLAT DECK BARGE AND ONLY WORK
E SPUD BARGE
2. THE SPUD BARGE WILL NEED TO BE FLEETED TO THE NORTH TO ALLOW ACCESS TO THE UNDERWATER FOOTING

No.	Date	By	Revision

BRIDGE DEMO
PIER 40 & 41 DEMO

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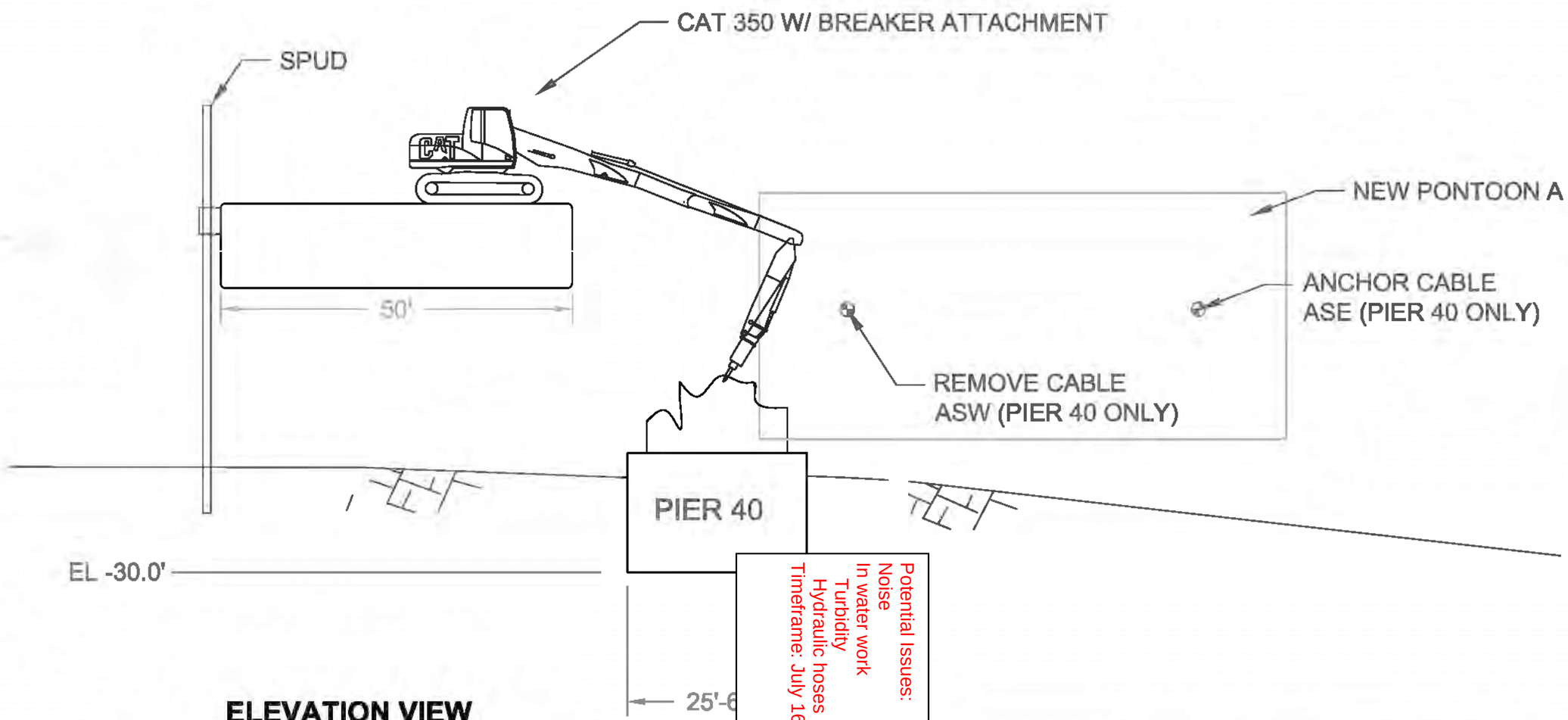

Potential Issues:
Noise
In water work
Turbidity
Hydraulic hoses
Timeframe: July 16-Sept. 2016

ELEVATION VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

NCE:
THE PIER HAS BEEN DEMOLISHED DOWN TO THE DEK OF
RGES, REMOVE THE FLAT DECK BARGE AND ONLY WORK
E SPUD BARGE
2. USING BREAKERS AND SHEARS, CONTINUE TO DEMOLISH THE FOOTING UNDERWATER TO 2 FT BELOW MUDLINE
3. CONFIRM FINAL ELEVATION BY TAKING MUDLINE SOUNDING BEFORE AND AFTER DEMOLISHING THE FOOTINGS

KGM

No.	Date	By	Revision

BRIDGE DEMO
PIER 40 & 41 DEMO

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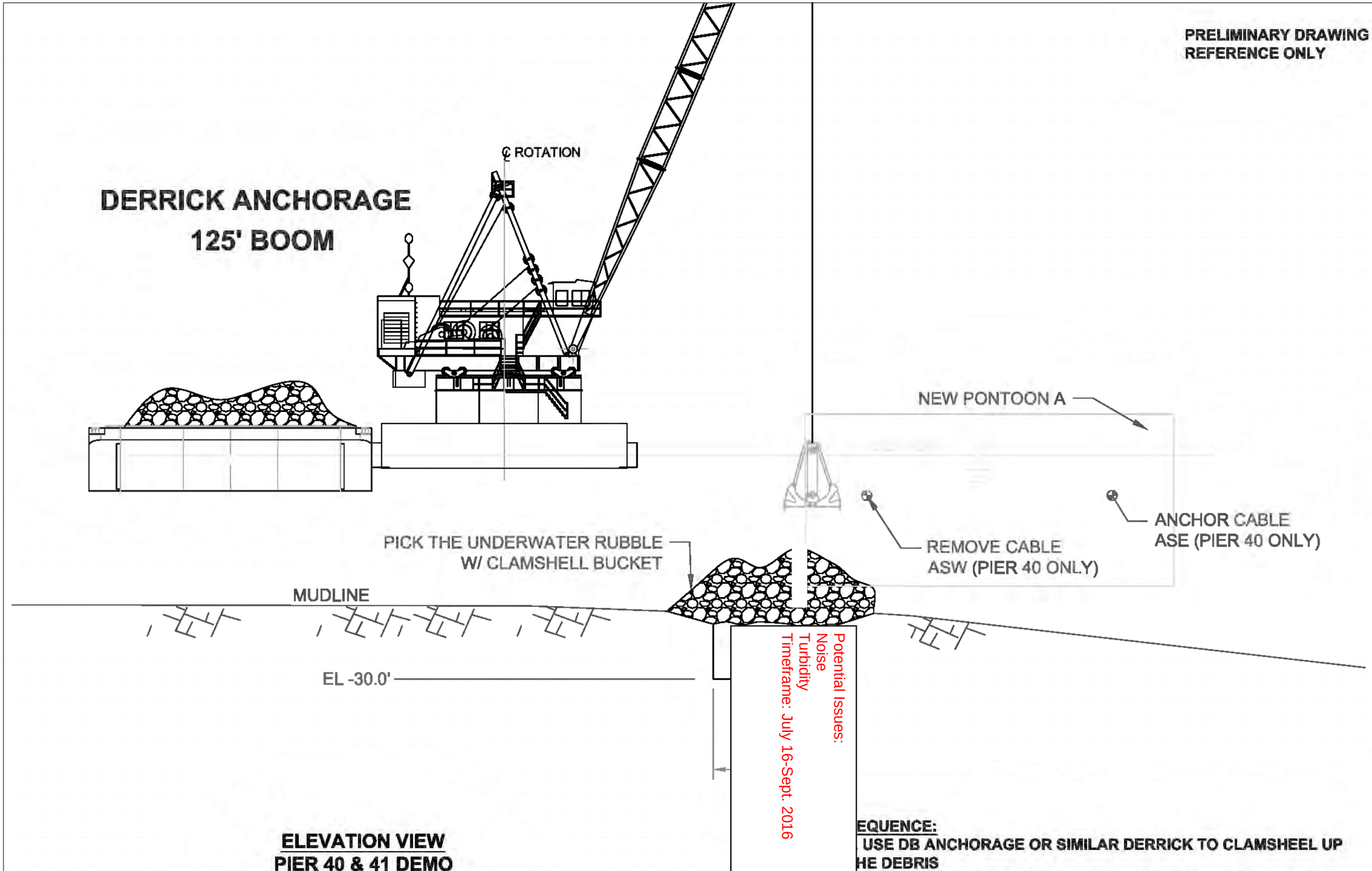

ELEVATION VIEW
PIER 40 & 41 DEMO
(PIER 40 SHOWN, PIER 41 SIMILAR)

EQUENCE:
USE DB ANCHORAGE OR SIMILAR DERRICK TO CLAMSHEEL UP
HE DEBRIS
2. USE AN ROV TO INSPECT THAT THE MATERIAL HAS BEEN
REMOVED

No.	Date	By	Revision

BRIDGE DEMO
PIER 40 & 41

SR 520 Floating Bridge and Landings

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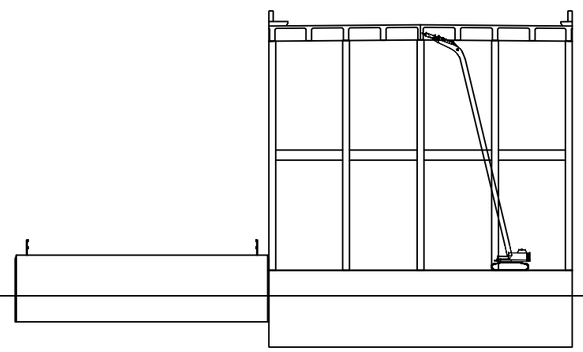
DEMO PONTOONS

1) REVERSE JOIN PONTOONS
2) FLOAT TO EAST SIDE STAGING AREA 1 & 2 AND REMOVE SUPERSTRUCTURE FROM 6 PONTOONS
3) FLOAT TYPICAL LONGITUDINAL PONTOONS TO WEST SIDE STAGING AREA TO REMOVE SCAFFOLD
4) DEMO DRAWSPAN AT CTC IN 2 CYCLES

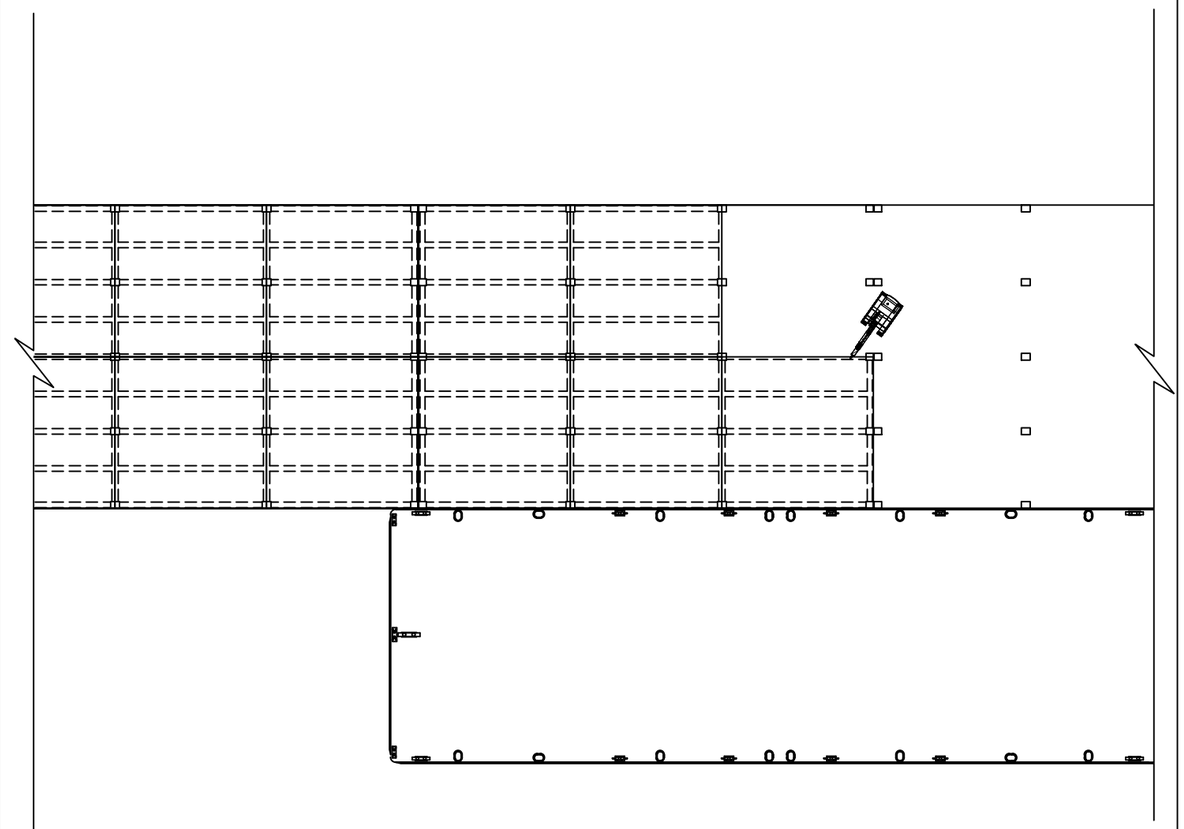
NOISE PERMIT

SR 520 - EVERGREEN POINT FLOATING BRIDGE AND LANDINGS PROJECT



ELEVATION - TYPICAL SPAN

SCALE: 1" = 30'



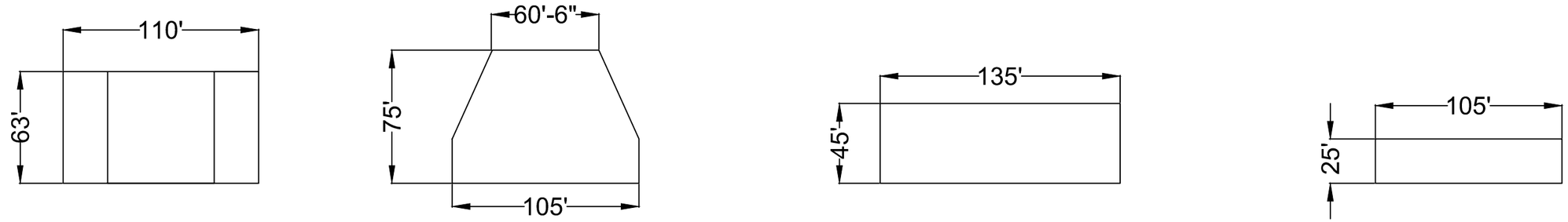
PROFILE - TYPICAL BENT

SCALE: 1" = 30'

SUPERSTRUCTURE RUBBLE IN PLACE

BENTS 1-68

Potential Issues:
Noise
Hot work
Dust control
Slurry / water control
Timeframe: May-August 2016



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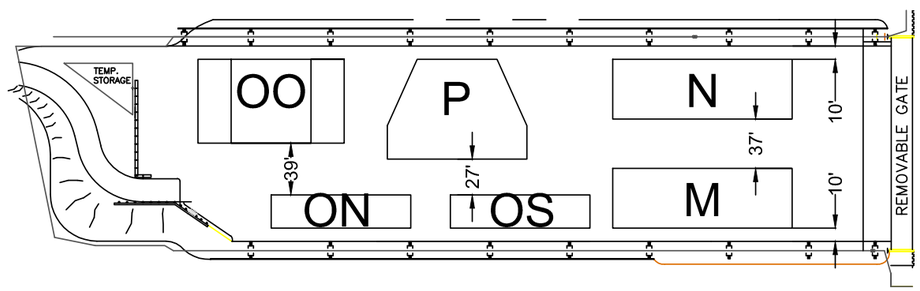
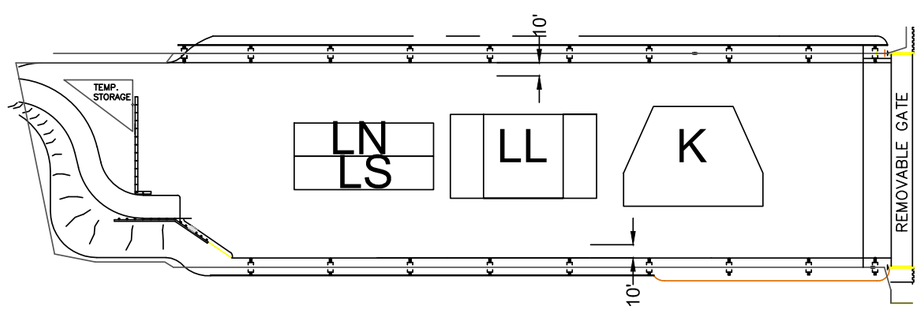
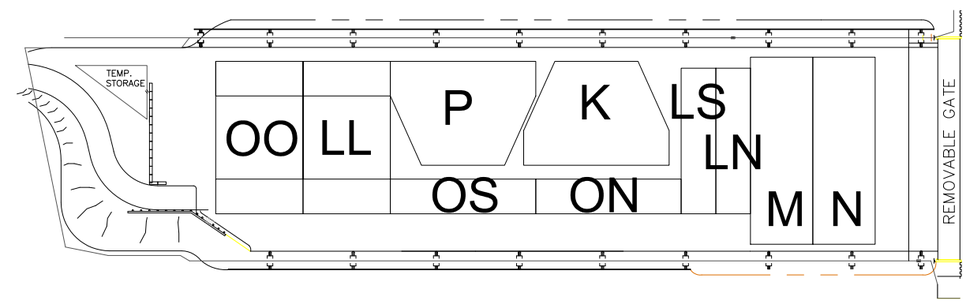


CYCLE 1



CYCLE 2

2 CYCLES



CYCLE 1

1 CYCLE

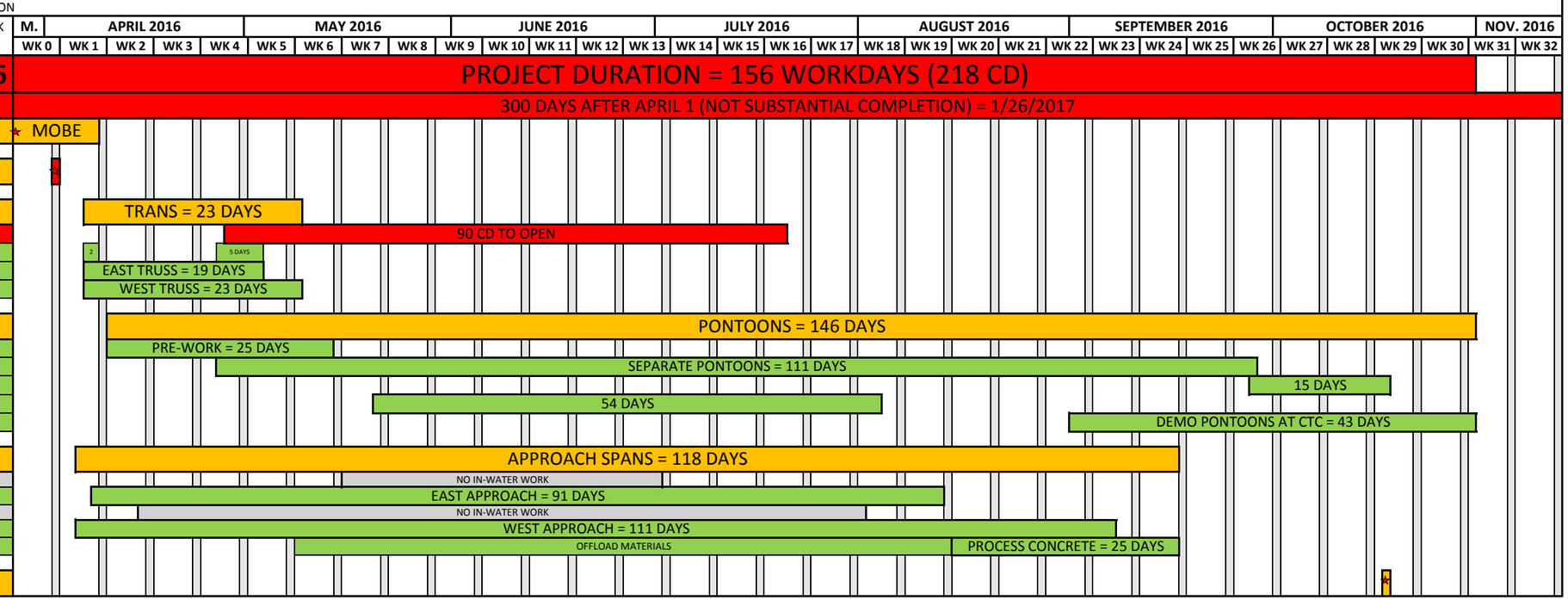
PONTOON DEMO - CTC

1- 2 CYCLE DEMO SCHEMES

Potential Issues:
Noise
Dust control
Timeframe: September-October 2016

SR 520 EVERGREEN POINT FLOATING BRIDGE DEMOLITION SCHEDULE

4/9/15 MOSEID

SR520 EVERGREEN POINT FLOATING BRIDGE DEMO SCHEDULE

	DURATION (WORK DAYS)
PROJECT DURATION (WD)	**156**
LD'S START 300 CDs A/F SUBSTANTIAL COM.	**300**
BEGIN DEMOLITION	**8**
SWITCH TRAFFIC TO NEW BRIDGE	**1**
TRANSITION SPANS	**23**
90 CD WINDOW TO REMOVE E. TRUSS	90
30' TRANSFER SPANS AND TRUSS SUPPORTS	7
EAST TRUSS	19
WEST TRUSS	23
PONTOONS	**146**
DRAW SPAN PONTOON PRE-WORK	25
SEPARATE PONTOONS	111
ANCHOR CABLES & REMOVE PILE ANCHORS	15
DEMO SUPERSTRUCTURE AT WSSA	54
DEMO PONTOONS AT CTC	43
APPROACH SPANS	**118**
NO IN-WATER WORK - EAST APPROACH	
EAST APPROACH (SPANS 40-45 REMOVAL)	91
NO IN-WATER WORK - WEST APPROACH	
WEST APPROACH (SPANS 30-39 REMOVAL)	109
KENMORE DEMO (47 DAYS OF ACTIVITY AT SITE)	47
DEMOLITION ON LAKE COMPLETE	**0**