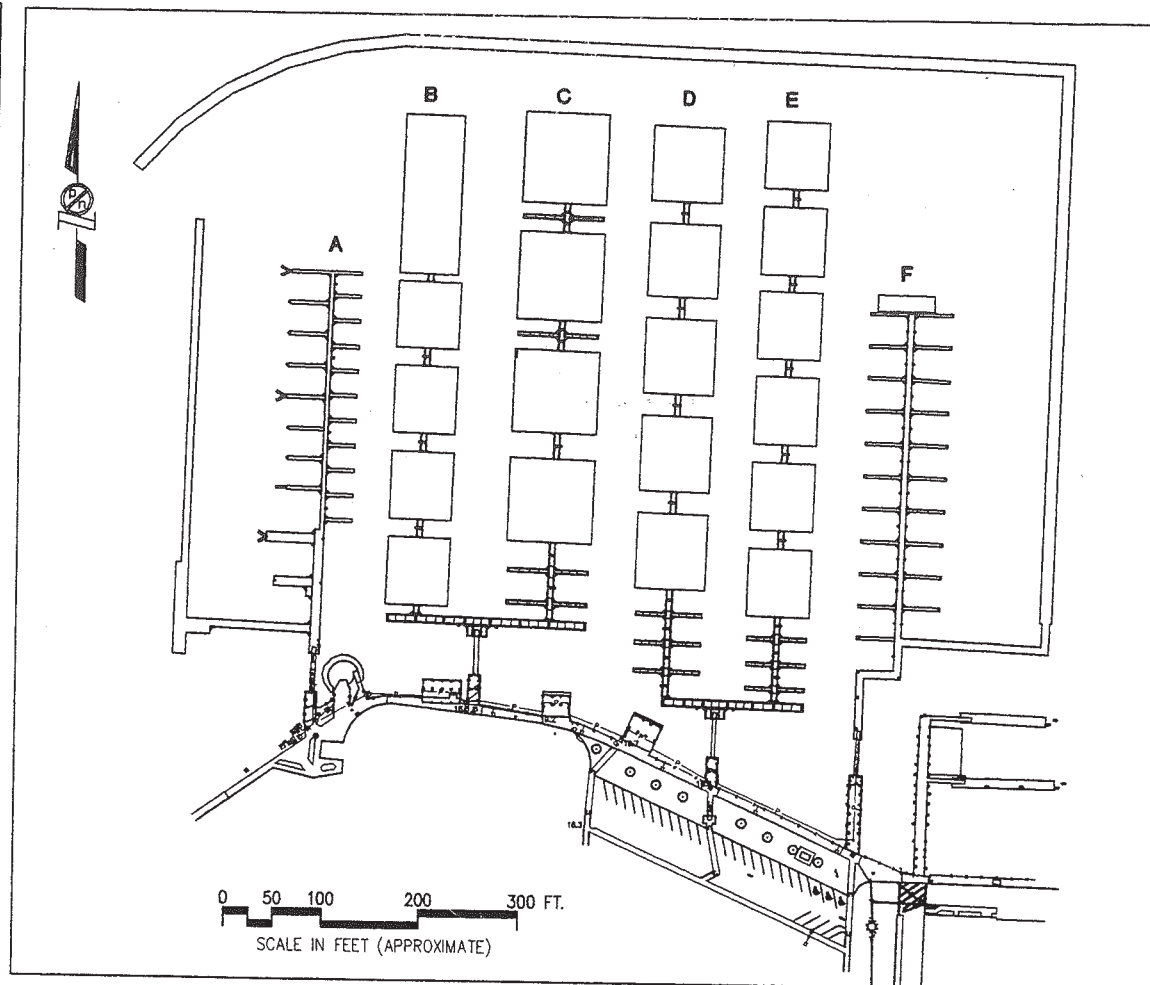


LOCATION MAP



VICINITY MAP

SHEET TITLE

SHEET NUMBER

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PORT OF BREMERTON

PORT ORCHARD

MARINA RECONSTRUCTION

PORT OF BREMERTON-PORT ORCHARD
MARINA RECONSTRUCTION

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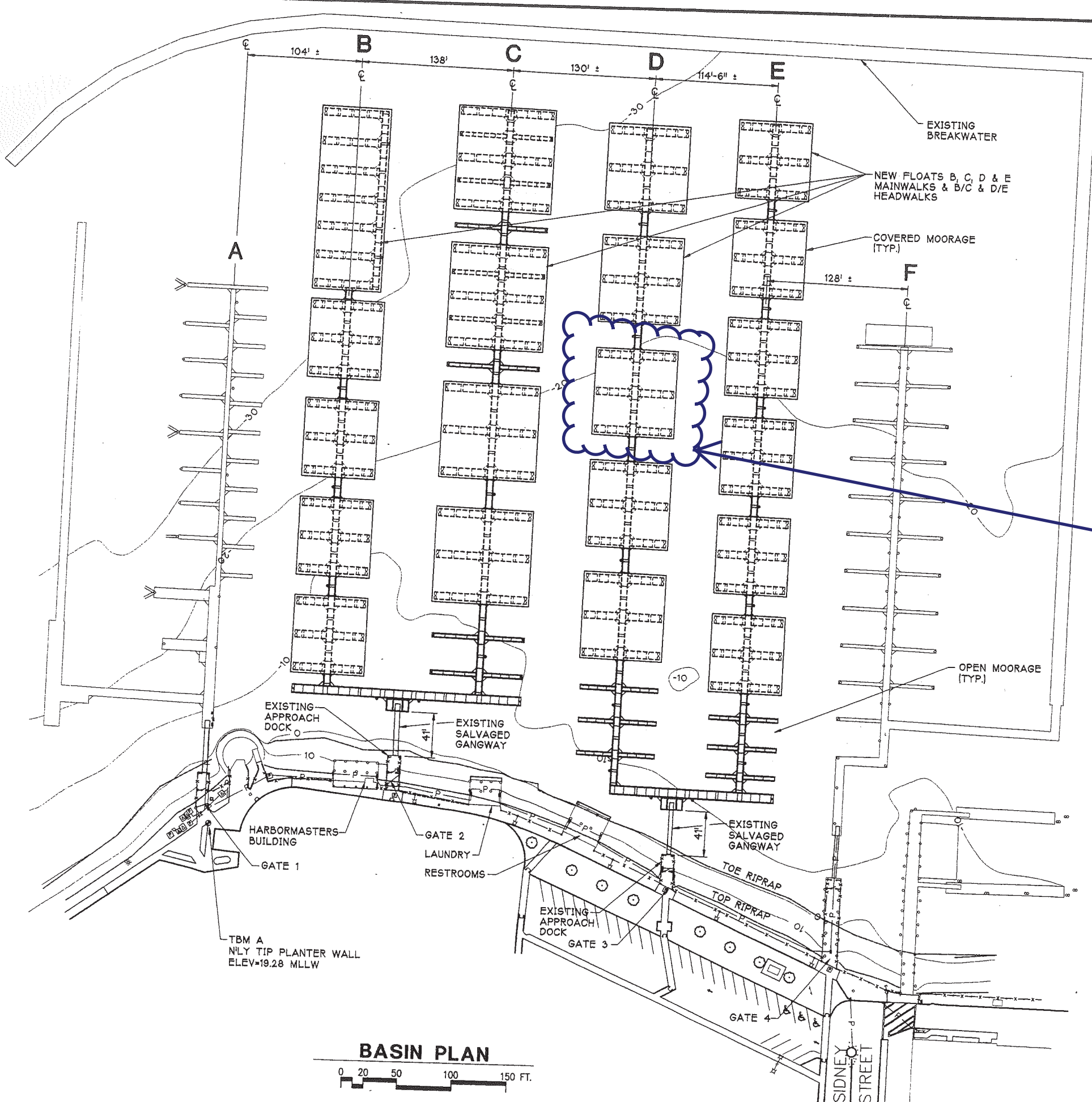
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TITLE SHEET AND INDEX

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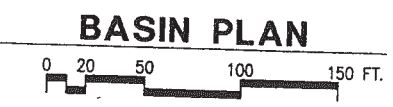


- PROJECT LAYOUT & CONTROL**
- 1) ESTABLISH CENTERLINE ALIGNMENT OF F FLOAT AND USE AS CENTERLINE OFFSET OF MAINWALKS WITH HEADWALKS PERPENDICULAR TO F ALIGNMENT.
 - 2) ESTABLISH HEADWALK OFFSET BY PERPENDICULAR OFFSET AS SHOWN FROM EXISTING APPROACH TO EDGE OF GANGWAY FLOATS.
 - 3) COORDINATE WITH ENGINEER, SUBMIT SURVEY CONTROL FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

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PROJECT AREA



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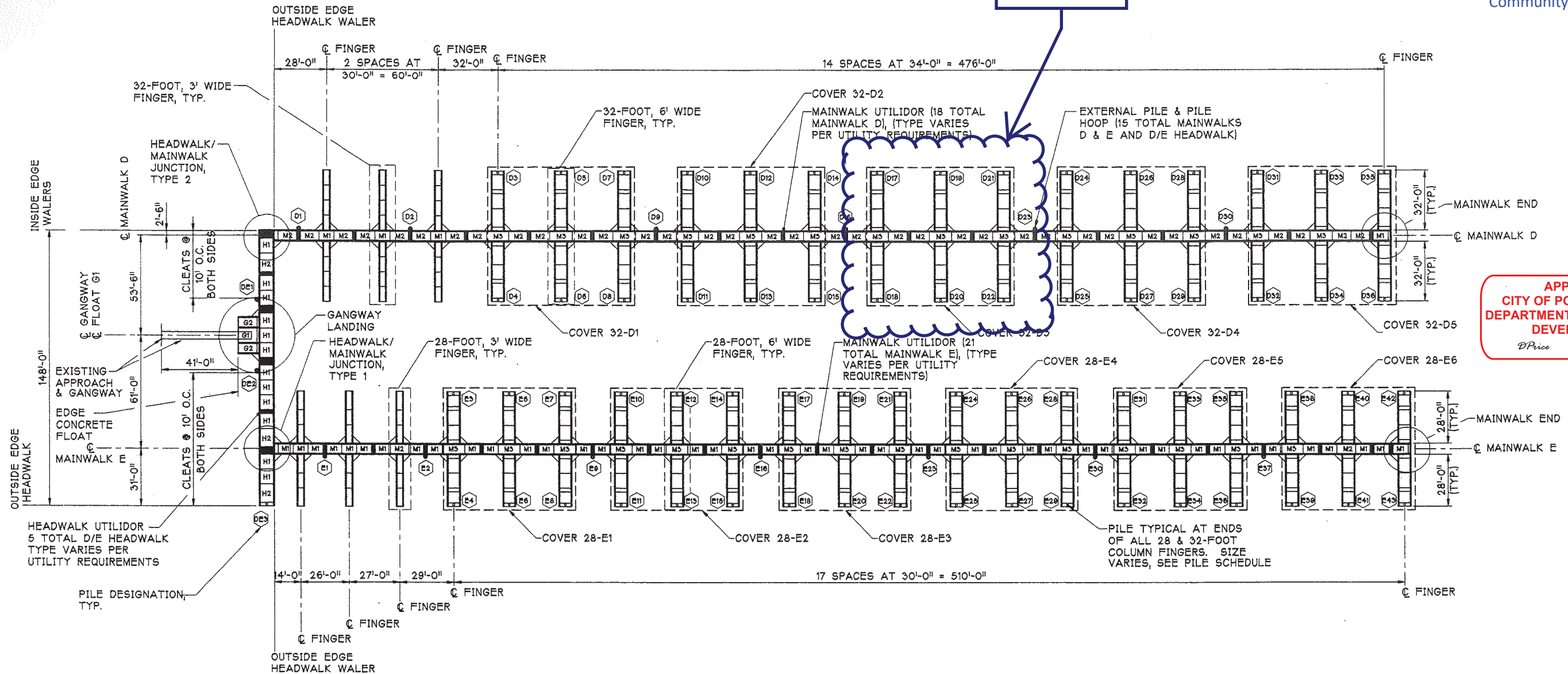
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Sheet 4 of 32

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PROJECT AREA



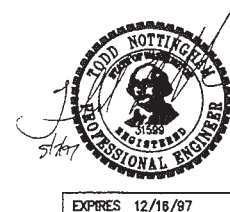
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MAINWALK D & E



CLEATS- PROVIDE AT HEADWALK LOCATIONS NOTED (24 TOTAL)
PROVIDE ONE MAINWALK CLEAT PER SLIP AT BOW LOCATION AS APPROVED BY ENGINEER (154 TOTAL)

GANGWAY/HEADWALK FLOAT UNIT DESIGNATION		MAINWALK FLOAT UNIT DESIGNATION	
FLOAT DESIGNATION	NOMINAL SIZE	FLOAT DESIGNATION	NOMINAL SIZE
G1	8' x 10'	M1	5' x 8'
G2	5' x 10'	M2	5' x 10'
H1	7' x 8'	M3	5' x 12'
H2	7' x 10'		



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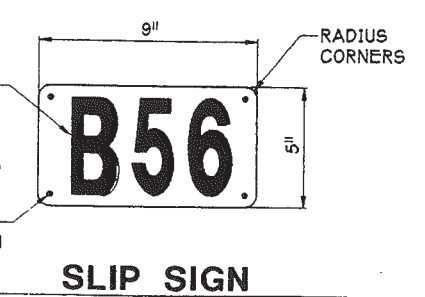
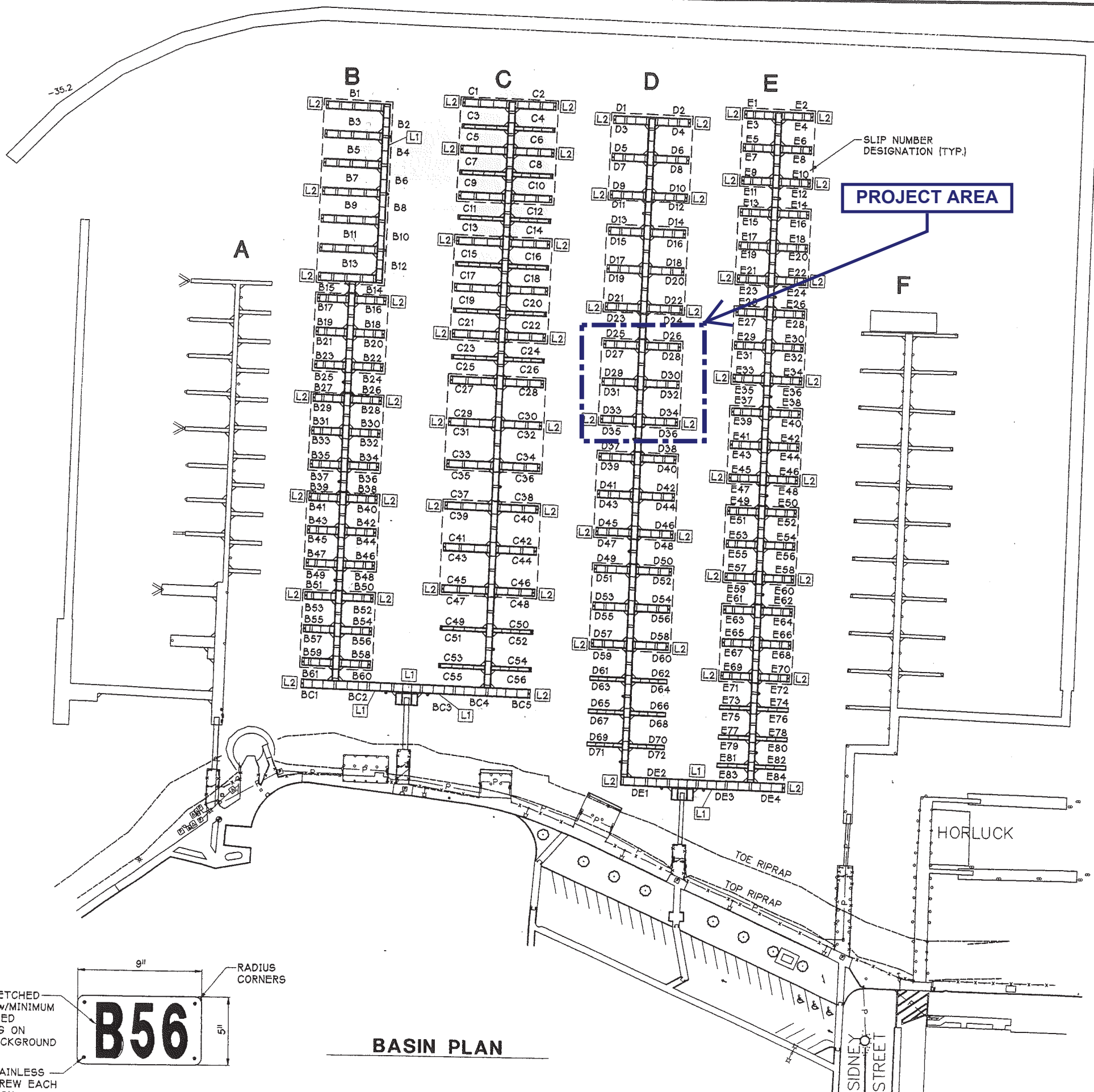
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MAINWALK D & E

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SLIP SIGN

BASIN PLAN

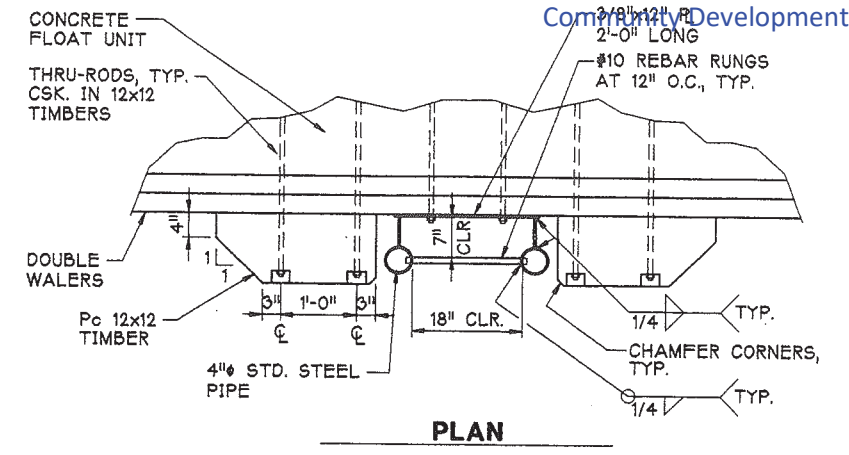
NOTE:

- 1) PROVIDE AND ATTACH SIGNS WITH SLIP I.D., TWO PER EACH SLIP. ONE TO BE ATTACHED AT END OF FINGER FOR HORIZONTAL VIEWING. THE OTHER TO BE ATTACHED TO MAINWALK FOR HORIZONTAL VIEWING.
- 2) PROVIDE AND INSTALL A DOCK BOX FOR EACH SLIP. DOCK BOX TRIANGULAR 20 Cu. Ft. MANUFACTURED BY CHEYENNE LIVESTOCK & PRODUCTS. PROVIDE AT ALL TRI-BRACES THAT DO NOT HAVE UTILITIES. ATTACH PER MANUFACTURERS RECOMMENDATIONS.
- 3) PROVIDE AND ATTACH LIFE RINGS AS MANUFACTURED BY CHEYENNE w/3"- $\frac{1}{2}$ " C.G. APPROVED RING & 90-FOOT ROPE w/ FLOAT. MOUNT TO WALER AS APPROVED BY ENGINEER. LIFE RINGS AT 200' O.C. TO MAINWALK. 4 AT MAINWALK & ONE EACH HEADWALK. (18 TOTAL)
- 4) PROVIDE LADDERS AT LOCATIONS SHOWN
 L1- ATTACH TO MAIN OR HEADWALK (7 TOTAL)
 L2- ATTACH TO INTERNAL PILE HOOP (53 TOTAL)

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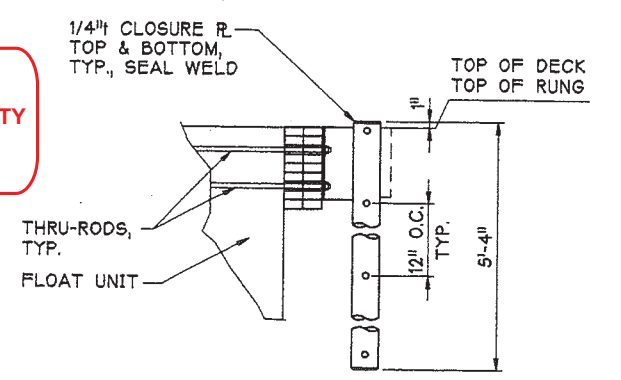
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SECTION

TYPE L1 LADDER



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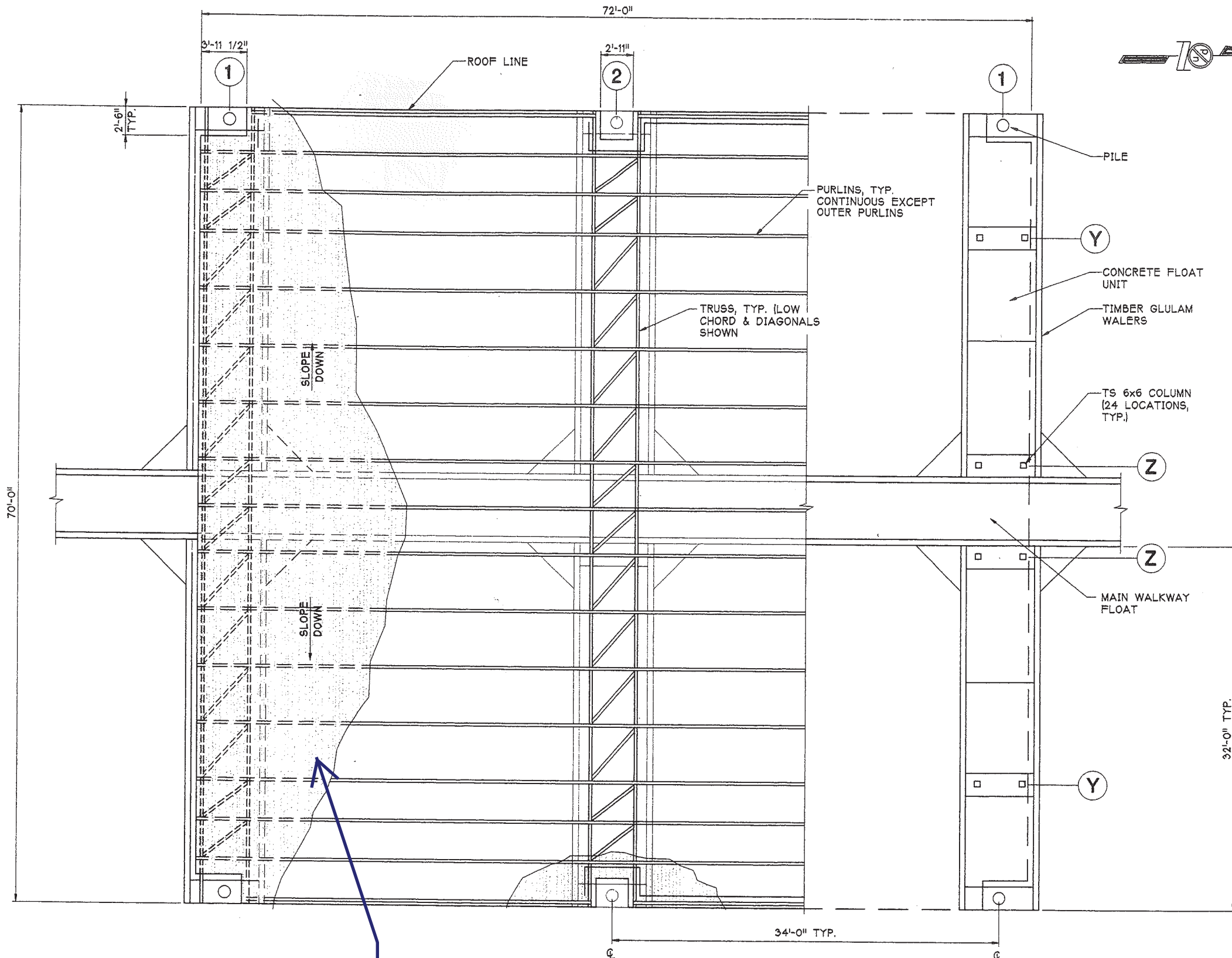
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 PLOT 1:1 W/ANCH.FCP 04-30-97



APPROXIMATE DEAD LOAD FLOAT REACTIONS	
LOCATION	COLUMN SET LOAD (KIPS)
1Y	4.8
1Z	3.6
2Y	7.5
2Z	5.3

INCLUDES ESTIMATED COLUMN, TRUSS, PURLIN AND ROOF WEIGHT. CONTRACTOR VERIFY.
 NOTE: COLUMN LOADS ARE FOR THE DOUBLE COLUMN SET AT THE DESIGNATED WELDMENT.

MEMBER SIZES	
COLUMNS	TS 6x6x3/16"
PURLINS	TS 6x4x3/16"

Per 10/17/97 revision:
 Columns - 4" x 4" x 1/8"
 Purlins - 8" x 2.5" x 14 ga.

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ROOF METAL ROOFING TO BE REPLACED FOR SLIPS D27 - D34

TRUSS/PURLINS
 COVER 32 PLAN

COLUMN/FLOATS

Designed: MH
 Drawn: DRH
 Checked:
 Project No.: 97416

Date: MAY '97
 Scale:

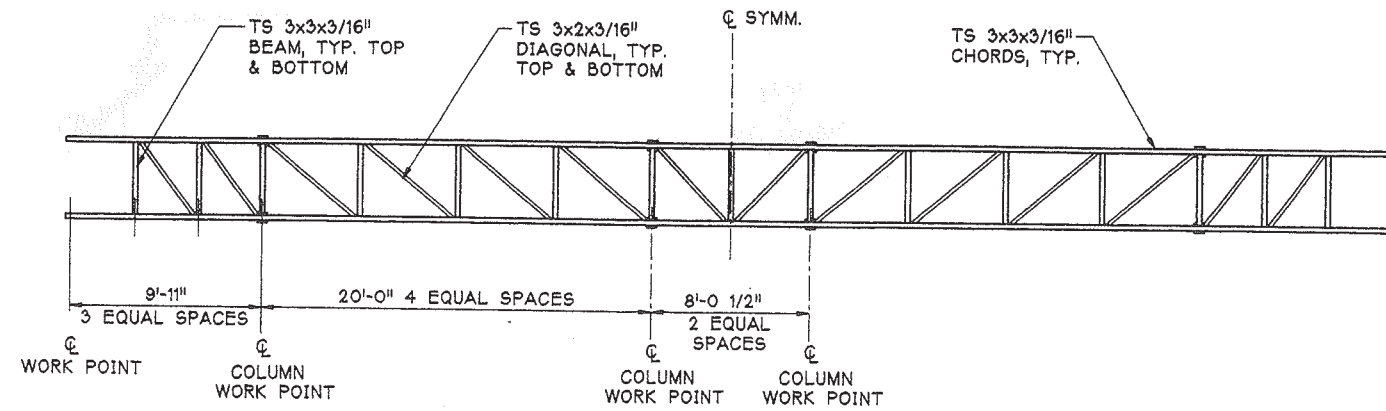
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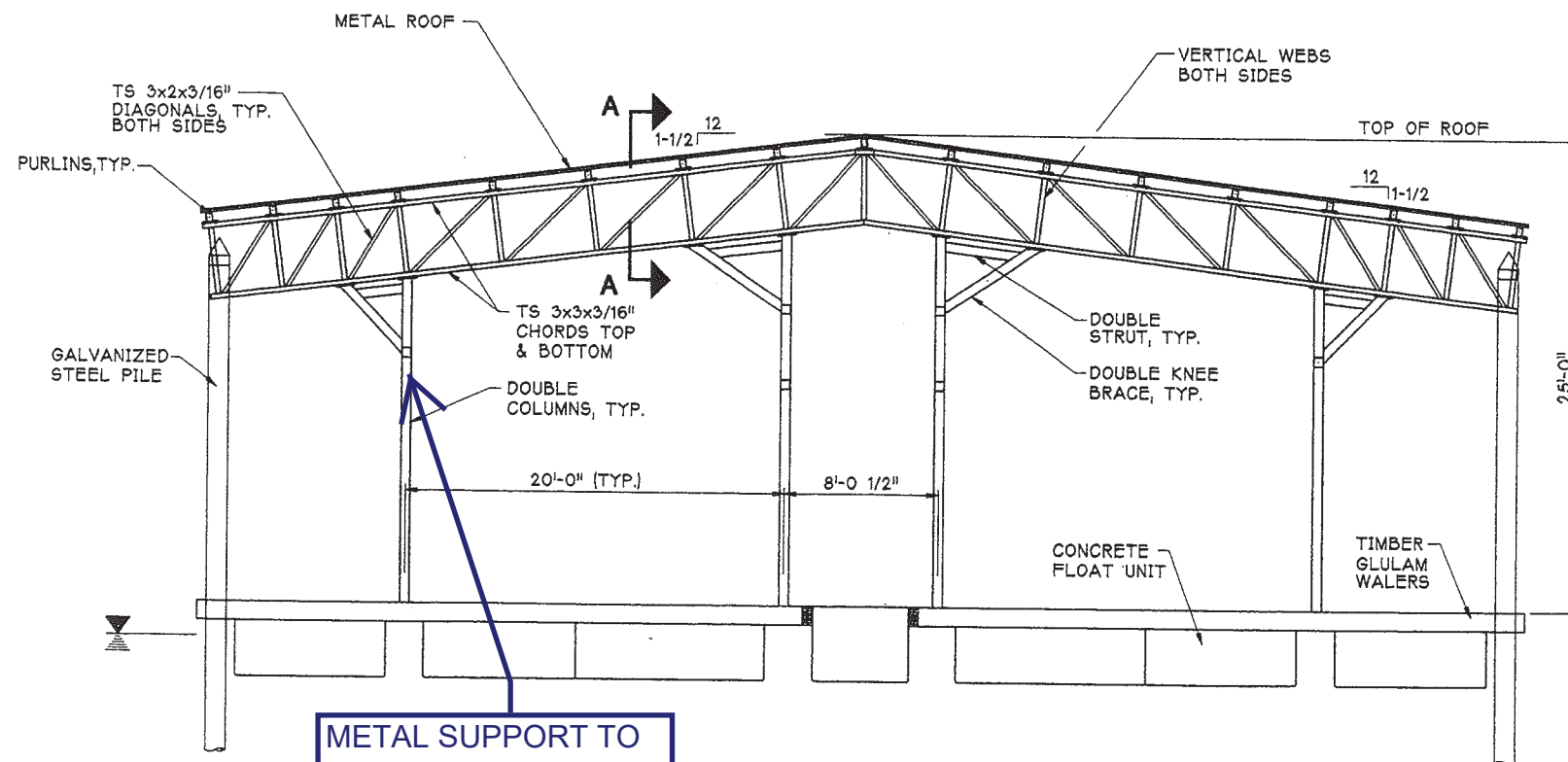
COVER 32 PLAN
 Sheet 23 of 32

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**TRUSS PLAN
32-FOOT SLIPS**



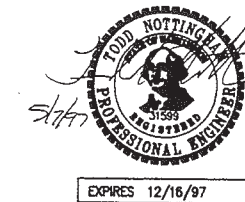
**TRUSS SECTION
32-FOOT SLIPS**

NOTE: DETAILS NOT SHOWN SIMILAR
TO COVER 28 SECTION

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COVER 32 SECTION

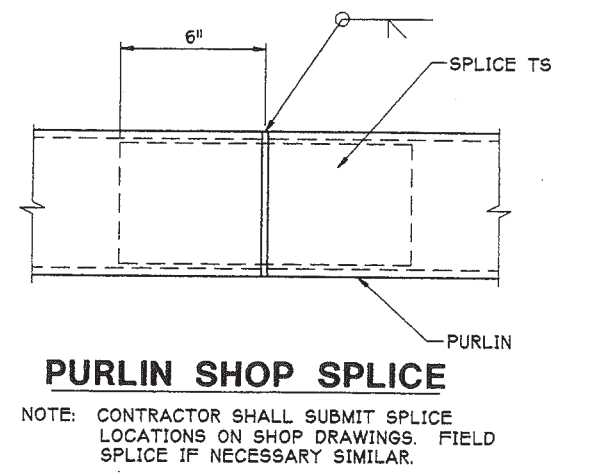
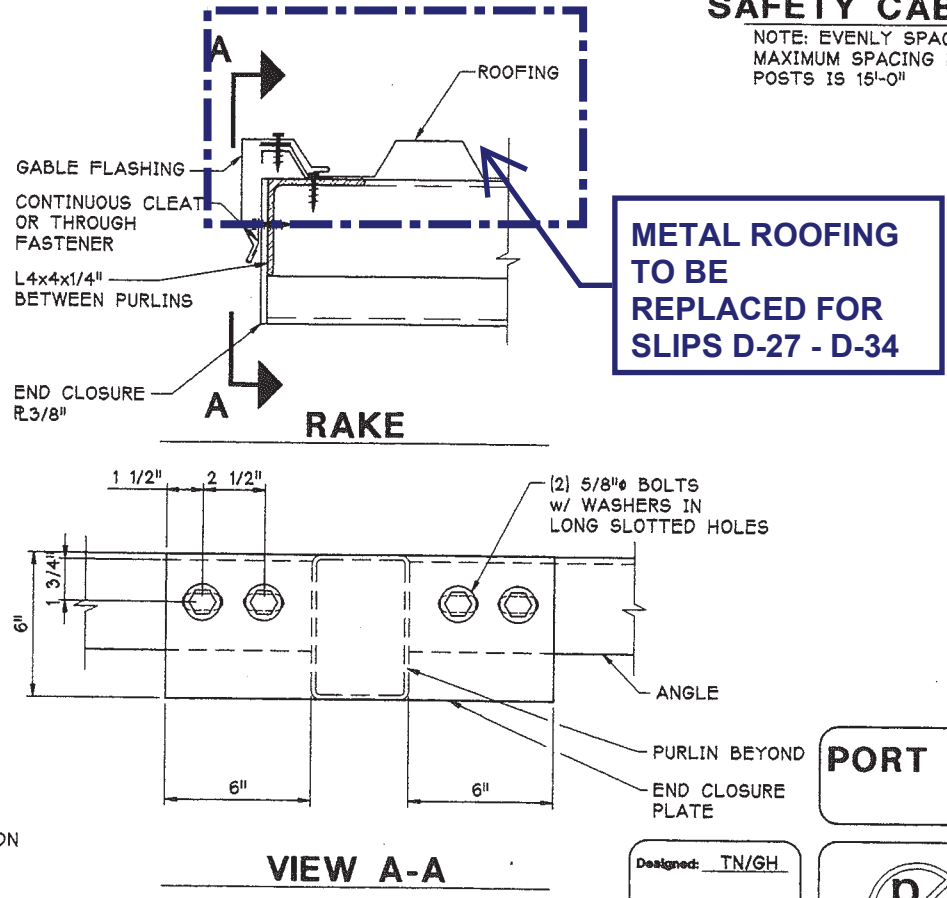
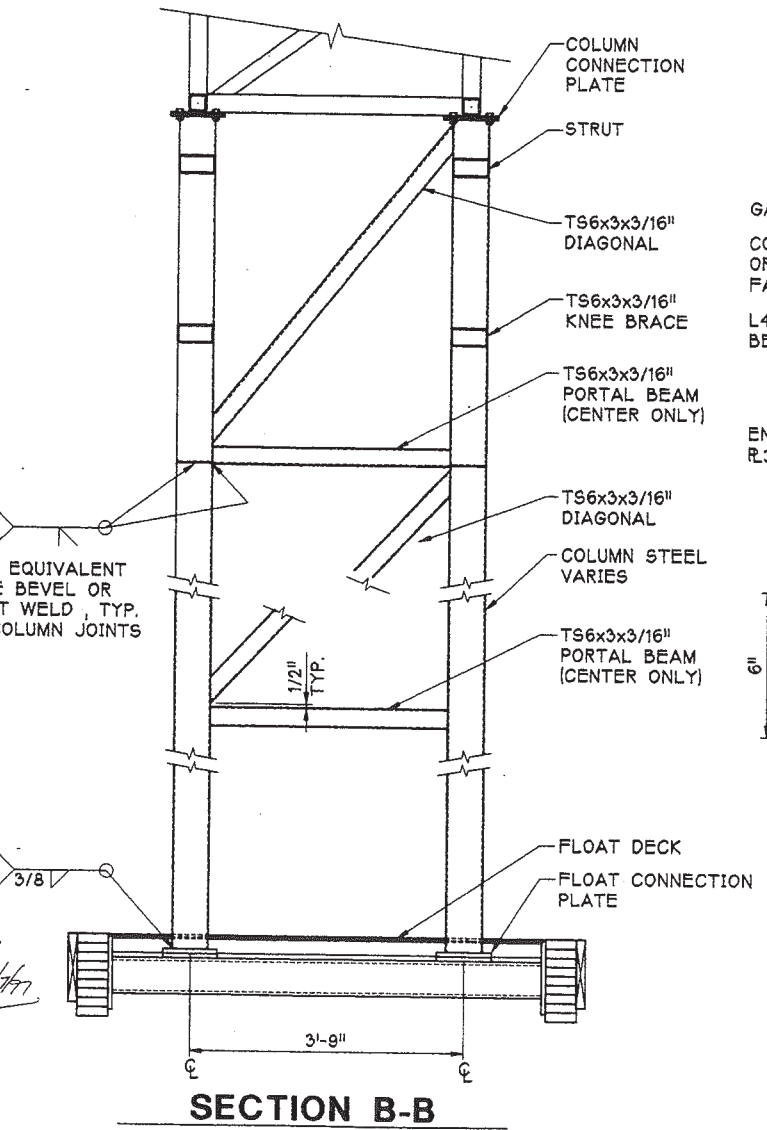
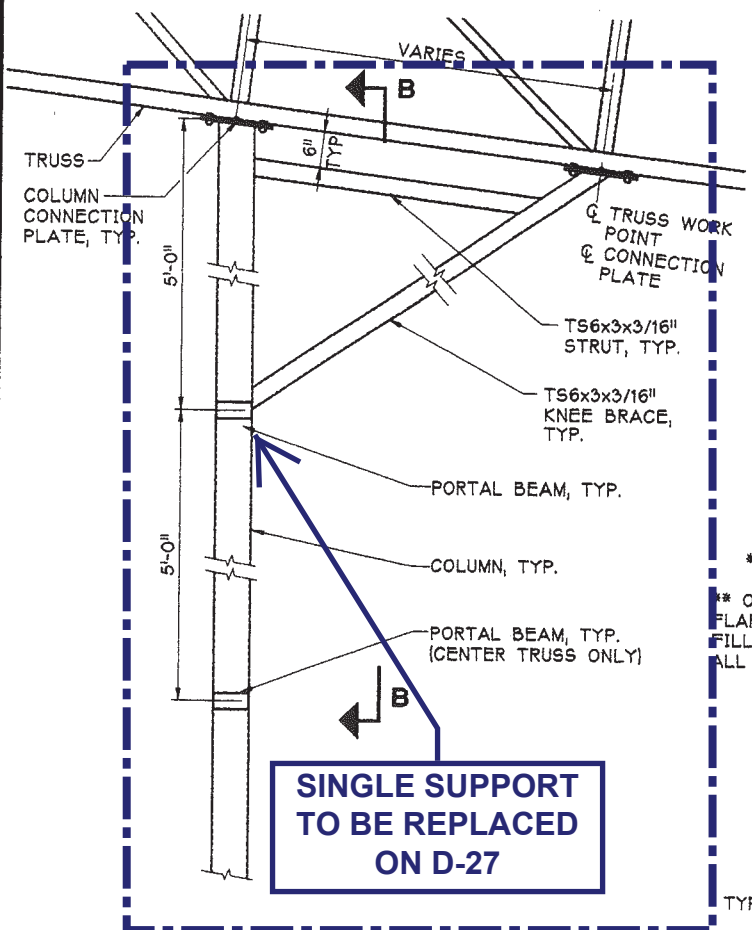
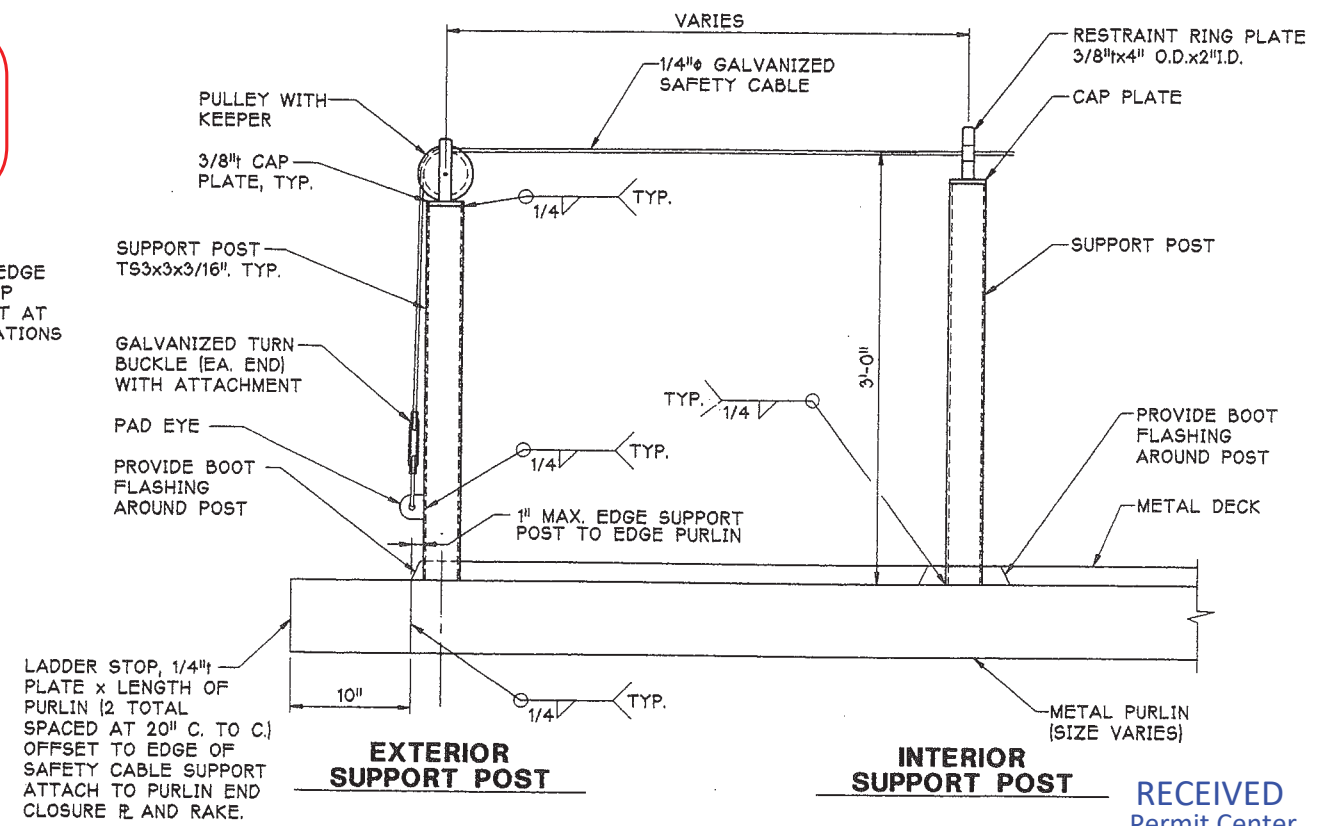
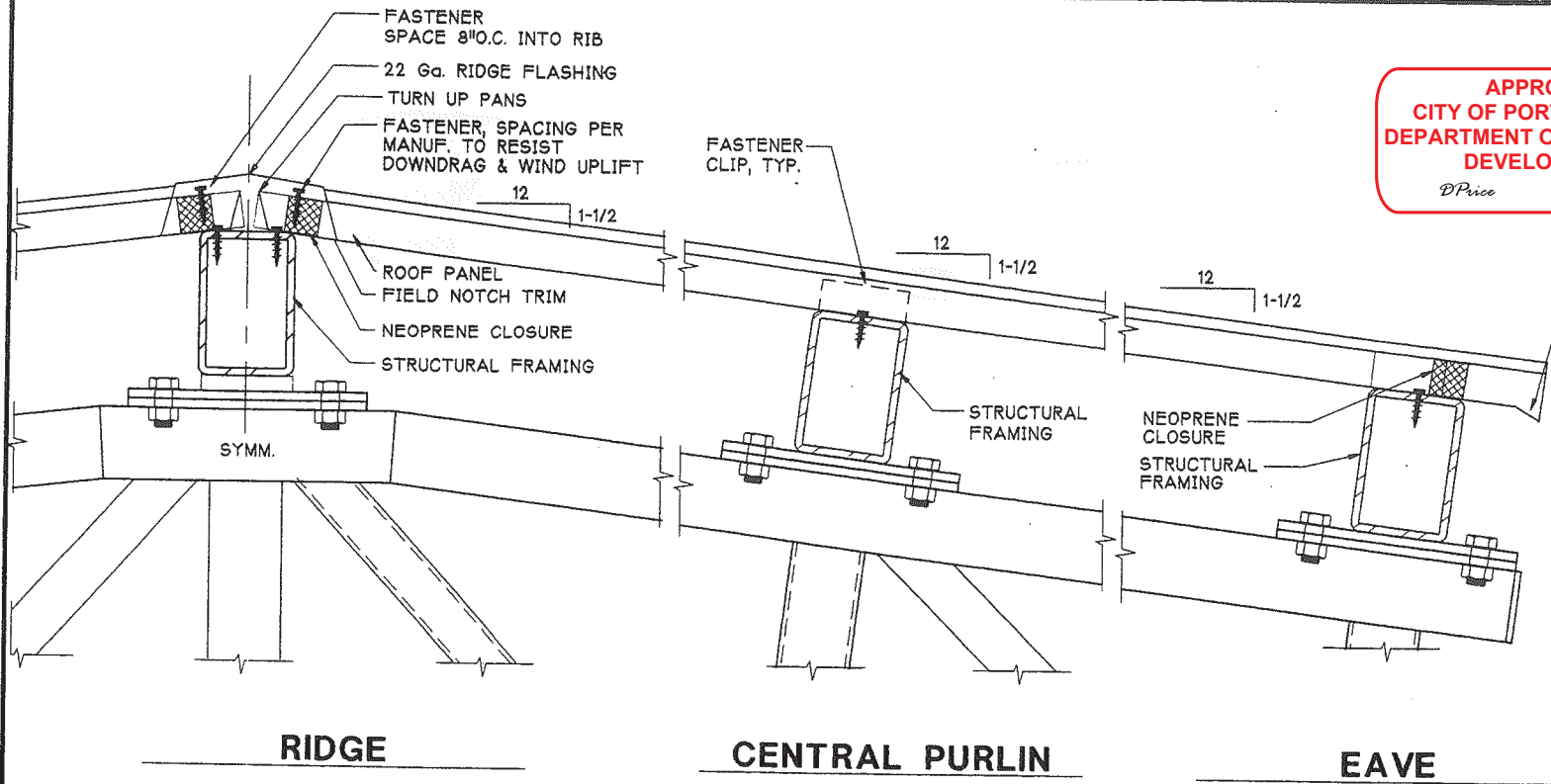
Sheet
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ELEVATION SAFETY CABLE SYSTEM
 NOTE: EVENLY SPACE SUPPORT POSTS. MAXIMUM SPACING FOR SUPPORT POSTS IS 15'-0"

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COLUMN & ROOF

Sheet
29 of 32

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FLOATS

The work covered under this section is in addition to the work covered under General section. Specific items covered in this section supersede those covered in the General section in case of conflict.

FLOATS - GENERAL

The float manufacturer shall have a minimum of five (5) years experience in the design and manufacturing of concrete floats. The concrete float manufacturing facility shall provide the proper environment and physical conditions necessary for casting high quality concrete float units. The facility shall provide adequate work space, equipment, level casting surfaces, and protection from direct sunlight, wind, moisture, and freezing.

The float system designed by the manufacturer shall consist of modular concrete float units as required to provide the configuration shown on the drawings.

Freeboard under all dead loads shall not be more than one-half (1/2) inch below nor more than one (1) inch above the freeboard shown in the drawings after one year. Dead loads shall consist of the float system, walers, rubstrips, pile guides, utilities, utility pedestals, transformers, roof cover structure and all other attached appurtenances.

Floats with special dead loads shall have the same freeboard as floats without such loading so that no residual stresses or tilting is incurred when the modules are connected. Walking surfaces of float units shall be level and flush with adjoining float units and shall float level under dead load. The maximum slope of the float deck under dead load is one (1) inch per ten (10) feet of float length or width. The maximum height variation between adjoining surfaces such as timber waler and concrete or steel and concrete shall be 1/4-inch.

FLOAT MATERIALS AND FABRICATION

CONCRETE

The concrete floats shall be cast in steel forms capable of maintaining the proper shape, lines, and dimensions of the float units. The dimensions of the finished float unit shall not vary by more than 1/8-inch from the dimensions shown in the approved shop drawings.

The form shall be properly coated with a release agent to allow for the easy removal of the form and to provide for a smooth form finish. The concrete in the float units shall be vibrated internally and/or externally to assure a smooth dense surface finish. Small surface holes caused by air bubbles, normal color variations, normal form joint marks, and minor chipping and spalls shall be tolerated, but should be minimized using good industry practice of cleaning forms and placing concrete. Major imperfections, honeycomb, cold joints or other defects will not be permitted. Acceptable cracks are limited to those of hairline nature that show no tendency to open.

All reinforcement shall be lapped a minimum of twelve (12)-inches at splices and shall have a minimum of three quarters (3/4) inch concrete cover. Welded wire fabric shall be lapped a minimum of 8 inches at all joints and splices and shall be centered in the thickness of the concrete at all locations. Fabricator shall provide means of holding the fabric into position such as staples, chairs, or other means as approved by Owner to facilitate the accurate placement of the fabric.

Float top surfaces shall be struck off after initial set, steel troweled, then broom and 3/8-inch edger finished before curing, unless otherwise approved. All cracks shall be filled with crack filler. All float tops shall be treated with approved concrete sealant after curing.

TIMBER

Lumber shall be fabricated to provide uniform gaps and butt joint connections. Lumber splices shall not exceed 1/2-inch between adjoining ends. All walers, fascia, spacers, plywood or any other member which is subject to foot traffic shall be flush with the concrete walking surface.

POLYSTYRENE

Float inner cores shall be closed-cell expanded polystyrene in accordance with ASTM D-1621. The density of the polystyrene shall be between 1.25 and 1.5 pounds per cubic foot and billets shall not contain greater than 5% regrid material. The foam shall have a maximum adsorption of 3 percent by volume as tested by ASTM C-272. Billets shall have a variation in design dimension of less than 1/8 inch.

The inner cores of the float modules shall be held in a true position during casting with a maximum allowable variation of 1/8-inch from the dimensions shown on the approved shop drawings.

Foam core shall be made of not more than 4 laminated sections. Laminations shall be glued with a low solvent glue, and shall be strapped to prevent delamination during transportation and handling. Leveling billets w/ coating or covering such as 60 mil Polyurethane as approved by the Owner shall be utilized to level floats as necessary.

UTILITY CHASES

Each walkway shall have PVC sleeves embedded as required for the electrical system. Sleeves shall remain above water surface under dead load conditions and shall be designed to facilitate installation, removal, and servicing of the utilities.

THRU-ROD CONNECTIONS

The minimum dimension for all thru rods for structural attachment is 3/4-inch thread diameter. All thru-rods shall be placed within PVC sleeves cast in the float units. The maximum inside diameter of the PVC shall not exceed 7/8-inch. No connecting device shall protrude beyond the fascia in the berth area. Any connecting device protruding above the surface of the deck shall have a low rounded profile.

CAUTION

Floats are not stable until completely assembled & will not float evenly until full dead load is applied.

MARKING AND HANDLING

All floats shall be clearly identified on one side and one end with the date of manufacture, specific float type and job number.

Except as otherwise approved, floats shall be cured a minimum of 7-days before transporting or assembling. The concrete floats shall be lifted and supported during stockpiling, transporting, and assembly only at lifting or supporting points as shown on the approved shop drawings. Floats shall be protected against damage from any cause, any damaged units shall be rejected.

ROOF COVER

The work covered under this section is in addition to the work covered under General section. Specific items covered in this section supersede those covered in the General section in case of conflict.

ROOF COVER - GENERAL

The foundation for the cover consists of floats which have a high deflection/load response compared to normal steel erection. The Contractor shall take into account this condition in performing the work for this project. The Contractor shall provide an erection sequence plan which accounts for the variable support conditions.

For each of the roof structures a dead load reaction at the column locations is shown. This load assumes that the floats are provided level with the dead load column reactions in place. The actual dead load for each structure shall be verified by the Contractor and coordination between suppliers and fabricators performed to insure a workable system.

It will be necessary to ballast the floats during erection to maintain a true and level surface which is needed for erection and bolting of the members. The erected structure shall have balanced reactions to those anticipated for dead loading so that no residual stresses or tilting is incurred when the steel members are connected.

ERECTION

Steel erection shall conform to AISC requirements.

ANTICIPATED COVERED ROOF ERECTION SEQUENCE

- 1) Fully assemble floats.
- 2) Ballast floats, stabilize w/ outriggers as necessary.
- 3) Erect columns.
- 4) Adjust ballast & place truss.
- 5) Place purlins, adjust ballast as purlins are added.
- 6) Add roof material, remove last of ballast.

ROOF PANELS

Roof shall have a minimum 24 gauge thickness, G90 galvanized with a Polyvinylidene Fluoride (PVF2) coating on both sides. All other roof components including rake trim, eave trim and gutters shall be 22 gauge minimum, G90 galvanized and coated with PVF2. Color shall be as specified on the plans.

Roof shall be capable of supporting both snow load and wind loads as described in these General Notes. Roof shall meet requirements of UL90 and ASTM 330E as applicable. In addition the roof shall be able to support a 250 pound point load without damage to the roof. Maximum deflection under load shall be L/180.

Material shall be connected to the purlins with either clips or screws per manufacturer's recommendations to meet the required loading.

Submit shop drawings showing complete roof system for Owners review and approval. The roof system shall include all roof panels, trim, flashing, miscellaneous shapes, end closures, gutters, seals fasteners, and any other components required to provide a complete roof. Drawings shall specify all materials, finish, dimensions, connection details, panel layout and erection procedures.

Provide and submit documentation for a 15-year minimum warranty life for all moorage roof components for in-service conditions.

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GENERAL NOTES

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32 of 32

21-235

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GENERAL NOTES

APPLICABLE CODES

All local codes plus the following specifications, standards and codes are part of these General Notes:

- 1) Uniform Building Code 1994 Edition
- 2) AWS D1.1 Structural Welding Code - current edition
- 3) ACI-318 Building Code Requirements for Reinforced Concrete
- 4) ASTM Specifications

In the event that there is a conflict between the above references and these General Notes the following priority will be followed:

- 1) All project permit requirements
- 2) These General Notes and Plans
- 3) Local Codes
- 4) The specifications, standards and codes listed above in order of precedence

DESIGN CRITERIA

Dead Loads - All
 Roof Snow Load - Uniform 25 psf
 Float Live Load - Uniform 40 psf, 1000 pound concentrated.
 Wind Load - 80 mph, exposure D
 Vessel Lengths - Maximum length equal to adjacent finger float length

MATERIALS AND CONSTRUCTION

GENERAL

The following section covers all phases of construction for this project, except electrical requirements which are covered elsewhere. Additional specific requirements are covered in the various sub-sections and on the plans. Requirements covered in the sub-sections supersede those in this section in case of conflict.

Materials not specifically noted in these General Notes or elsewhere on the drawings shall be submitted by the Supplier for approval. Approval will be based on conformance to current standards utilized by the Owner. All materials must conform to good workmanship, acceptable industry standards and manufacturers recommendations.

Construction not mentioned in these General Notes shall be performed using reasonable care and good construction practices. Final inspection and acceptance of all work not specifically included in these General Notes or on the drawings shall be made by the Owner. Approval of all methods and products shall be based upon conformance to the General Notes, drawings, quality of workmanship, applicable industry standards, and pertinent manufacturers recommendations.

STRUCTURAL STEEL

Miscellaneous plates and shapes shall be ASTM A36, galvanized.
 Pipe shall be ASTM A53, Grade B, type E or S, galvanized.
 Tubes shall be ASTM A 500, Grade B, galvanized.

STEEL WELDING

Per AWS D1.1. All welders shall be qualified per AWS for the type of welding anticipated. Welds will be spot tested by the Engineer by VT, MT, or UT and those failing shall be repaired at the Contractors expense which will also include all costs for retesting. No welding through galvanized coating will be performed. The galvanizing within one inch of the weld shall be removed and repaired after welding.

BOLTS

All bolts connecting steel to concrete or steel to steel connections shall be ASTM A325, galvanized. Washers shall be used under both head and nut of all bolts. Steel to steel bolted connections shall be tightened per AISC turn-of-nut method.

All other bolts, lag screws, nuts, washers, nails and spikes shall meet ASTM A307 or ASTM A36 or similar requirements as approved by the Engineer and shall be hot-dipped galvanized. Malleable iron washers shall be used in all areas where the bolt head or nut shall bear against wood, except under economy heads.

GALVANIZING

All steel, pile and hardware shall be hot-dipped galvanized per ASTM A123 or A153 after fabrication unless otherwise noted. Damaged galvanizing, including that removed for welding shall be repaired by stick galvanizing with zinc or aluminum alloy sticks to a minimum thickness of 12 mills. Contractor shall submit repair material and methods of repair for review and approval.

SPRAY METALIZING

Steel as noted on the plans shall be spray metalized with aluminum or zinc per the Steel Structures Painting Council (SSPC) Guide No. 23. Minimum dry coating thickness of 6 mil is required for steel that is above waterline. For steel located below water a minimum of 12 mil coating is required. Damaged metalizing, including that removed for welding, shall be repaired by stick galvanizing similar to method covered in Galvanizing section.

CONCRETE

Concrete shall be designed, mixed and batched in accordance with ACI A318. Batched concrete shall also conform to ASTM C94. Aggregates shall conform to ASTM C33, with maximum aggregate size of 3/8 inch. Portland cement and silica fume concrete appropriately proportioned to meet or exceed the following minimum requirements for strength and serviceability.

Minimum 28 day compressive strength = 6000 psi
 Minimum cement content = 6.5 sack per cubic yard
 Minimum Silica Fume content = 50 pounds per cubic yard
 3.2 pounds of 1-1/2 inch Forta-Fiber per cubic yard (except sides and bottom which need not have fibers).
 Maximum water cement ratio = 0.40
 Air Entrainment = 3% to 7%
 1 to 2 inch slump delivered to the site prior to addition of superplasticizer. Plasticizer shall be POZZ 322N or approved equal, adjust as required to obtain workable consistency.

Admixtures, if used, including water reducers, retarders, and accelerators, shall conform to ASTM C494. Air entraining mixtures shall conform to ASTM C260.

Portland cement shall be ASTM C150 Type II. Type III may be utilized if chemical requirements for saltwater environment are met as approved by the Engineer. Submit for review and approval.

Fill all cracks with crack filler. Concrete crack filler shall be Sikapronto 19. Seal all concrete with concrete sealer. Concrete sealer shall be Chem-Trete BSM 40.

CONCRETE TESTING

Concrete shall be tested by a Contractor provided independent testing laboratory, as approved by the Owner. All testing shall be performed in accordance with respective ASTM and ACI requirements.

A minimum of three (3) compressive test cylinders shall be taken daily per mix, cured and tested. Test results shall be submitted on seven day and twenty-eight (28) day breaks. Unit weight, entrained air tests shall be taken daily from the same material sampled and used in the compressive strength cylinders.

The Contractor shall submit test results for the concrete in accordance with ACI-318. Items constructed with inferior concrete shall be rejected.

CONCRETE REINFORCING

All reinforcing bar shall be ASTM A615 Deformed Bar, grade 60, galvanized. Bar bend radius shall account for galvanizing embrittlement. Rebar to be welded shall be of weldable quality conforming to ASTM A706, galvanized. Welded wire fabric shall conform to ASTM A185, galvanized.

TIMBER

All sawn timber shall conform to #1 Coast Region Doug Fir or better according to WCLIB Grading Rules, pressure treated.

GLUE-LAMINATED TIMBER

All Glulam members shall be manufactured with Coast Region Douglas Fir that conforms to AITC 117-87 specifications and shall be manufactured in balanced combinations having equal design values for both positive and negative bending. The glulam beams shall have an industrial finish, shall be for exterior use and have design values equal to or exceeding the following when loaded perpendicular to the widest faces of the laminations: Doug-Fir glulams shall be pressure treated.

Bending (Fb) = 2400 psi.
 Horizontal Shear (Fv) = 165 psi
 Modulus of Elasticity (E) = 1,700,000 psi

TIMBER PRESSURE TREATMENT

All sawn timber and glulam timber shall be incised and pressure treated according to AWWA C18 specifications to a net dry salt retention of not less than 0.60 pounds per cubic foot of ACZA (ammoniacal copper zinc arsenate) in the assay zone. Timber components shall be cut to length, drilled, dapped, and shaped as much as practical before pressure treating. Any field fabrication or damage shall be repaired per AWWA M4.

All timber members being manufactured shall be produced in accordance with the current industry BMP (Best Management Practices) to include the following:

- 1. Manufacturing good housekeeping practice shall be observed to insure a minimum of sawdust, surface residue, and other foreign material on the wood product prior to treatment.
- 2. After pressure period and the treating solutions has been removed from the retort, the treated material shall be aqua steamed for a minimum of one hour at 212 F with a 2% aqua ammonia solution. After aqua steaming and the aqua ammonia is removed from the retort a final vacuum for two hours at 180 F to 210 F shall be applied.
- 3. Prior to shipment, material shall be air dried under cover or kiln dried to a maximum final moisture content of 30% in the treated zone by the oven dry method.

SURVEY

All construction surveys shall be performed by or under the supervision of a Surveyor licensed in the State of Washington.

An accurate method of horizontal and vertical control shall be established by the Contractor and approved by the Owner before construction begins. The Contractor shall maintain the control system throughout the project. If at any time the methods utilized fail to provide accurate location the Contractor may be required to suspend work. The Contractor shall lay out the work from established horizontal and vertical control points indicated on the drawings and shall be responsible for all required measurements taken from these points.

The Contractor shall furnish at its own expense all stakes, templates, platforms, equipment, range markers, and labor as may be required to lay out the work from the Control Points furnished by the Owner. It shall be the responsibility of the Contractor to maintain the Control Points until authorized to remove them. If such points are destroyed or disturbed they shall be reestablished by the Contractor at its own expense.

DEMOLITION

Demolition shall be completed as described on the plans and as required by the permits.

STAGING AREA

No upland staging area is available for the Contractors use. Contractor shall provide their own area off site.

SUBMITTALS

The Owners review of submittals will be for general conformance only and it shall remain the responsibility of the Contractor to conform to all requirements of the plans and specifications. Any intended deviation from the plans and specifications must be specifically identified by the Contractor and specifically approved by the Owner to be acceptable.

Shop drawings of all fabricated materials shall be submitted to the Owner for written approval prior to fabrication or mobilization of any item. A minimum of five sets shall be provided for each submittal, of which two will be returned to the Contractor. The Contractor should allow two weeks from the time of receipt for review of submittals by the Owner for a reasonable number of drawings.

Certifications, manufacturers data and other information for all materials, including those not specifically shown in these notes or on individual drawings, shall be submitted to the Owner for written approval to verify conformance with the plans and specifications. In the event that the plans or specifications do not specifically reference a material, the approval of materials will be based on its conformance to the Uniform Building Code. All methods and materials shall conform to these General Notes, good workmanship, generally accepted industry standards, and manufacturers recommendations.

The following is a partial list of required submittals for the Project. This does not constitute a complete list as it will vary depending upon the Contractors methods.

Construction Plans (includes plan drawings and written description of methods):

- 1. Survey plan and updates
- 2. Staging area plan - including dates of use, security and pedestrian control plan
- 3. Pile driving plan and equipment
- 4. Pile socket plan and equipment
- 5. Roof erection plan
- 5. Daily Operation Reports - Furnish weekly (includes personnel and equipment)

Shop Drawing Plans.

- 1. Structural Steel.
- 2. Concrete Floate, including floatation calculations, timber and all other associated items.

Materials Certifications Submittals:

- 1. Concrete mix and all associated items, including concrete strength tests.
- 2. Reinforcing steel.
- 3. Structural Steel.
- 4. Steel Pipe Piles.
- 5. Amenities
- 6. Signs

APPROVED
CITY OF PORT ORCHARD
DEPARTMENT OF COMMUNITY
DEVELOPMENT
 DPrice 04/19/2021

RECEIVED
Permit Center

APR 15, 2021

City of Port Orchard
Community Development

Peratrovich, Nottingham & Drage, Inc. (PN&D) is not responsible for safety programs, methods, procedures of operation, or the construction of the design shown on these drawings. Drawings are for use on this project only and are not intended for reuse without written approval from PN&D. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PN&D.

PORT OF BREMERTON-PORT ORCHARD MARINA RECONSTRUCTION



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Engineering Consultants
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 Seattle, Washington, 98104
 PH: (206) 624-1387 FAX: (206) 624-1388

Designed: _____
 Drawn: DRH
 Checked: _____
 Project No.: 97416

Date: MAY '97
 Scale: _____



EXPIRES 12/16/97

GENERAL NOTES

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PLOT III - W/ANCH.FCP 04-30-97