



LAKE HAVASU CITY, ARIZONA

ADDENDUM NO. 1

Site Six Fishing Dock Project
Project B25-PW-102015-500592

DATED: NOVEMBER 11, 2024

This Addendum No. 1 forms a part of the contract described above.

Item 1: Changes:

Amend the specifications section with the following:

- A. Remove and Replace in its entirety SECTION 0500A – Indemnification and Insurance Requirements (long form) with pollution liability. Document enclosed in Exhibit C.
- B. Section 310 – Bid Schedule enclosed in Exhibit D.
- C. Remove and Replace Contract, page 00500-2 - Paragraph 7 has been changed to add APPENDIX II TO PART 200 CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS UNDER FEDERAL AWARDS. Document enclosed in Exhibit E.
- D. Remove and Replace Table of Contents (page 2 of the Invitation to Bid PDF Package) – Division III has been changed to add APPENDIX II TO PART 200 CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS UNDER FEDERAL AWARDS. Document enclosed in Exhibit F.

Item 2: Questions and Answers

The following questions were received from bidders. The answers are provided herein by the OWNER:

1. **Question:** *Can the existing dock be demolished prior to new dock showing up onsite?*

Answer: No. The existing dock must remain in place until the new dock system is securely on-site.

2. **Question:** *Are there wave and wind parameters provided in the specification for the design of the new dock?*

Answer: No. The contractor shall employ a Licensed Engineer in the state of Arizona to calculate the applicable loading condition on the dock. Please refer to the special provisions for Engineering Plans & Calculations Page 0120-3.

Please find the attached calculations to item 2, Exhibit A which shall be used for informational purposes only.

3. **Question:** *Does the City want the existing dock salvaged for their use?*

Answer: The city only wants to keep the shade structures. The rest of the dock becomes the contractors to remove and dispose of properly.

4. **Question:** *How does the contractor determine if the existing anchor system is sufficient?*

Answer: The contractor will employ a licensed civil engineer in the state of Arizona to calculate the loads & forces applied to the existing anchoring system.

Please find the revised section 310 to be amended in the specifications. The city has provided a new bid item #11 for and Allowance for Additional Anchors & Hydro-survey of a Dollar Amount of \$30,000.00

5. **Question:** *Is there a defined lay down yard near the site?*

Answer: Yes. The city will work with the successful bidder to designate a portion of the parking area adjacent to the site.

6. **Question:** *Are the turbidity curtains really needed?*

ANSWER: No. Their requirement is being removed per the addendum.

7. **Question:** *Will some sort of floating barrier be required to separate boaters from work area?*

Answer: Yes. The contractor will provide safety buoys as needed for boating safety.

8. **Question:** *Who will be responsible for the notice for mariners?*

Answer: The contractor will be responsible for providing a notice to mariners.

9. **Question:** *What type of flood lights are wanted?*

Answer: LED Lighting shall be provided per Bid Item 9 – Utility Chase ways, Pull Boxes, Electrical Conduit and Lighting on special provisions page 0120-7.0

10. **Question:** *Is there a requirement of decontaminating the existing floats once pulled and if so, can this be done in the parking lot?*

Answer: Decontamination of the existing floats will need to be done with proper BMP's in place to prevent run off from entering the lake. The city will provide a suitable location for the contractor to perform these activities.

11. **Question:** *Will the existing anchor cables to dead men anchors be re-utilized?*

Answer: No. Please refer to the Special Provisions section 01210-6 - Whalers and Structural Connections for reference. "The cost for installing a new chain anchoring system will also be Included in this bid item. The new galvanized chain anchoring will be attached to existing dead men anchors".

12. **Question:** *Will the city of Lake Havasu accept an out of state licensed engineer performing the required calculations under the direct supervision of an Arizona licensed engineer?*

Answer: Yes, only in the condition the licensed Civil Engineer reviews the work and places his seal and stamp on plans, calculations and specifications.

13. **Question:** *What is the type of anchoring system is being required?*

Answer: Static.

14. **Question:** *What is the purpose of the additive alternate bid item?*

Answer: The city of Lake Havasu has created a base bid to cover the core item of the project. If bids come in such that there are dollars left in the budget to fund the additive alternate as well then that will be awarded as well.

15. **Question:** *Does the city intend to have the existing shade structure put back on the new dock?*

Answer: No. The existing shade structure will be salvaged back to the city to be utilized elsewhere. A new shade structure will be provided in the Alternate Bid Item 11 a – Aluminum Shade Structure.

16. **Question:** *Can there be a set of criteria for determining if existing anchor system is sufficient for new dock?*

Answer: The contractor shall employ a Licensed Engineer in the state of Arizona to calculate the applicable loading condition on the dock. Please refer to the special provisions for Engineering Plans & Calculations Page 0120-3.

Bid item 11 - Allowance for Additional Anchors & Hydro Survey of the dollar amount of \$30,000.00.

17. **Question:** *Does the city have as-builts for existing dock?*

Answer: No.

18. **Question:** *Is the city open to an alternate type of dock as opposed to what is being requested?*

Answer: No. The city has specified in Bid Item 6 - Floating Dock & Decking system as specified in specifications provisions section 1210-5.

19. **Question:** *Does the existing deck, once removed, have to be recycled?*

Answer: No. It becomes the property of the contractor to dispose of properly.

20. **Question:** *Will safety buoys need to be lighted at night?*

Answer: Yes. The contractor will provide safety buoys with lighting for the purpose of boater safety at night.

21. **Question:** *Will the existing lighting be re-purposed on the new dock?*

Answer: No. New lighting will be required for new dock.

22. **Question:** *Do you require the floating dock Manufacturer to have a minimum of 10 years' experience designing and manufacturing a concrete dock system?*

Answer: No, However in section 00420 - Bidders Statement of Qualifications you will fill a list of construction projects within the last 5 years.

23. **Question:** *Shall the dock manufacturer be ISO 9001 certified?*

Answer: No, this is not a requirement of the specification.

24. **Question:** *Can the city confirm the size and type of the dead man anchor?*

Answer: The dead man anchor is made of concrete. The size and exact location will be determined by underwater divers as mentioned in special provisions section 01210-3 Engineering Plans and Structural Calculations. Bid Item 11 will be allowance for Additional Anchors and Hydro Survey.

25. **Question:** *Can the city offer a bid extension?*

Answer: No.

26. **Question:** *This is not enough time for engineering, submittal review, manufacturing and construction. Will the city extend the project completion*

timeline that reflects a manageable timeline of a project of this magnitude? 3-months for drafting/engineering, 20 working days for city submittal review, 4-months for material procurement/manufacturing and 2 months onsite is an adequate timeline.

Answer: Yes.

27. **Question:** *Is a surveyor necessary if we are replacing “in like kind” with the same footprint utilizing the same anchors?*

Answer: No, a registered Land Surveyor is not required.

28. Specifications, Section 2, Quality Control and Special Inspections, state: *“The contractor will be responsible for providing special inspections for all denoted structural connections and shall be stamped by a Civil Engineer or Structural Engineer in the State of Arizona.”*

Question: *Can the city clarify what exactly is needed here?*

Answer: Quality Control would be required for concrete materials. Special Inspection information can be found in chapter 17 of the International building code.

29. **Specifications**, Section 2, Quality Control and Special Inspections, state: *“Any cost associated Underwater inspections that require certified divers will be included in this bid. The certified divers will be responsible for connecting the new chain anchoring system to existing dead men blocks.”*

Question: *Can the city confirm a change order will be issued if the existing chain or concrete dead man Anchors cannot be located (i.e. buried) and, are not currently attached or retrievable and/or do not meet current loading requirements? Please confirm if the city will issue a change order in the event a new concrete anchor/s will need to be made/installed.*

Answer: Please find the revised section 310 to be amended in the specifications. The city has provided a new bid item #11 for and Allowance for Additional Anchors & hydro Survey of a Dollar Amount of \$30,000.00. Any funds in addition to this amount will require the use of force account funds.

30. **Specifications**, Section 4. Engineering Plans and Specifications, state: *The contractor will be directly responsible for obtaining a licensed Civil Engineer in the state of Arizona to prepare plans and calculations to match the existing dock footprint as denoted in **FIGURE 1A**. Structural calculations shall Denote all connections and loading conditions per ASCE 7 and the latest International Building Code. The Civil Engineer will prepare calculations designing the dock to withstand hydraulic wave forces and Applicable wind, dead & Live loads applied to the structure. The Civil Engineer will use the existing Concrete anchoring system restrain the dock from lateral movement. Please refer to **Figure 2A** for*

the Locations of the concrete anchors. In the condition the engineer of record needs to verify the location of The existing anchors, any cost associated with hydrographic survey will be included in this bid item. All Cost associated with site planning and permitting shall be included in this bid item.

Question: *Due to the existing dock system being installed many years ago, the existing anchoring may not meet current code requirements. Can the city confirm what dimension criteria the contractors should base the new system off? I.e. Design Wave Height, Design Wind Speed, Current Speed, Low to High Water Elevation Change (Water Level Variation), Vessel Loading (if any).-It appears the current system is designed for a max wave height of 2ft. Can the bidders assume this wave height is sufficient for bidding?*

Answer: Designs shall be based on current code requirements. The engineer of record will determine the applied loads and necessary codes for the structure.

31. **Specifications**, Section 5, Removal and Disposal of Existing Dock System, states: *The contractor will be responsible for providing a detailed plan for the removal of the existing dock system and the offsite Disposal of any dock related materials. This shall include an offsite area onshore to disassemble or Demolish the dock for hauling. The contractor shall have storm water BMP's in place to prevent debris Enter the adjacent lake. All hauling and dump fees associated with the disposal of the existing dock will Also be included in this bid item.*

Question: *During the pre-bid meeting the city showed an onsite laydown yard near the parking lot that could be used for a laydown yard and to be used for offloading, loading, demo and product storage. Please confirm this site is available for these activities and that the contractor does NOT need to provide an offsite area for this.*

Answer: The city will designate a staging area for the contractor in the south west parking lot for site six. The contractor will be responsible for submitting a suitable demolition plan with applicable BMP's. In the condition these submittals are approved by the city of Lake Havasu we would accept offloading, loading, demolition and product storage with proper containment. Any dewatering shall be done where water shall not drain to the lake with proper bmp's.

32. **Specifications**, Engineering Plans and Structural Calculations, state: *"All cost associated with site planning and permitting shall be included in this bid item."*

Question: *Can the city confirm which specific permits are needed and the time frame to obtain those permits for this project? Does the city have any permits for the project? What specific permits is the contractor responsible for? If the city does not currently have any permits please consider the permitting time in the project timeline. IE. Example an Army Corp of Engineers permit can take approximately 8- months.*

Answer: The city is in the process of obtaining an Army Corp of Engineers authorization for the replacement of the fishing dock. There will be no cost for any Lake Havasu City Building Permits.

33. **Specifications**, Section 9, Utility Chase Ways, Pull Boxes, Electrical Conduit and Lighting.

Question: *Can the city confirm the Electrical Point of Connection? Can the bidders assume the Landside Electrical Point of Connection is adequate and meets code for the new electrical requirements? Can the city confirm that the ONLY utilities are the Shade Structure LED Lighting?*

Answer: The electrical point of connection is a J-box with a step down transformer in the location of Parking Lot Lights. There is a 400 amp panel where the circuit is labeled on the North Side of the Parking Lot. Please find the attached Exhibit B with the Electrical Diagram. The current electrical is to current code requirement. The LED lights are the only electrical source on the Dock.

34. **Question:** Are there ANY environmental studies required for this project?

Answer: No

35. **Attachment A**, 200.322 Domestic Preference

Question: *Can the city clarify is this a requirement or simply a "preference"? Can the City clarify this section? i.e... Supplying domestic chain is likely 4 x the cost and some products are more readily available. Can the city please clarify if this is merely a "preference" or a requirement?*

Answer: The preference is required by grant funds.

Exhibit A

GEIGER ENGINEERS

Geiger Gossen Hamilton Liao Engineers P.C.

1215 Cornwall Avenue Bellingham, Washington 98225 - 5020 Phone 360 - 734 - 7194 Fax 360 - 734 - 7399

CALCULATION SET COVER SHEET

PROJECT NAME: Lake Havasu Site 6 GGHL PROJECT # 98802.01
PROJECT LOCATION: Lake Havasu AZ
OWNER: City of Lake Havasu-Public Works
1854 McCulloch Blvd. Suite A13
Lake Havasu City, AZ 86403
CLIENT: BMI - Dixon
CLIENT CONTACT: Dan DeCaro
ADDRESS: 707-678-2385

LOADS:
WIND SPEED: 80 MPH EXPOSURE: D

LIVE: 50 PSF
WAVES: Access Dock: 1' x 45'
Attenuator: 3.0' x 45' (Wind/Wave from East)
1.4' x 24' (Vessel Wake)

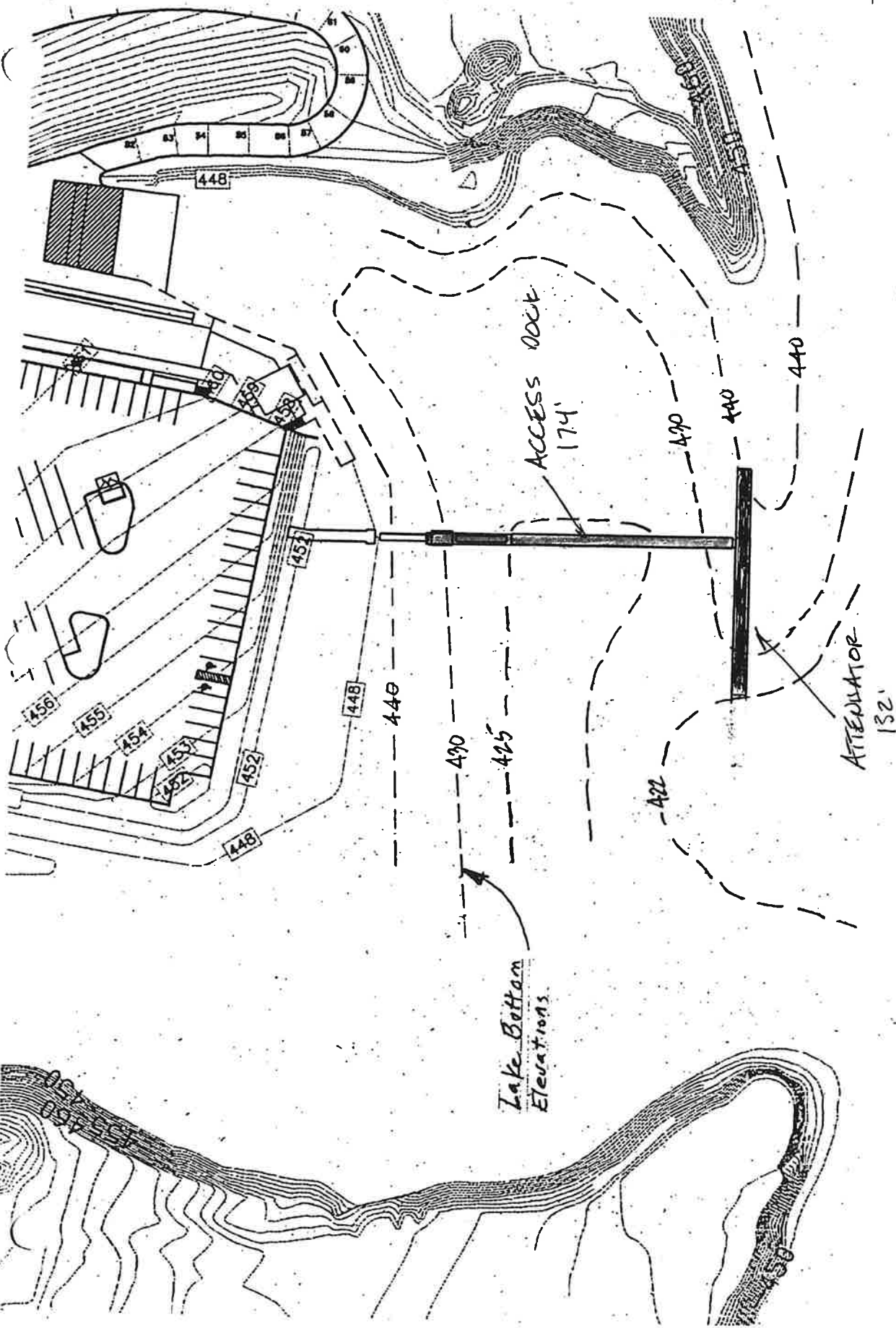
GOVERNING CODE FOR DESIGN: 1994 Uniform Building Code
ASCE 7-93

STRUCTURAL CALCULATION INDEX

| PAGE | ITEM |
|-------|------------------|
| 1 | COVER |
| 2 | SITE PLAN/LAYOUT |
| 3 | PLAN LAYOUT |
| 4 | SITE FETCH |
| 5 | DESIGN WAVES |
| 6-8 | WIND LOADS |
| 9-10 | ACCESS DOCK |
| 11-16 | ATTENUATOR |
| 17-21 | ANCHORAGE |
| A1-A6 | WAVE STUDY |



EXHIBIT 3



Contractor Shall Use These Elevations
For The Design Of Anchor System.

1" = 80'

Note: Lake Bottom Elevations Provided
To William T. Miller Engineering
By Lake Havasu City.



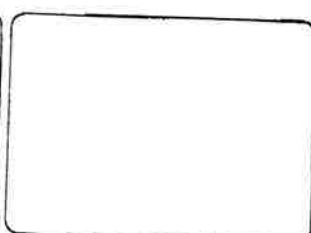
Not to be used without the written consent of Beilingnam Marine. This drawing is the property of Beilingnam Marine and is to be used only for the project and location specified. Beilingnam Marine is not responsible for any errors or omissions in this drawing. © 1998 Beilingnam Marine. All rights reserved.

Site Six Marina
Lake Havasu City, Az.
Overall Dock Layout
Job #98-3-003
Filename: Layout.Cad

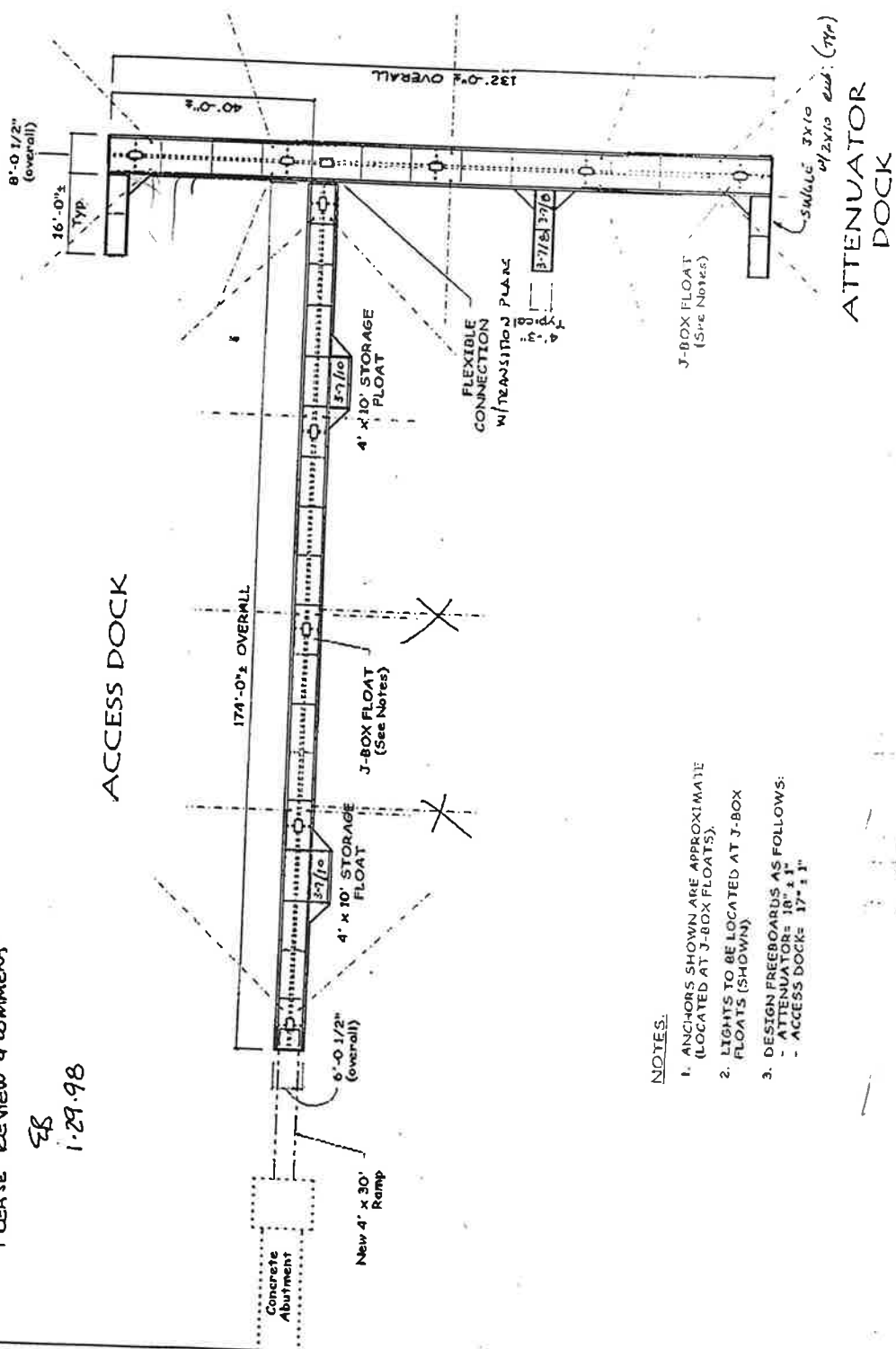
Revisions:

Checked By:

Drawn by: D. DeCaro
Scale: 1/4"=20'-0"
Date: 29 Jan 1998
Sheet 1 of



Jack/Bill
PLEASE REVIEW & COMMENT
EB
1.29.98



- NOTES:**
1. ANCHORS SHOWN ARE APPROXIMATE (LOCATED AT J-BOX FLOATS).
 2. LIGHTS TO BE LOCATED AT J-BOX FLOATS (SHOWN).
 3. DESIGN FREIGHTS AS FOLLOWS:
- ATTENUATOR 17'-1"
- ACCESS DOCK 17'-1"

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FAX (360) 734-7399

JOB BMI-LAKE HAVASU-SITE 6
SHEET NO. 5 OF _____
CALCULATED BY TRK DATE 3/12/98
CHECKED BY _____ DATE _____
SCALE _____

DESIGN WAVES - SEE APPENDIX WAVE STUDY
AND PROJECT SPECS

- 40,000# VESSEL @ 150' - 1.4' x 24'
- WIND WAVE TO ATTENUATOR 3.0' x 45' FROM EAST
CRESTS NEAR I TO ATTEN.
- 1' SUSTAINED WAVE TO ACCESS DOCK
USE 45' WAVE LENGTH

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JOB STG 6
SHEET NO. 6 OF _____
CALCULATED BY JRL DATE 3/12/98
CHECKED BY _____ DATE _____
SCALE _____

DESIGN WIND PRESSURE PER ASCE 7-93

(FORMERLY ANSI A58.1 1982)

- BASIC WIND SPEED $V = \underline{80}$ mph
(FASTEST MILE @ 33' ELEVATION)

- BASIC WIND PRESSURE $q_z = 0.00256 K_z (IV)^2$
(Eqn. 3 ASCE 7-93)

WHERE: K_z = Velocity pressure exposure coefficient (see attached)
 I = Importance factor

USE EXPOSURE CATEGORY D (SECTION 6.5.3 ASCE 7-93)
AND MAX. STRUCTURE HEIGHT = 12'

$$K_z = \underline{1.14}$$

USE $I = 1.00$ (CATEGORY I)

NOTE: IF SITE IS AT HURRICANE OCEANLINE
AND BASIC WINDSPEED IS FROM
ANSI WIND MAP, USE $I = 1.05$

THEREFORE:

$$q_z = 0.00256 (1.14) [1.0 (80)]^2$$

$$q_z = \underline{18.7 \text{ psf}}$$

- DESIGN WIND PRESSURE $W = q_z G_h C_p$ (TABLE 4 ASCE 7-93)

WHERE: G_h = GUST RESPONSE FACTOR
 C_p = PRESSURE COEFFICIENT (SHAPE FACTOR)

USE: $G_h = 1.0$ - ROPE SLACK AND HYDRAULIC DAMPING WILL
REDUCE GUST RESPONSE (USE FOR EXPOSURES C & D ONLY)
 $C_p = 1.2$ - ENGINEERING STUDY OF CONCRETE BEETHING SYSTEMS
WINKLER & KELLY 1979 FOR CAL. BOATING & WATERWAYS

$$W = \underline{22.4 \text{ psf}}$$

1 OF 2

1/23/90 CSF

VELOCITY EXPOSURE COEFFICIENT, K_z PER ASCE 7-93

FOR MARINA DESIGN, STRUCTURE (BOAT) HEIGHTS ARE ALMOST ALWAYS LESS THAN 12 FT (EXCLUDING MASTS) WIND SPEED IN THE BOUNDARY LAYER WILL VARY WITH ELEVATION BASED ON THE $1/4$ POWER LAW (ANSI ASHRAE 1972 APPENDIX). EQUATION C3 FROM ASCE 7-93 IS BASED ON THE ABOVE VARIATION IN WINDSPEED AND HAS BEEN USED TO OBTAIN K_z VALUES FOR $z = 12.0$ FT.

$$K_z = 2.58 \left(\frac{z}{z_g} \right)^{2/2}$$

| EXPOSURE CATEGORY | K_z ($z = 12.0'$) |
|-------------------|--------------------------|
| A | 0.10 |
| B | 0.33 |
| C | 0.75 |
| D | 1.14 |

Table C6
 Exposure Category Constants

| Exposure Category | α | z_g | D_o |
|-------------------|----------|-------|-------|
| A | 3.0 | 1500 | 0.025 |
| B | 4.5 | 1200 | 0.010 |
| C | 7.0 | 900 | 0.005 |
| D | 10.0 | 700 | 0.003 |

6.5.3 Exposure Categories

6.5.3.1 General. An exposure category that adequately reflects the characteristics of ground surface irregularities shall be determined for the site at which the building or structure is to be constructed. Account shall be taken of large variations in ground surface roughness that arise from natural topography and vegetation as well as from constructed features. The exposure in which a specific building or structure is sited shall be assessed as being one of the following categories:

(1) *Exposure A.* Large city centers with at least 50% of the buildings having a height in excess of 70 feet. Use of this exposure category shall be limited to those areas for which terrain representative of Exposure A prevails in the upwind direction for a distance of at least one-half mile or 10 times the height of the building or structure, whichever is greater. Possible channeling effects or increased velocity pressures due to the building or structure being located in the wake of adjacent buildings shall be taken into account.

(2) *Exposure B.* Urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single family dwellings or larger. Use of this exposure category shall be limited to those areas for which terrain representative of Exposure B prevails in the upwind direction for a distance of at least 1500 feet or 10 times the height of the building or structure, whichever is greater.

(3) *Exposure C.* Open terrain with scattered obstructions having heights generally less than 30 feet. This category includes flat, open country and grasslands.

(4) *Exposure D.* Flat, unobstructed coastal areas directly exposed to wind flowing over large bodies of water. This exposure shall be used for those areas representative of Exposure D extending inland from the shoreline a distance of 1500 feet or 10 times the height of the building or structure, whichever is greater.

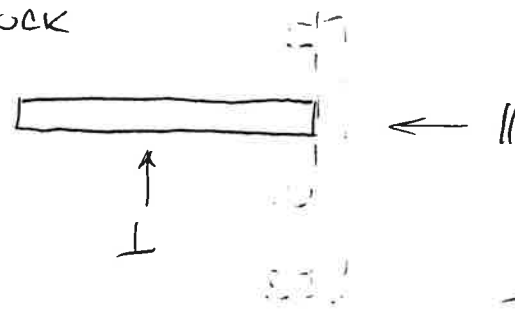
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 FAX (360) 734-7399

JOB SITE 6
 SHEET NO. 8 OF _____
 CALCULATED BY JRK DATE 3/12/98
 CHECKED BY _____ DATE _____
 SCALE _____

WIND LOADS TO STRUCTURES

20mph Exp D - 22.4 psf - see prev.
 FREEBOARD - 18"

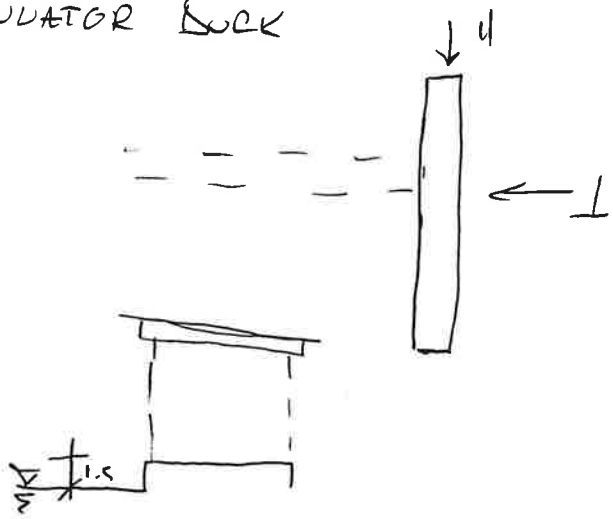
ACCESS DOCK



I WIND
 Area = 1.5' x 174' = 261 ft²
 Wind_I = 5.85 k
 or
33.6 plf

|| WIND
 1.5 x 6 x 22.4 = 200 #

ATTENUATOR DOCK



I WIND
 Area columns ≈ 0.36 sf/ft
 roof ≈ 1 sf/ft
 f.b. ≈ 1.5 sf/ft
 Wind_I = 132 x (1.5 + 1 + .36) x 22.4
 or = 8.5 kip
 W = 64 plf

|| WIND
 Area 4 sf column + 8.5 sf
 + 12 ft² f.b.
 Wind = 24.55 sf x 22.4 = 550 #

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JOB BMI - LAKE HAVASLI
 SHEET NO. 9 OF _____
 CALCULATED BY HAYNES DATE 1/5/97
 CHECKED BY _____ DATE _____
 SCALE _____

UNI-FLOAT ACCESS DOCK (5' WIDE CONC.)

CONSIDER H = 2.0' x 45'

QUASI-STATIC SOLUTION: $M_{max} = (0.0824)(5')^2(2)(\frac{45}{12\pi})^2$
 $= 16.0 \text{ k}$

$M_D = (1.5)(16) = 24 \text{ k}$

$24/4 = 6 \text{ k}$

TRY 3x12 : $F_b' = (1150)(1.6)(1.0) = 1840$

$M_c = \frac{(1840)(52.734)}{12} = 8.08 \text{ k}$ ✓

TRY 3x10 : $M_c = \frac{(1.87)(35.65)}{12} = 5.47 \text{ k}$

$(4)(5.47) = 21.9 \text{ k} \rightarrow \text{OLF} = 1.37$

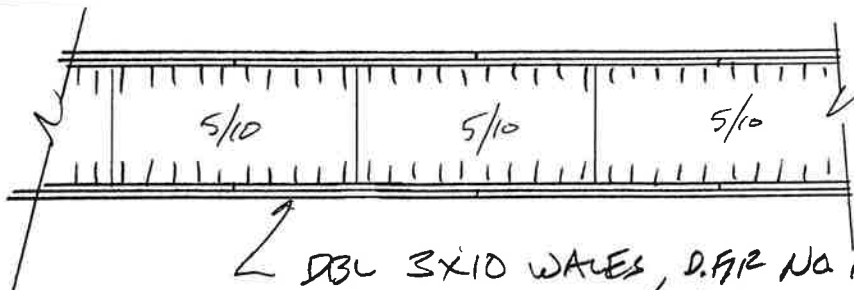
IF $H = 1.0' \times 45' \rightarrow M_{max} = 8 \text{ k}$

SPLICE
 $(0.32)(4)(2) + (5.77)2 = 18$
 $.74(2)(2) = 10$

$M_D = 12.0 \text{ k}$

DBL 3x10 OLF = 2.77

ACCESS DOCK



DBL 3x10 WALES, D.FIR NO 1 + BETTER W/RHB, FILL 3/4" Ø THRU-RODS.

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JOB SITE 6
SHEET NO. 10 OF _____
CALCULATED BY JRK DATE 3/12/98
CHECKED BY _____ DATE _____
SCALE 98802-01

ACCESS DOCK (cont.)

CHECK SWAK: MOMENT w/ 45' o.c. SUPPORTS

$$M = wL^2/8 = 40 \text{ plf} (45)^2/8 = 10 \text{ kip-ft}$$

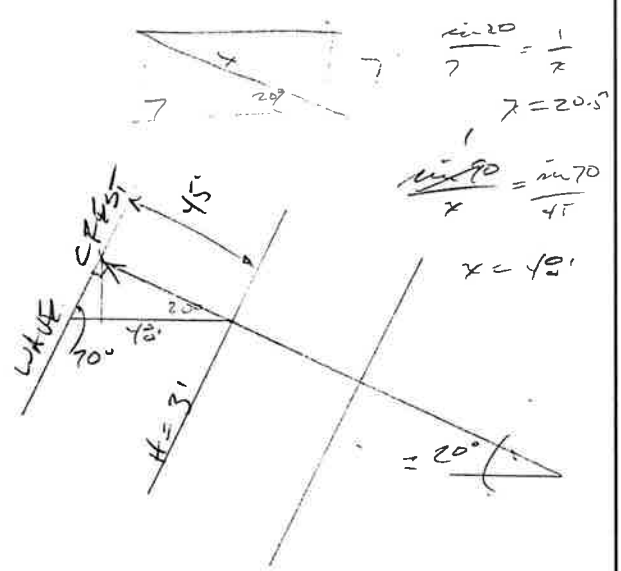
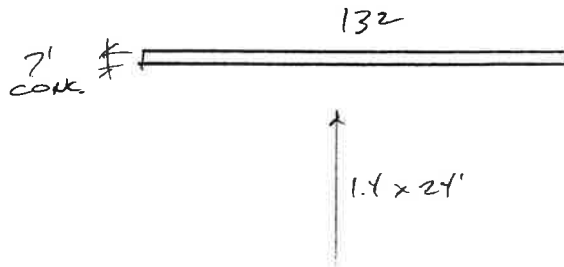
$$T/C = \frac{10 \text{ kip-ft}}{5' \text{ arm}} = 2 \text{ kip}$$

DOUBLE 3x10 ok by INSP.

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JOB B.M.E. - LAKE HAVES II
 SHEET NO. 11 OF _____
 CALCULATED BY HAYNES DATE 1/5/87
 CHECKED BY _____ DATE _____
 SCALE _____

WAVE LOADS TO ATTENUATOR



CALIF.
 REF. BOARDS

$H = 1.4 \times 24'$ ASSUME 2' DRAFT.
 $F_w = 4.5$

$L/L_w = 7/24 = 0.3 \rightarrow P = 0.85$

WAVE FORCE = $(4.5)(0.85)(2')(7')(1' \text{ LONG}) = \underline{54 \text{ LB/LF}}$
 FOR $H = 1.4'$

(WIND = 65 LB/LF)
SAY 120 P/LF

$H = 3' \times 45'$

$F_w = 9.5$

$L/L_w = 20.5/45 \Rightarrow P = 0.98$

WAVE FORCE = $(9.5)(0.98)(2')(7')(1') = \underline{130.7 \text{ LB/LF}}$

2 CRESTS @ ATTN AT A TIME

QUESTIONABLE
 DUE TO ANGLE
 OF ATTACK
 (and almost 1)
 orthogonal to
 wind.

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JOB BME - LAKE HAWASLI
 SHEET NO. 12 OF _____
 CALCULATED BY HAYNES DATE 1/5/91
 CHECKED BY _____ DATE _____
 SCALE _____

ATTENUATOR

CONSIDER $H = 1.4'$ x $24'$ LONG WAVER
 $3'$ x $45'$

QUASISTATIC: $M_{max} = (0.0624)(7')(1.4/2)(24/2\pi)^2 = 4.46'k$

$M_{max} = (0.0624)(7')(3/2)(45/2\pi)^2 = 33.6'k$

CONSIDER DBL 4x12: NO. 1 + BETTER

$F_b = 1150 \text{ psi}$

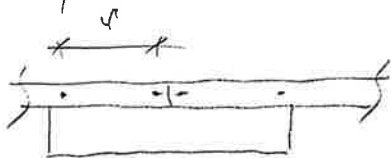
$F_b' = \frac{(1150)(C_m = 1.0)(1.6)}{1000} = 1.84 \text{ ksi}$
DURATION

$M_n = \frac{(1.84 \text{ ksi})(73.83)}{12} = 11.3'k$

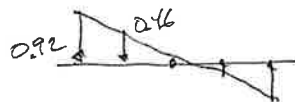
$(4 \text{ wales})(11.3) = 45.2'k$

OLF = 1.34

SPlice w/ 10' MODULE (FULL ROSS)



$M_{DEU} (2 \text{ ROSS ONLY}) = (0.92)(4) \times 2 \text{ WAVERS} + 22.6'k = 30'k$
P.G.



$2[(0.92)(4) + (0.46)(2)] + 22.6'k = 31.8'k < 45.2'k$

w/ 4" ϕ SP. NING. / PIS

$(3.0k)(4)^2 + 22.6'k = 46.6 > 45.2$

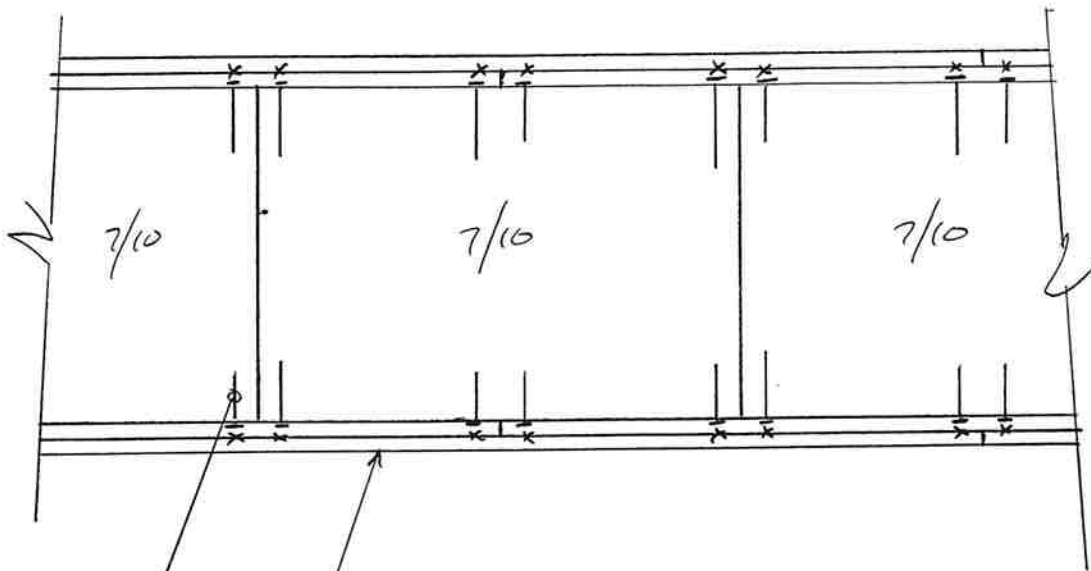
N.G.

[USE DBL 4x12 WAVERS NO. 1 + BETTER w/ (PIS) 4 ROSS MIN / FLOAT, 10' MODULES, 4" ϕ SP. + S.R.]

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JOB BMI - LAKE HAWASH
 SHEET NO. 13 OF _____
 CALCULATED BY HAYNES DATE 1/5/99
 CHECKED BY _____ DATE _____
 SCALE _____

ATTENUATOR



DBL 4x12 WALES, NO 1 + BETTER D. FIR
 W/ PLB BOARD

3/4" ϕ THRU-ROD W/
 4" ϕ SPLIT RINGS + SHEAR PLATES TYP.
 AND HAIR-PINS.

CHECK SWAY MOMENT

$$M = \frac{wL^2}{8} = \frac{120(40)^2}{8} = 24 \text{ kip-ft}$$

$$T/C = \frac{24 \text{ kip-ft}}{7.5'} = 3.2 \text{ kip}$$

DOUB 4x12
 \checkmark OK BY N.S.P.
 SPLICES W/ SHEAR
 PLATES OK

GEIGER ENGINEERS

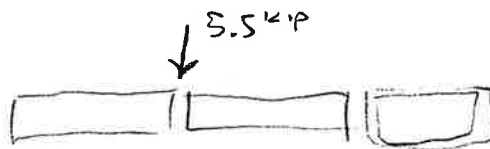
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JOB SITE 6
 SHEET NO. 14 OF _____
 CALCULATED BY JRK DATE 1/29/98
 CHECKED BY _____ DATE _____
 SCALE _____

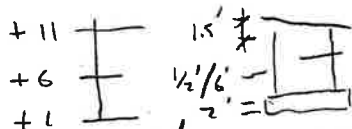
MOMENT TO WATER - END OUTRIGGERS

- SUBMERGE 2 3'-7" x 8' FLOATS

$$P = 1.5' \times 64 \frac{\text{pcf}}{2} \times 8' \times 2 \times 3.6' = 5.5 \text{ kip}$$



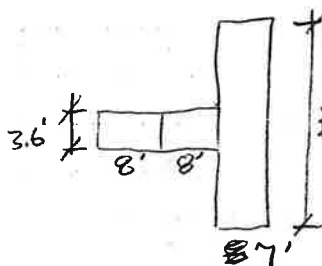
$$M = 8' \times 5.5 = 44 \text{ kip-ft}$$



TRIS WIDTH = 38'

SUBMERGENCE TO CONSERV.

$$M = 38' \times \left[\frac{1}{2} \times 1' + \left(\frac{0.5' \times 6'}{2} + (1.5' \times 11') \right) \right] \times 22.4 = 16.2 \text{ kip-ft}$$



SHAPE 1
 $I = \frac{16 \times 3.6^3}{12} = 1229 \text{ ft}^4$
 $A = 16 \times 3.6 = 57.6 \text{ ft}^2$

SHAPE 2
 $I = \frac{37.7 \times 7^3}{12} = 1077 \text{ ft}^4$
 $A = 264 \text{ ft}^2$

$$\bar{X} = \frac{3.5 \times 264 + 15 \times 57.6}{264 + 57.6} = 5.6'$$

$$I = 1229 + 1077 + 2.1^2(264) + 9.4^2(57.6) = 8560 \text{ ft}^4$$

$$S = \frac{8560}{12.4} = 492 \text{ ft}^3$$

$$F_b = \frac{M}{S} = \frac{16.2}{492} = 0.033 \text{ ksi} \text{ - submerged } 6''$$

Moment @ Joint = $(0.033) \times 3.6' \times 16' / 2 \times 216 / 3 = 10.1 \text{ kip-ft}$

T5 2x8x1/4

Mall = $7.62 \times 46 \times .6 = 17.5 \text{ kip-ft}$
 (add flange stay at 7')

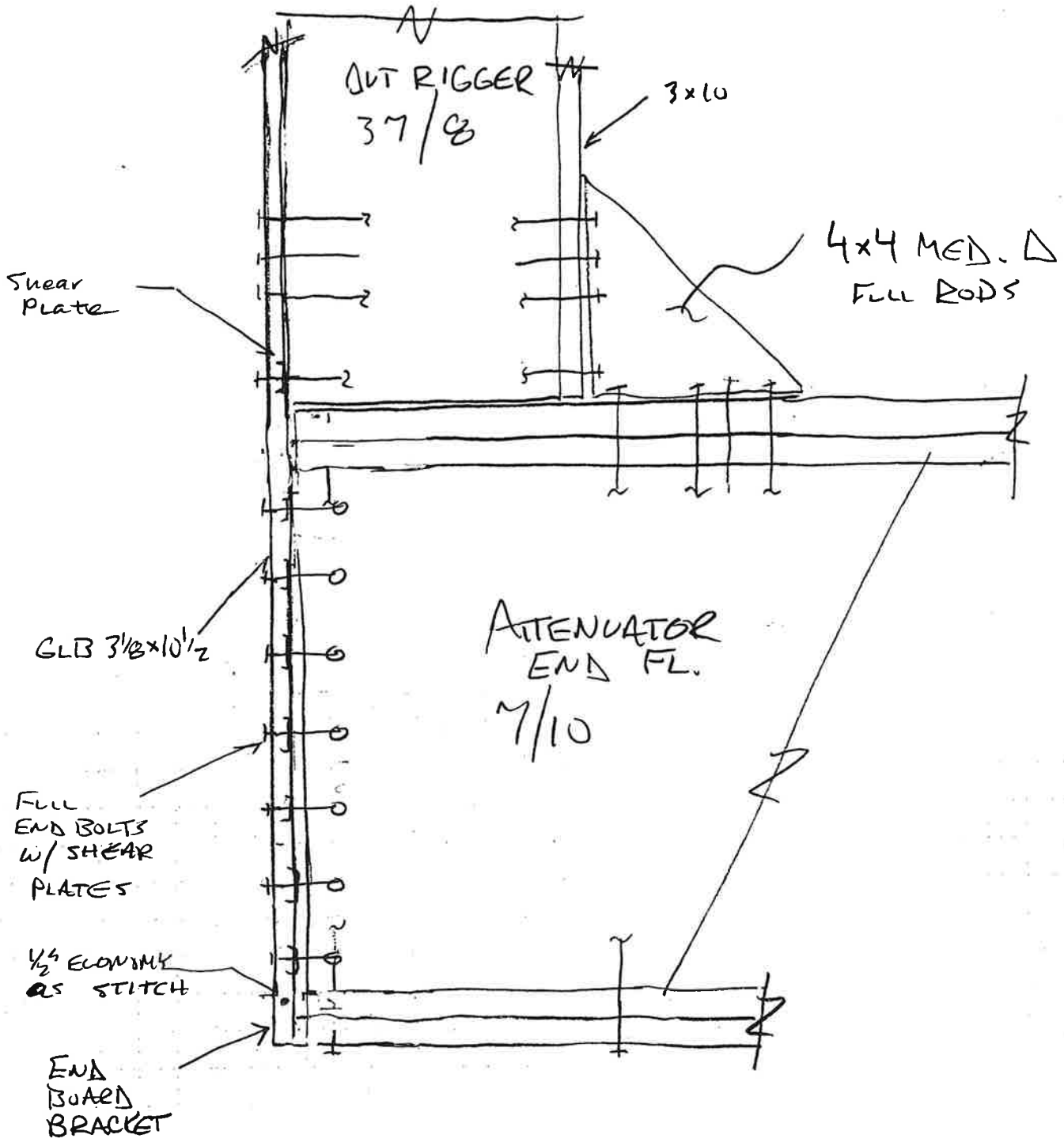
GLB 3'8" x 10'1/2

$S = 597.4$ Mall = $\frac{2400 \times 1.6 \times 8 \times 57.4}{12} = 44.7 \text{ kip-ft}$

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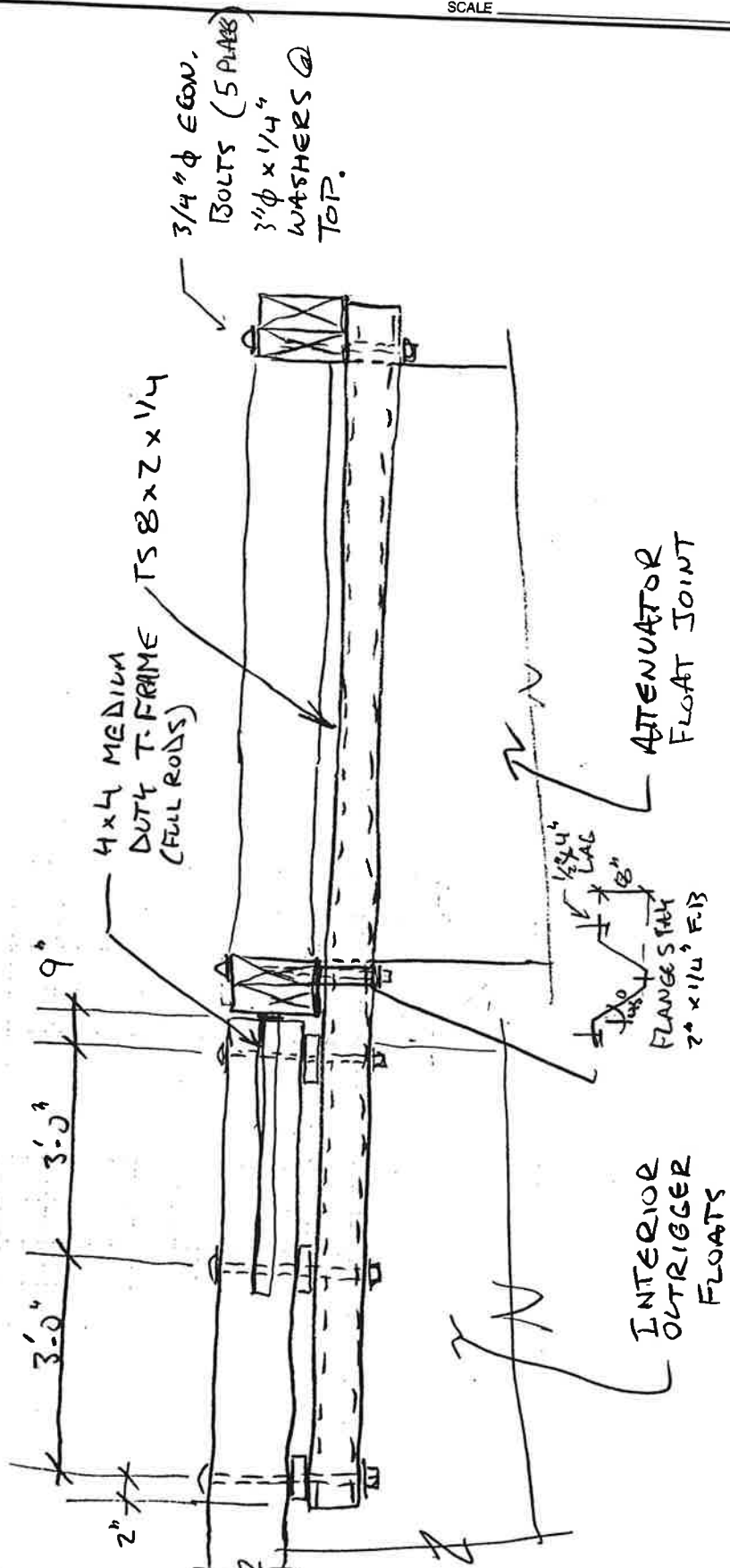
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JOB SITE 6
SHEET NO. 15 OF _____
CALCULATED BY JRK DATE 11/29/98
CHECKED BY _____ DATE _____
SCALE _____



END OUTRIGGER CONN.

PRELIMINARY



INTERIOR OUTRIGGER CONN.
PRELIMINARY

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JOB SITE 6
SHEET NO. 17 OF _____
CALCULATED BY JRK DATE 1/30/98
CHECKED BY _____ DATE _____
SCALE _____

DECK ANCHORING

LINE CAPACITY

LOAD (WORKING) 3.9 kip / line (Atten) / 1.6 kip / line (access)

CHAIN - 1/2" PIRWF COIL GALV. SWL = 4500#
238 #/ft

WIRE ROPE - 1/2" 6x19 1/2" GALV. SWL = 16 kips

ANCHOR CAPACITY

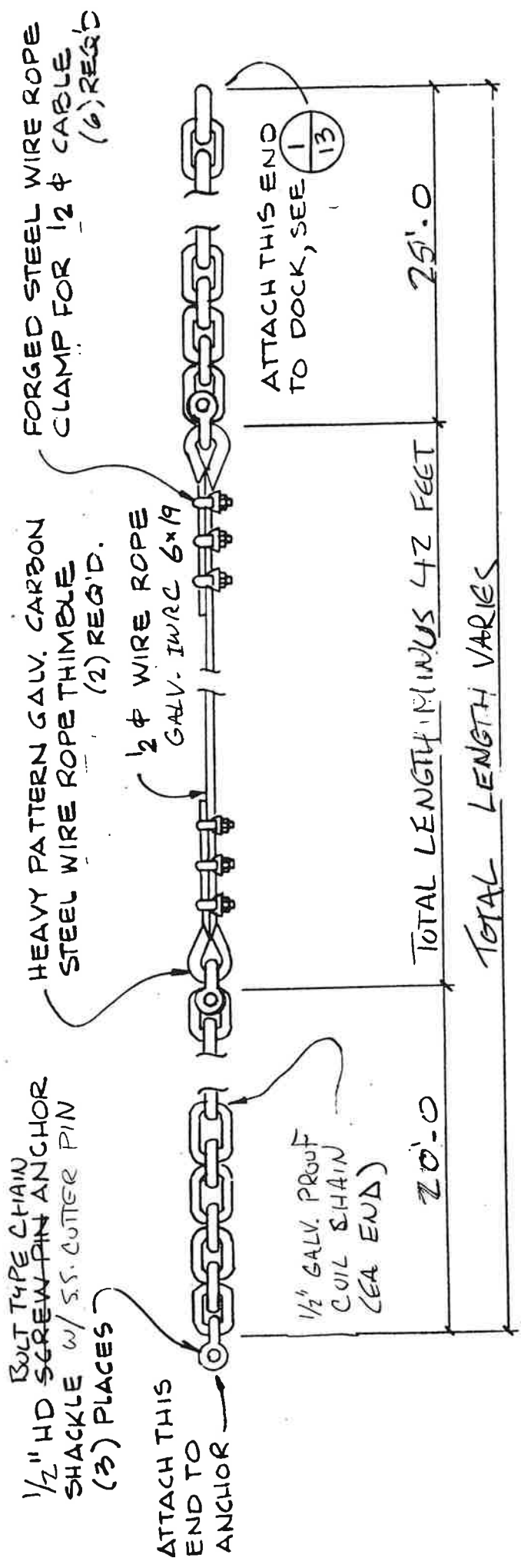
DANFORTH TEST PULLS AT VARIOUS SCOPES

| | DEPTH | SCOPE | TEST PULL |
|---|---------------|---------|-----------|
| 1 | 447-422 = 25' | ~ 1:3.7 | 2500# |
| 2 | 447-424 = 23' | ~ 1:4 | 1500# |
| 3 | 447-432 = 15' | ~ 1:5.9 | > 3900# |

first two pulls are not indicative of performance.

DANFORTH IS SENSITIVE TO SCOPE !. DESIGN ROPE LENGTHS FOR 1:6 SCOPE MIN.

USE $T_{all} = \frac{3.9 \text{ kip}}{2 \text{ F.S.}} = 1950 \#$

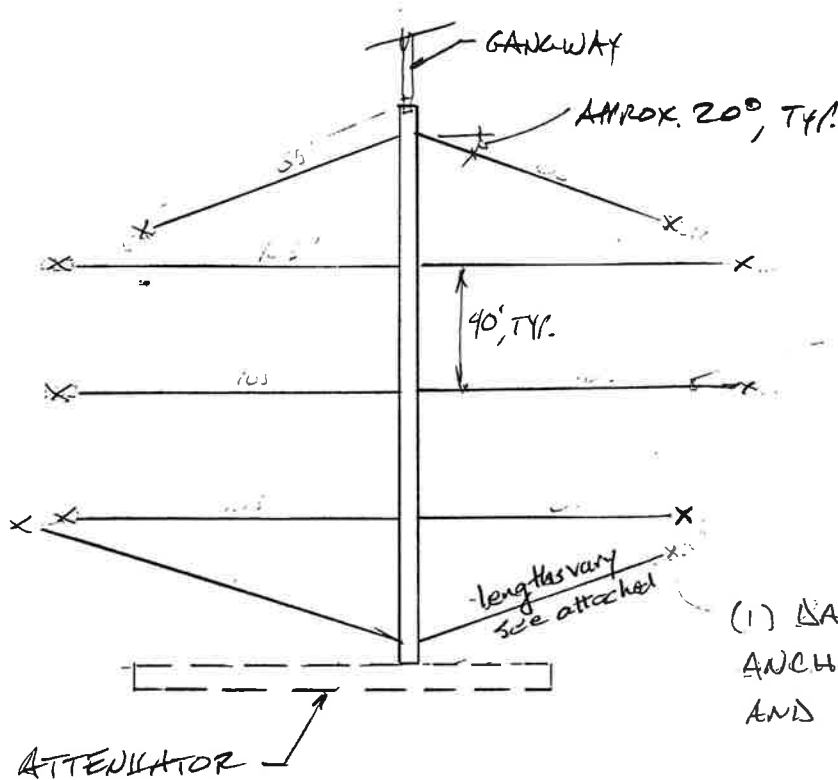


ANCHORS SHOULD BE POSITIVELY SET
 (VERIFIED BY DIVER) AND PROPERLY LOADED
 TO 2000# x NUMBER OF ANCHORS

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JOB BMI - LAKE HAVASII
 SHEET NO. 19 OF _____
 CALCULATED BY HAYNES DATE 1/5/97
 CHECKED BY _____ DATE _____
 SCALE _____

ACCESS DOCK



- 1/2" φ GALV. WIRE
 ROPE (SEE NOTE
 FOR ATTENUATOR
 LAYOUT).
 SET LINES FOR
 1:6 SCOPE

(1) SANFORTH
 ANCHOR. SET SIZE
 AND LOAD TESTED

TOTAL CAPACITY

⊥ LOADS

$$3 \times 1950 + 2 \times 1950 \cos 20 = 9.5 \text{ kips} > 5.9 \text{ kip}$$

ok

|| LOADS

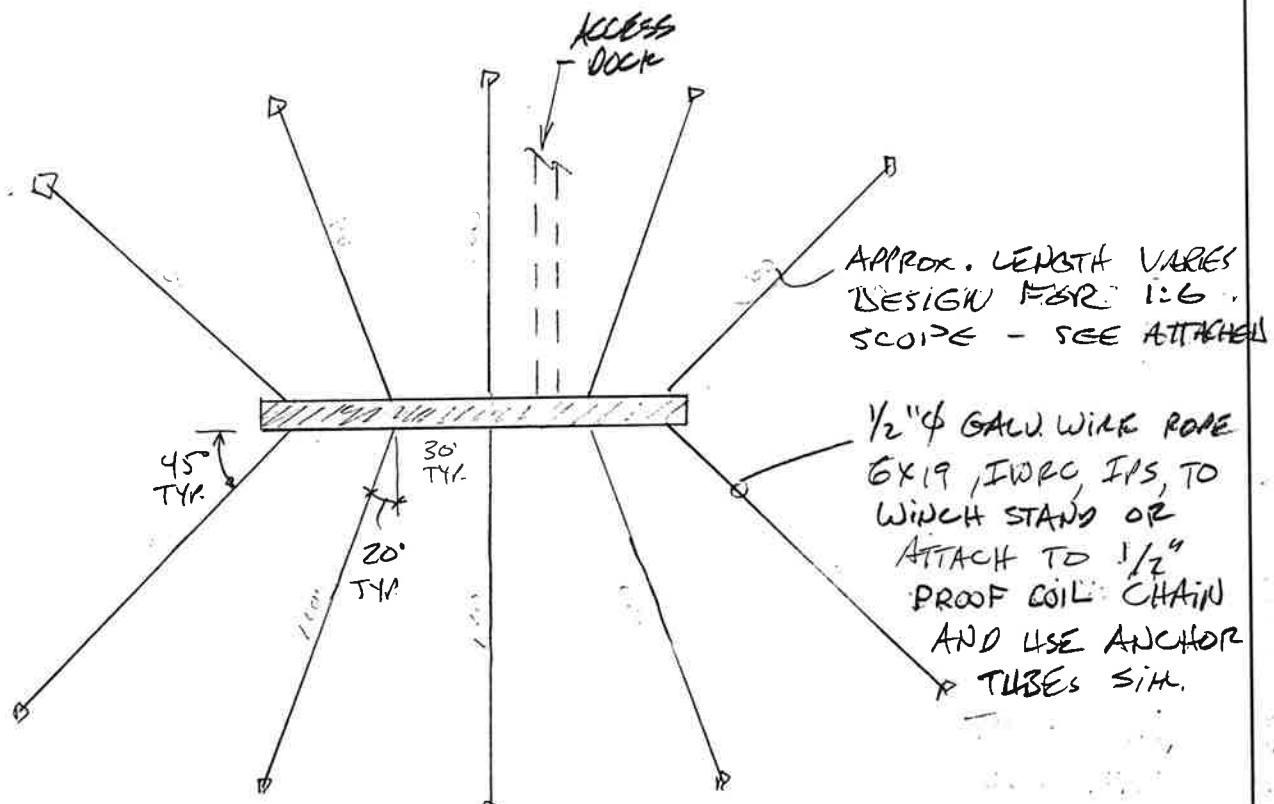
$$2 \times 1950 \sin 20 = 1.3 \text{ kips} > 0.2 \text{ kip}$$

ok

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JOB BME - LAKE HAVASIL
 SHEET NO. 20 OF _____
 CALCULATED BY HAYNES DATE 1/5/97 3/12/98
 CHECKED BY _____ DATE _____
 SCALE _____

ATTENUATOR ANCHOR LAYOUT



TOTAL CAPACITY

I LOAD

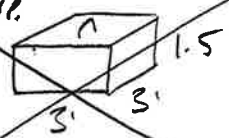
$$(1 + 2 \cos 20^\circ + 2 \cos 45^\circ) 3900 = 16.7 \text{ kip} < 15.8 \text{ kip V&K}$$

II LOAD

$$(2 \sin 20^\circ + 2 \sin 45^\circ) 3900 = 8.2 \text{ kip} < .55 \text{ kip V&K}$$

(windward = 120 p.f.f.)

SIX 2000 LBS (AIR WT) CONC. BLOCKS, TYR.



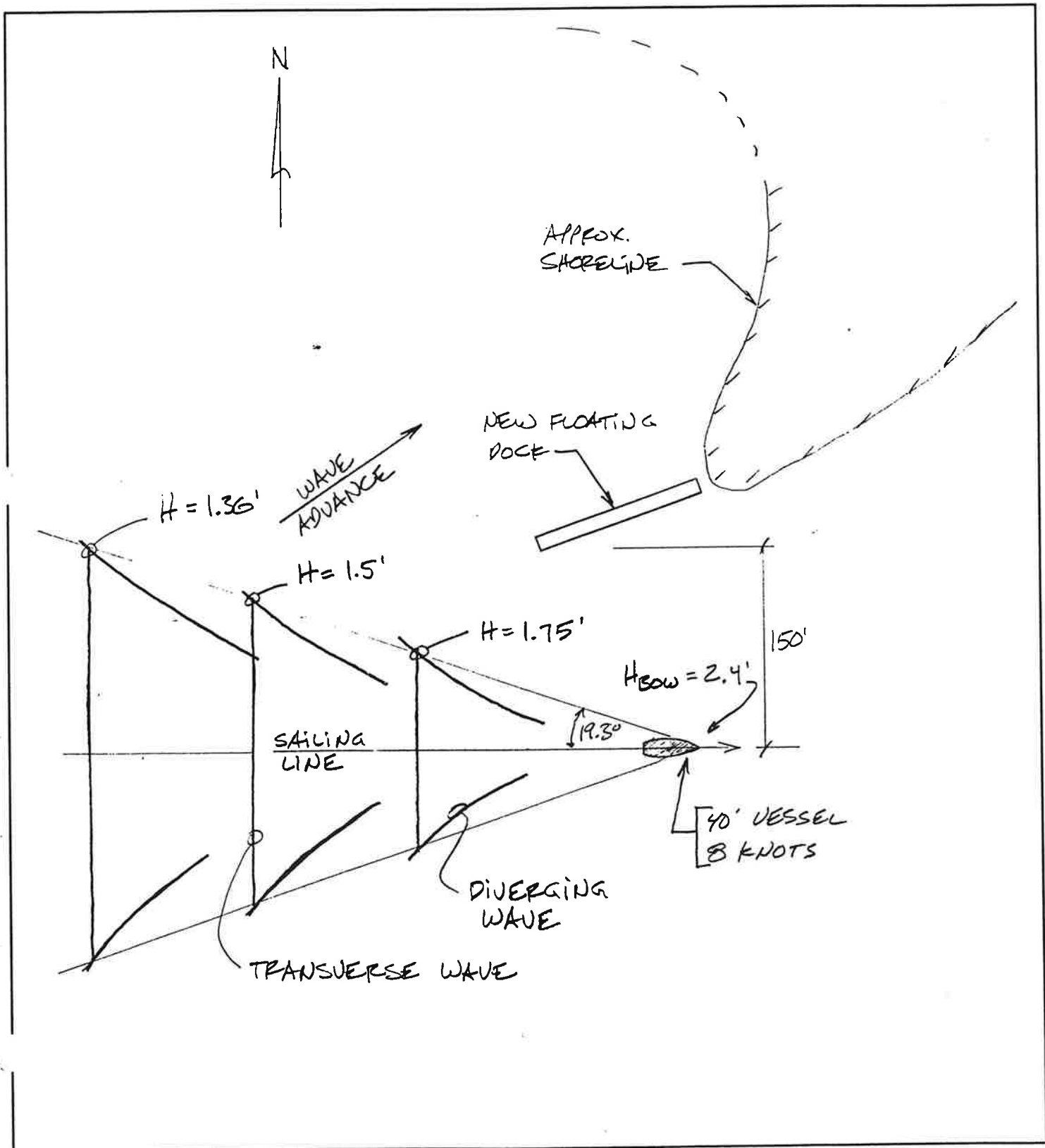
W/ REBAR EXTENDING OUT BOTTOM

SIM TO BARRETT COVE, SEE ATTACHED.

DOUBLE DANFORTH ANCHORS SET IN SERIES,

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JOB EMI - HAVALI WAVE ATTN.
SHEET NO. 41 OF _____
CALCULATED BY HAYNES DATE 10/11/96
CHECKED BY _____ DATE _____
SCALE 1" = 100'



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JOB BMI-HAJA WAVE ATTENUATOR
 SHEET NO. AZ OF _____
 CALCULATED BY HAYNES DATE 10/8/96
 CHECKED BY _____ DATE _____
 SCALE _____

BOAT WAKE

ASSUME: 40' DISPLACEMENT CRAFT
 SPEED = 8 KNOTS (13.5 FPS)
 150' AWAY FROM ATTENUATOR, DEPTH = 25'

REF.: SORENSEN, 'BAWK PROTECTION FOR VESSEL GENERATED WAVES', '86

$$F = \frac{13.5}{\sqrt{32.2(25)}} = 0.476$$

$$\theta = 35.27 (1 - e^{12(0.476-1)}) = 35.2^\circ$$

$$C_D = 13.5 (\cos 35.2^\circ) = 11.03 \text{ fps}$$

$$C_D = \sqrt{\frac{32.2(L_D)}{6.283} \tanh \frac{157.08}{L_D}}$$

$$11.03 = \left(5.125(L_D) \tanh \frac{157.08}{L_D} \right)^{1/2}$$

FROM SMITHY PLATE C-4 READ $T_D \approx 2.2 \text{ sec}$

$$L_D \approx CT = (11.03)(2.2) = 24.27'$$

PULL INTO ABOVE EQN.; $C_D = 11.15 \text{ fps}$ CLOSE

$$\text{TRY } L_D = 24': \quad C_D = 11.09 \text{ fps} \quad \checkmark \text{ OK}$$

$$\underline{L_D = 24'} \quad \underline{T_D = 2.18 \text{ sec}}$$

$$\sqrt{L} = \frac{13.5 \text{ fps}}{\sqrt{24'}} = 2.76 \quad \xrightarrow{\text{(REF. FIG. 8)}} \quad K_w = 1.133$$

SET $B = 15'$ (42' EGG HARBOR)

$$L_c = \text{SAY } \frac{1}{2} L_D = 20'$$

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JOB BME-HAJA

WAVE ATTN.

SHEET NO. A3

OF

CALCULATED BY HAYDES

DATE 10/8/96

CHECKED BY

DATE

SCALE

BOAT WAKE, CONT'D

$$H_B = \left(\frac{k_w B}{L_e} \right) \frac{U^2}{2g} = \frac{(1.133)(15')}{20} \left(\frac{13.5^2}{2(32.2)} \right) = 2.4'$$

↑
BOW WAKE

TRY CLASS No. 2 (N=2):

$$x = \frac{2(13.5)^2}{32.2} \left(\frac{2(2) + 3/2}{\sqrt{3}} \right) \pi = 112.9'$$

11.32

$$x = \frac{2(13.5)^2}{32.2} \left(\frac{2(1) + 1.5}{\sqrt{3}} \right) \pi = 71.3$$

11.32

TRY CLASS No. 3 (N=3)

$$x = \frac{2(13.5)^2}{32.2} \left(\frac{2(3) + 1.5}{\sqrt{3}} \right) \pi = 154' \quad \checkmark \text{ ok } (\approx 150')$$

11.32

$$H_m = \frac{1.11(2.4')}{(2(3) + 1.5)^{0.333}} = 1.36'$$

40' VESSEL TRAVELING @ 8 KNOTS

150' AWAY FROM ATTN.:

$$H @ ATTN \approx 1.4'$$

$$L \approx 24'$$

$$T \approx 2.2 \text{ sec}$$

NOTE: TORBASON + KOLLMEYER

8 KNOTS
25' DEG

L = 24' ✓
T = 2.2

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JOB _____
SHEET NO. A5 OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____

WIND WAVES :

CONSIDER 4 WIND SPEEDS : 60, 70, 75 + 80 MPH (FASTEST-MILE)

EASTERN FETCH

| <u>WIND</u> | <u>H_s</u> | <u>T_p</u> | <u>L₀</u> | <u>T</u> |
|-------------|----------------------|----------------------|----------------------|----------|
| 60 MPH | 2.34' | 2.46 sec | 31.1' | 26.4 min |
| * Design 70 | 2.78' | 2.61 | 34.9' | 24.9 |
| 75 | 3.0 | 2.68 | 36.7 | 24.3 |
| 80 | 3.24 | 2.74 | 38.6 | 23.7 |

ATTENUATION :

$$\left. \begin{aligned} B/L &= 10'/34' = 0.29 \rightarrow \\ 12'/34' &= 0.35 \rightarrow \end{aligned} \right\} K_T \approx 0.37$$

BASED ON
EULIOT BAY

$$H_T = (0.37)(2.8') = \underline{1.0'} \leftarrow \checkmark$$

$$(0.37)(3.0) = \underline{1.1'} \checkmark$$

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JOB BSM - HAVASLI WAVE ATTN
 SHEET NO. A6 OF 6
 CALCULATED BY HAYNES DATE _____
 CHECKED BY _____ DATE _____
 SCALE _____

SITE 6 ATTENUATOR

LAKE HAVASLI, AZ

MIN. HIGH WATER = 450' }
 LOW WATER = 445' } 5' VARIATION

EASTERN FETCH:

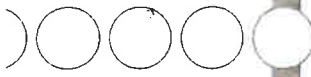
| <u>DIRECTION</u> | <u>DISTANCE</u> | <u>TRAY</u> |
|------------------|------------------------|--------------------------|
| 90° | 2.42 MILES | 2.42 (2) |
| 93° | 2.65 | 2.65 (2) |
| 96° | 1.1 | 1.1 |
| 99° | 0.91 | 0.91 |
| 102° | 0.93 | 0.93 |
| 105° | 1.0 | 1.0 |
| 108° | 0.63 | 0.63 |
| 111° | 0.63 | |
| 114° | 0.61 | |
| | <u>Σ = 10.88</u> | <u>TRAY = 12.3 MILES</u> |
| | <u>R̄ = 1.21 MILES</u> | |

* ASSUME DEEP WATER

WIND PER ASCE 7-93:

| | <u>25 YR</u> | <u>50 YR</u> |
|-------------|--------------|--------------|
| PRESCOTT : | 71 MPH | 76 MPH |
| YUMA : | 65 | 70 |
| LAS VEGAS : | 71 | 75 |

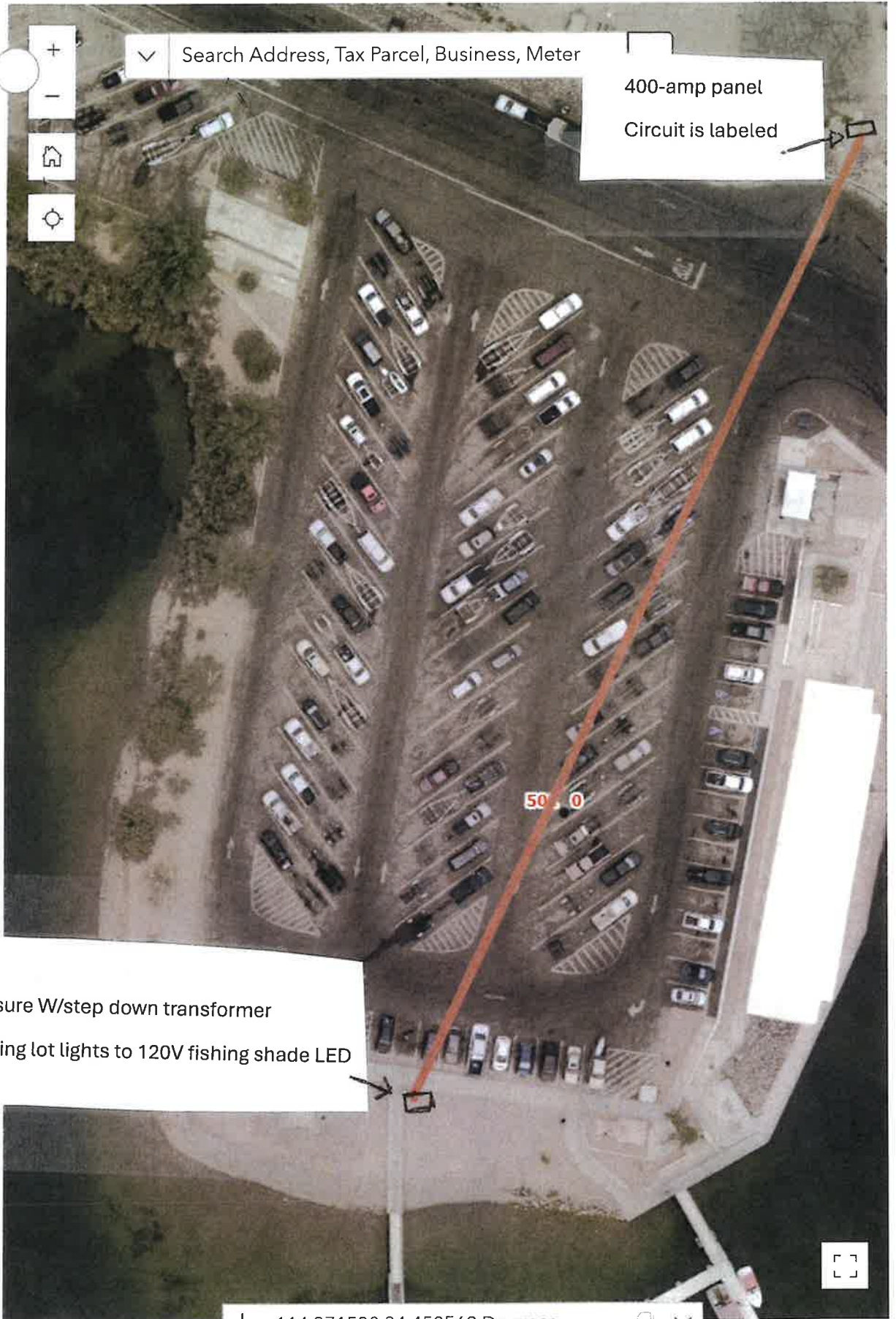
Exhibit B



Search Address, Tax Parcel, Business, Meter

400-amp panel

Circuit is labeled



J-box

S/S enclosure W/step down transformer
from parking lot lights to 120V fishing shade LED

50 ft

-114.371530 34.450569

Exhibit C

LAKE HAVASU CITY CONSTRUCTION CONTRACT
INDEMNIFICATION AND INSURANCE REQUIREMENTS
(long form)

I. INDEMNIFICATION

CONTRACTOR agrees to indemnify, defend, save, and hold harmless the City, its departments, agencies, boards, commissions, officers, officials, agents, volunteers, and employees ("CITY") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorney's fees, and costs of claim processing, investigation, and litigation) ("Claims") for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the CONTRACTOR or any of its owners, officers, directors, agents, employees, or contractors. This Indemnity includes any claim or amount arising out of or recovered under Workers' Compensation law or arising out of the failure of CONTRACTOR to conform to any federal, state, or local law, statute, ordinance, rule, regulation, or court decree. It is the specific intention of the parties that the CITY shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the CITY, be indemnified by CONTRACTOR from and against any and all claims. It is agreed that CONTRACTOR will be responsible for primary loss investigation, defense, and judgment costs where this indemnification is applicable. The amount and type of insurance coverage requirements required by this Agreement will in no way be construed as limiting the scope of indemnity in this Section.

II. INSURANCE REQUIREMENTS

A. CONTRACTOR and its subcontractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this CONTRACT, are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the CONTRACTOR, its agents, representatives, employees or subcontractors.

B. The insurance requirements herein are minimum requirements for this CONTRACT and in no way limit the indemnity covenants contained in this CONTRACT. City in no way warrants that the minimum limits contained herein are sufficient to protect the CONTRACTOR from liabilities that might arise out of the performance of the work under this CONTRACT by the CONTRACTOR, its agents, representatives, employees or subcontractors, and CONTRACTOR is free to purchase additional insurance.

C. MINIMUM SCOPE AND LIMITS OF INSURANCE: CONTRACTOR shall provide coverage with limits of liability not less than those stated below.

1. **Commercial General Liability – Occurrence Form**

Policy shall include bodily injury, property damage, personal injury and broad form contractual liability coverage. Limits may be met through a combination of General Liability and Excess Liability policies on a follow form basis.

- a. General Aggregate \$5,000,000
- b. Products – Completed Operations Aggregate \$5,000,000
- c. Personal and Advertising Injury \$1,000,000
- d. Blanket Contractual Liability – Written and Oral \$1,000,000
- e. Fire Legal Liability \$50,000
- f. Each Occurrence \$5,000,000

i. The policy shall be endorsed to include the following additional insured language: ***"Lake Havasu City, its departments, agencies, boards, commissions, and its officers, officials, agents, volunteers and employees shall be named as additional insureds with respect to liability arising out of the activities performed by or on behalf of the CONTRACTOR."***

ii. Policy shall contain a waiver of subrogation against Lake Havasu City, its departments, agencies, boards, commissions, and its officers, officials, agents, volunteers and employees for losses arising from work performed by or on behalf of the CONTRACTOR.

iii. Completed operations coverage shall remain effective for at least two years following expiration of CONTRACT.

2. **Business Automobile Liability**

a. Bodily Injury and Property Damage for any owned, hired, and/or non-owned vehicles used in the performance of this CONTRACT.

Combined Single Limit (CSL) \$1,000,000

i. The policy shall be endorsed to include the following additional insured language: "Lake Havasu City, its departments, agencies, boards, commissions, and its officers, officials, agents, volunteers and employees shall be named as additional insureds with respect to liability arising out of the activities performed by or on behalf of the CONTRACTOR, involving automobiles owned, leased, hired or borrowed by the CONTRACTOR."

- ii. Policy shall contain a waiver of subrogation against Lake Havasu City, its departments, agencies, boards, commissions, and its officers, officials, agents, volunteers and employees for losses arising from work performed by or on behalf of the CONTRACTOR.

3. Workers' Compensation and Employers' Liability

| | |
|---------------------------------------|-------------|
| a. Workers' Compensation | Statutory |
| b. Employers' Liability Each Accident | \$ 500,000 |
| Disease – Each Employee | \$ 500,000 |
| Disease – Policy Limit | \$1,000,000 |

- i. Policy shall contain a waiver of subrogation against Lake Havasu City, its departments, agencies, boards, commissions, and its officers, officials, agents, volunteers and employees for losses arising from work performed by or on behalf of the CONTRACTOR.
- ii. This requirement shall not apply if exempt under A.R.S. Section 23-901.

4. Professional Liability (Errors and Omissions Liability) (if applicable)

| | |
|---------------------|-------------|
| a. Each Claim | \$1,000,000 |
| b. Annual Aggregate | \$2,000,000 |

- i. In the event that the professional liability insurance required by this CONTRACT is written on a claims-made basis, CONTRACTOR warrants that any retroactive date under the policy shall precede the effective date of this CONTRACT; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years beginning at the time work under this CONTRACT is completed.
- ii. The policy shall cover professional misconduct or lack of ordinary skill for those positions defined in the Scope of Work of this CONTRACT.

5. Contractor's Pollution Liability

| | |
|--|-------------|
| a. Each Claim | \$2,000,000 |
| b. Annual Aggregate | \$4,000,000 |
| i. The policy shall provide coverage for damages against, but not limited to, bodily injury, third-party liability, clean up, corrective action including assessment, remediation and defense costs. When a self-insured retention | |

or deductible exceeds \$25,000, the Lake Havasu City reserves the right, but not the obligation, to review and request a copy of the CONTRACTOR'S most recent annual report or audited financial statements.

- ii. The pollution liability policy shall be endorsed to include the following additional insured language: "***Lake Havasu City, its departments, agencies, boards, commissions, and its officers, officials, agents, volunteers and employees shall be named as additional insureds with respect to liability arising out of the activities performed by or on behalf of the CONTRACTOR.***"
- iii. In the event that the pollution liability insurance required by this CONTRACT is written on a claims-made basis, CONTRACTOR warrants that any retroactive date under the policy shall precede the effective date of this CONTRACT; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of seven (7) years beginning at the time work under this CONTRACT is completed.

6. Indemnity—Patents, Copyright, and Trademark.

Contractor agrees to defend City, mayor, council, appointed boards and commissions, officers, officials, employees, and agents its departments, agencies, boards, commissions, officers, officials, agents, volunteers, and employees individually and collectively at Contractor's own expense, in all suits, actions, or proceedings in which Contractor is made a defendant for actual or alleged infringement of any United States of America or foreign letters patents resulting from Contractor's use of the goods, service, or finished end product purchased as a result of this Procurement (Invitation To Bid (ITB) or Request For Proposal (RFP)) and subsequent Contract. Contractor further agrees to pay and discharge any and all judgments or decrees which may be rendered in any such suit, action, or proceedings against City. Contractor agrees to indemnify and hold harmless the City from any and all license, royalty and proprietary fees or costs, including legal costs, which may arise out of City's purchase and use of goods, service, or finished end product supplied by the Contractor. Contractor will indemnify City against all claims for damages to persons or property resulting from defects in materials or workmanship. It is expressly agreed by Contractor that these covenants are irrevocable and perpetual.

7. Contractor's Personal Property

CONTRACTOR and each of its subcontractors and suppliers shall be solely responsible for any loss or damage to its or their personal property and

that of their employees and workers, including, without limitation, property or materials created or provided pursuant to this CONTRACT, any subcontract or otherwise, its or their tools, equipment, clothing, fencing, forms, mobile construction equipment, scaffolding, automobiles, trucks, trailers or semi-trailers including any machinery or apparatus attached thereto, temporary structures and uninstalled materials, whether owned, used, leased, hired or rented by CONTRACTOR or any subcontractor, consultant or supplier or employee or worker (collectively, "Personal Property"). CONTRACTOR and its subcontractors, consultants and suppliers, at its or their option and own expense, may purchase and maintain insurance for such Personal Property and any deductible or self-insured retention in relation thereto shall be its or their sole responsibility. Any such insurance shall be CONTRACTOR's and the subcontractors', suppliers' volunteers and employees' and workers' sole source of recovery in the event of loss or damage to its or their Personal Property. Any such insurance purchased and maintained by CONTRACTOR and any subcontractor, consultant or supplier shall include a waiver of subrogation as to Owner. CONTRACTOR waives all rights of recovery, whether under subrogation or otherwise, against all such parties for loss or damage covered by CONTRACTOR's property insurance. CONTRACTOR shall require the same waivers from all subcontractors and suppliers and from the insurers issuing property insurance policies relating to the Work or the Project purchased and maintained by all subcontractors and suppliers. The waivers of subrogation referred to in this subparagraph shall be effective as to any individual or entity even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium, directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property which is the subject of the loss or damage.

8. Theft, Damage, or Destruction of Work

In the event of theft, damage or destruction of the Work, CONTRACTOR will re-supply or rebuild its Work without additional compensation and will look to its own resources or insurance coverages to pay for such re-supply or rebuilding. CONTRACTOR will promptly perform, re-supply or rebuild, regardless of the pendency of any claim by CONTRACTOR against any other party, including Owner, that such party is liable for damages, theft or destruction of CONTRACTOR's Work. This subparagraph shall apply except to the extent that the cost of re-supply or rebuilding is paid by Owner's builder's risk insurance; in such event, Owner waives (to the fullest extent permitted by the builder's risk policy) all rights of subrogation against CONTRACTOR and each of its

subcontractors to the extent of such payment by Owner's builder's risk insurer.

D. ADDITIONAL INSURANCE REQUIREMENTS: The policies shall include, or be endorsed to include, the following provisions:

1. Lake Havasu City, its departments, agencies, boards, commissions and its officers, officials, agents, volunteers and employees wherever additional insured status is required. Such additional insured shall be covered to the full limits of liability purchased by the CONTRACTOR, even if those limits of liability are in excess of those required by this CONTRACT.
2. The Contractor's insurance coverage shall be primary insurance with respect to all other available sources.
3. Coverage provided by the Contractor shall not be limited to the liability assumed under the indemnification provisions of this CONTRACT.

E. NOTICE OF CANCELLATION: Each insurance policy required by the insurance provisions of this CONTRACT shall not be suspended, voided, cancelled, reduced in coverage or in limits without ten (10) business days written notice to City. Such notice shall be mailed directly to Lake Havasu City, Administrative Services Department, Procurement Division, 2330 McCulloch Blvd. North, Lake Havasu City, AZ 86403 and shall be sent by certified mail, return receipt requested.

F. ACCEPTABILITY OF INSURERS: Insurance is to be placed with duly licensed or approved non-admitted insurers in the state of Arizona with an "A.M. Best" rating of not less than A- VII. CITY in no way warrants that the above-required minimum insurer rating is sufficient to protect the CONTRACTOR from potential insurer insolvency.

G. VERIFICATION OF COVERAGE:

1. CONTRACTOR shall furnish CITY with certificates of insurance as required by this CONTRACT. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf and the Project/contract number and project description shall be noted on the certificate of insurance.
2. All certificates and endorsements are to be received and approved by CITY at least ten (10) days before work commences. Each insurance policy required by this CONTRACT must be in effect at or prior to commencement of work under this CONTRACT and remain in effect for the duration of the Project. Failure to maintain the insurance policies as required by this CONTRACT, or to provide evidence of renewal, is a material breach of contract.

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3. All renewal certificates required by this CONTRACT shall be sent directly to Lake Havasu City, Administrative Services Department, Procurement Division, 2330 McCulloch Blvd. North, Lake Havasu City, AZ 86403. The Project/contract number and project description shall be noted on the certificate of insurance. CITY reserves the right to require complete, certified copies of all insurance policies required by this CONTRACT at any time.
-
- H. **SUBCONTRACTORS:** CONTRACTOR's certificate(s) shall include all subcontractors as insureds under its policies **or** CONTRACTOR shall furnish to CITY separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to the minimum requirements identified above.
 - I. **APPROVAL:** Any modification or variation from the insurance requirements in this CONTRACT must have prior approval from the CITY's Human Resources/Risk Management Division, whose decision shall be final. Such action will not require a formal CONTRACT amendment, but may be made by administrative action.
 - J. **EXCEPTIONS:** In the event the CONTRACTOR or sub-contractor(s) is/are a public entity, then the Insurance Requirements shall not apply. Such public entity shall provide a Certificate of Self-Insurance.

Exhibit D

SECTION 310

BID SCHEDULE – Site Six Fishing Dock B25-PW-102015

| <u>ITEM NO.</u> | <u>DESCRIPTION</u> | <u>EST QTY</u> | <u>UNIT OF MEASURE</u> | <u>UNIT PRICE¹ (Word)</u> | <u>UNIT PRICE (Figure)</u> | <u>ITEM TOTAL² COSTS</u> |
|-----------------|---|----------------|------------------------|--|--------------------------------|---|
| BASE BID | | | | | | |
| 1 | MOBILIZATION | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 2 | QUALITY CONTROL & STRUCTURAL INSPECTIONS | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 3 | ENVIRONMENTAL CONTROL & BMP'S | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 4 | ENGINEERING PLANS AND STRUCTURAL CALCULATIONS | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 5 | REMOVAL & DISPOSAL OF EXISTING FISHING DOCK | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 6 | FLOATING DOCK & DECKING | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 7 | WHALERS & STRUCTURAL CONNECTIONS | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 8 | HANDRAIL/GUARDRAIL AND ADA COMPONENTS | 1 | L.S. | _____ | \$ _____ | \$ _____ |
| 9 | UTILITY CHASEWAYS , PULLBOXES ELECTRICAL CONDUIT & LED LIGHTING | 1 | L.S. | _____ | _____ | _____ |

¹The "Unit Price" column shall indicate unit or lump sum prices for each bid item and shall be indicated in written and numerical form.

²The "Item Total Costs" column shall indicate the extension of the unit prices, which is obtained by multiplying the "Estimated Quantity" column by the "Unit Price" column.

Exhibit E

in the Bid Schedule.

6. CONTRACTOR shall submit a completed Section 00450 entitled Hazard Communication Program with the executed copy of this CONTRACT.
7. The term "CONTRACT DOCUMENTS" means and includes the following:
 - 00020 Notice Inviting Bids
 - 00100 Information for Bidders
 - 00300 Bid Proposal
 - 00310 Bid Price Schedule
 - 00400 Bid Bond
 - 00420 Bidder's Statement of Qualifications
 - 00430 Bidder's Affidavit of No Collusion
 - 00450 Hazard Communication Program
 - 00460 Employment Eligibility Verification
 - 00500 CONTRACT
 - 00500A Indemnification and Insurance Requirements
 - 00500B Contractor Claim Handling Procedure
 - 00510 Arizona Statutory Performance Bond
 - 00520 Arizona Statutory Payment Bond
 - 00670 Notice of Award
 - 00680 Notice to Proceed
 - 00685 Certificate of Substantial Completion
 - 00690 Certificate of Final Completion
 - 00700 General Conditions
 - 00800 Special Provisions
 - Technical Specifications and Details
 - Construction Contract Drawings
 - Change Orders
 - Lien Releases (Conditional and Final)
 - Addenda
 - Appendix II to Part 200 Contract Provisions for Non-Federal Entity Contracts Under Federal Awards
8. OWNER shall pay CONTRACTOR in the manner and at such times as set forth in the General Conditions and in such amounts as required by the CONTRACT DOCUMENTS.
9. In the event CONTRACTOR fails to perform any portion of the PROJECT or satisfy any term or condition of the CONTRACT DOCUMENTS, OWNER may at its sole discretion file notice and/or claim of such failure with CONTRACTOR'S surety.
10. Israel. If applicable, Contractor certifies that it is not currently engaged in, and agrees for the duration of this Contract that it will not engage in, a boycott of goods and services from Israel, as defined in A.R.S. § 35-393.
11. Conflict of Interest. The Contract may be cancelled in accordance with Arizona Revised Statutes Section 38-511.

Exhibit F

LAKE HAVASU CITY
CONTRACT DOCUMENTS
VOLUME 1

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DIVISION I – BID AND CONTRACT DOCUMENTS

| | | |
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| SECTION 00020 | - | NOTICE INVITING BIDS |
| SECTION 00040 | - | INTENT TO BID NOTIFICATION |
| SECTION 00100 | - | INFORMATION FOR BIDDERS |
| SECTION 00300 | - | BID PROPOSAL |
| SECTION 00310 | - | BID SCHEDULE |
| SECTION 00400 | - | ARIZONA STATUTORY BID BOND |
| SECTION 00420 | - | BIDDER'S STATEMENT OF QUALIFICATIONS |
| SECTION 00430 | - | AFFIDAVIT OF CONTRACTOR CERTIFYING NO COLLUSION IN BIDDING |
| SECTION 00450 | - | HAZARD COMMUNICATION PROGRAM |
| SECTION 00460 | - | EMPLOYMENT ELIGIBILITY VERIFICATION FORM |
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| SECTION 00670 | - | NOTICE OF AWARD |
| SECTION 00680 | - | NOTICE TO PROCEED |
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| SECTION 00690 | - | CERTIFICATION OF COMPLETION |

DIVISION II – GENERAL CONDITIONS

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DIVISION III – SPECIAL PROVISIONS

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