



MULTIPLE USE AGREEMENT

STATE OF TEXAS §

COUNTY OF TRAVIS §

THIS AGREEMENT made by the State of Texas by and between the Texas Department of Transportation, hereinafter referred to as "State", party of the first part, and The City of League City _____, hereinafter called _____ City _____, party of the second part, is to become effective when fully executed by both parties.

WITNESSETH

WHEREAS, on the 23rd day of April, 2024, the governing body for the _____ City _____ entered into Resolution/Ordinance No. _____ hereinafter identified by reference, authorizing the _____ City's participation in this agreement with the State; and

WHEREAS, the _____ City _____ has requested the State to permit the construction, maintenance and operation of a public Kayak Launch Parking Area and Access Walkway on the highway right of way, (ROADWAY _____ FM 270 _____ CONTROL SECTION NO. _____ Lat: 29°31'54.28"N Long: 95° 5'37.26"W) (General description of area including either the control number or GPS coordinates.)

shown graphically by the preliminary conceptual site plan in Exhibit "A" and being more specifically described by metes and bounds of Exhibit "B", which are attached and made a part hereof; and

WHEREAS, the State has indicated its willingness to approve the establishment of such facilities and other uses conditioned that the _____ City _____ will enter into agreements with the State for the purpose of determining the respective responsibilities of the _____ City _____ and the State with reference thereto, and conditioned that such uses are in the public interest and will not damage the highway facilities, impair safety, impede maintenance or in any way restrict the operation of the highway facility, all as determined from engineering and traffic investigations conducted by the State.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and agreements of the parties hereto to be by them respectively kept and performed as hereinafter set forth, it is agreed as follows:

1. DESIGN AND CONSTRUCTION

_____ City _____ will prepare or provide for the construction plans for the facility, and will provide for the construction work as required by said plans at no cost to the State. Said plans shall include the design of the access control, necessary horizontal and vertical clearances for highway structures, adequate landscape treatment, adequate detail to ensure compliance with applicable structural design standards, sufficient traffic control provisions, and general layout. They shall also delineate and define the construction responsibilities of both parties hereto. Completed plans will be submitted to State for review and approval and when approved shall be attached to the agreement and made a part thereof in all respects. Construction shall not commence until plans have been approved by the State. Any future revisions or additions shall be made after prior written approval of the State. Any sidewalks, curb ramps and other pedestrian elements to be constructed, either on site or off site, by the _____ City _____ shall be in accordance with the requirements of Title II of the Americans With Disabilities Act (ADA) and with the Texas Accessibility Standards (TAS). Elements constructed by the _____ City _____ and found not to comply with ADA or TAS shall be corrected at the entire expense of the _____ City _____.

2. INSPECTION

Ingress and egress shall be allowed at all times to such facility for Federal Highway Administration personnel and State Forces and equipment when highway maintenance operations are necessary, and for inspection purposes; and upon request, all parking or other activities for periods required for such operations will be prohibited.

3. PARKING REGULATIONS

Parking regulations shall be established limiting parking to single unit motor vehicles of size and capacity no greater than prescribed for 1¹/₂ ton trucks, such vehicles to conform in size and use to governing laws. Parking shall be permitted only in marked spaces.

Parking shall be prohibited when a security threat, as determined by TxDOT, exists.

4. PROHIBITION/SIGNS

Regulations shall be established prohibiting the parking of vehicles transporting flammable or explosive loads and prohibiting use of the area in any manner for peddling, advertising or other purposes not in keeping with the objective of a public facility. The erection of signs other than those required for proper use of the area will be prohibited. All signs shall be approved by the State prior to the actual erection.

5. RESPONSIBILITIES

Timely maintenance, repair and operation of the facility shall be entirely the responsibility of the _____ City _____. Such responsibility shall not be transferred, assigned or conveyed to a third party without the advanced written approval of the State. These responsibilities expressly include the timely maintenance and repair of any portion of the facility necessary to comply with the Americans with Disabilities Act. Further, such responsibility shall include picking up trash, mowing and otherwise keeping the facility in a clean and sanitary condition, and surveillance by police patrol to eliminate the possible creation of a nuisance or hazard to the public. Hazardous or unreasonably objectionable smoke, fumes, vapor or odors shall not be permitted to rise above the grade line of the highway, nor shall the facility subject the highway to hazardous or unreasonably objectionable dripping, droppings or discharge of any kind, including rain or snow.

If the State determines that _____ City _____ has failed to comply with these responsibilities, it will perform the necessary work and charge _____ City _____ the actual cost of the work.

6. FEES

Any fees levied for use of the facilities in the area shall be nominal and no more than are sufficient to defray the cost of construction, maintenance and operations thereof, and shall be subject to State approval.

A. Retention Period. The _____ City _____ shall maintain all books, documents, papers, accounting records and other evidence pertaining to fees collected and costs (hereinafter called the Records). The _____ City _____ shall make the records available during the term of the Agreement and for four years from the date the Agreement is terminated, until completion of all audits, or until pending litigation has been completely and fully resolved, whichever occurs last.

B. Audit Report. If fees are collected by the _____ City _____ for the use of the facility under this agreement, the _____ City _____ will provide the State an annual audit report detailing the fees collected for the use of the facility and the costs associated with constructing, maintaining, and operating the facility within the same period. If the report shows more fees collected than expenses for the construction, operation, or maintenance of the facility the _____ City _____ must provide a multiple year plan detailing how the additional revenue will be used for construction, operation, or maintenance of the facility.

C. Availability. The State or any of its duly authorized representatives, the Federal Highway Administration, the United States Department of Transportation, Office of Inspector General, and the Comptroller General shall have access to the _____ City 's records that are directly pertinent to this Agreement for the purpose of making audits and examinations.

7. TERMINATION UPON NOTICE

This provision is expressly made subject to the rights herein granted to both parties to terminate this agreement upon notice, and upon the exercise of any such right by either party, all obligations herein to make improvements to said facility shall immediately cease and terminate and

_____ City _____ shall be responsible for the facility's timely removal at no cost to the State.

If the State determines that _____ City _____ has failed to timely remove the facility, it will perform the necessary work and charge _____ City _____ the actual cost of the work.

8. MODIFICATION/TERMINATION OF AGREEMENT

If in the sole judgment of the State it is found at any future time that traffic conditions have so changed that the existence or use of the facility is impeding maintenance, damaging the highway facility, impairing safety or that the facility is not being properly operated, that it constitutes a nuisance, is abandoned, or if for any other reason it is the State's judgment that such facility is not in the public interest, this agreement under which the facility was constructed may be: (1) modified if corrective measures acceptable to both parties can be applied to eliminate the objectionable features of the facility; or (2) terminated and the use of the area as proposed herein discontinued.

9. PROHIBITION OF STORAGE OF FLAMMABLE MATERIALS

All structures located or constructed within the area covered by the agreement shall be fire resistant. The storage of flammable, explosive or hazardous materials is prohibited. Operations deemed to be a potential fire hazard shall be subject to regulation by the State.

10. RESTORATION OF AREA

The _____ City _____ shall provide written notification to the State that such facility will be discontinued for the purpose defined herein. The _____ City _____ shall, within thirty (30) days from the date of said notification, clear the area of all facilities that were its construction responsibility under this agreement and restore the area to a condition satisfactory to the State.

11. PREVIOUS AGREEMENTS

It is understood that this agreement in no way modifies or supersedes the terms and provisions of any existing agreements between the parties hereto.

12. INDEMNIFICATION

THE _____ City _____ WILL INDEMNIFY THE STATE AGAINST ANY AND ALL DAMAGES AND CLAIMS FOR DAMAGES, INCLUDING THOSE RESULTING FROM INJURY OR DEATH OF PERSONS OR FOR LOSS OF OR DAMAGE TO PROPERTY, ARISING OUT OF, INCIDENT TO OR IN ANY MANNER CONNECTED WITH THE CONSTRUCTION, OPERATION OR MAINTENANCE OF THE FACILITY, WHICH INDEMNIFICATION SHALL EXTEND TO AND INCLUDE ANY AND ALL COURT COSTS, ATTORNEY'S FEES AND EXPENSES RELATED TO OR CONNECTED WITH ANY CLAIMS OR SUITS FOR DAMAGES AND SHALL, IF REQUESTED IN WRITING BY THE STATE TO DO SO, ASSIST THE STATE OR RELIEVE THE STATE FROM DEFENDING ANY SUCH SUITS BROUGHT AGAINST IT. THE INDEMNIFICATION OF THE STATE SHALL EXTEND FOR A PERIOD OF TWO (2) YEARS BEYOND THE DATE OF TERMINATION OF THIS AGREEMENT.

DURING EACH YEAR WHILE THERE IS ANY LIABILITY BY REASON OF THE AGREEMENT CONTAINED IN THIS SUBSECTION OF THIS RESOLUTION, INCLUDING THE CALENDAR YEAR 2024, THE CITY OF LEAGUE CITY (CITY) SHALL COMPUTE AND ASCERTAIN THE RATE AND AMOUNT OF AD VALOREM TAX, BASED ON THE LATEST APPROVED TAX ROLLS OF SAID ENTITY, WITH FULL ALLOWANCES BEING MADE FOR TAX DELINQUENCIES AND COSTS OF TAX COLLECTION, WHICH WILL BE SUFFICIENT TO RAISE AND PRODUCE THE MONEY REQUIRED TO PAY ANY SUMS WHICH MAY BE OR BECOME DUE DURING ANY SUCH YEAR, IN NO INSTANCE TO BE LESS THAN TWO (2%) PER CENT OF SUCH OBLIGATION, TOGETHER WITH INTEREST THEREON, BECAUSE OF THE OBLIGATION HEREIN ASSUMED.

SAID RATE AND AMOUNT OF AD VALOREM TAX IS HEREBY ORDERED TO BE LEVIED AND IS HEREBY LEVIED AGAINST ALL TAXABLE PROPERTY IN SAID ENTITY FOR EACH YEAR WHILE ANY LIABILITY EXISTS BY REASON OF THE OBLIGATION UNDERTAKEN BY THIS SUBSECTION OF THIS RESOLUTION, AND SAID AD VALOREM TAX SHALL BE ASSESSED AND COLLECTED EACH SUCH YEAR UNTIL ALL OF THE OBLIGATIONS HEREIN INCURRED SHALL HAVE BEEN DISCHARGED AND ALL LIABILITY HEREUNDER DISCHARGED.

No party to this agreement intends to waive, relinquish, limit or condition its general governmental immunity from liability in any way.

Each party agrees and acknowledges that it is not an agent, servant, or employee of the other party and that under this provision each party is responsible only for its own acts and for those of its agents, servants, independent contractors or employees. Such responsibility includes, but is not

limited to any claims or amounts arising or recovered under the "Workers Compensation Law," the Texas Tort Claims Act, Chapter 101, Texas Civil Practice and Remedies Code; or any other applicable laws or regulations, all as time to time may be amended.

Nothing in this agreement shall be construed as creating any liability in favor of any third party against the State and the _____ City _____. Additionally, this agreement shall not ever be construed as relieving any third party from any liability against the State. Furthermore, the _____ City _____ shall become fully subrogated to the State's rights of recovery and shall be entitled to maintain any action over and against any third party who may be liable for damages. The State agrees to execute and deliver instruments and papers and to otherwise do that which is necessary to secure such rights.

13. INSURANCE

The _____ City _____, shall provide necessary safeguards to protect the public on State maintained highways including adequate insurance for payment of any damages which might result during the construction, maintenance, repair and operation of the facility. _____ City _____ shall include TxDOT as an additional insured by endorsement in _____ City _____'s commercial general liability insurance policy. Prior to beginning work on the State's right of way, the _____ City _____'s construction contractor shall submit to the State a completed insurance form (TxDOT Form No. 1560) or appropriate certificate of self-insurance and shall maintain the required coverage during the construction of the facility.

14. USE OF RIGHT OF WAY

It is understood that the State by execution of this agreement does not impair or relinquish the State's right to use such land for highway purposes when it is required for the construction or re-construction of the traffic facility for which it was acquired, nor shall use of the land under such agreement ever be construed as abandonment by the State of such land acquired for highway purposes, and the State does not purport to grant any interest in the land described herein but merely consents to such use to the extent its authority and title permits.

15. ADDITIONAL CONSENT REQUIRED

The State asserts only that it has sufficient title for highway purposes. The _____ City _____ shall be responsible for obtaining such additional consent, permits or agreement as may be necessary due to this agreement. This includes, but is not limited to, appropriate permits and clearances for environmental, ADA and public utilities.

16. FHWA ADDITIONAL REQUIREMENTS

If the Facility is located on the Federal-Aid Highway System, "ATTACHMENT A", which states additional requirements as set forth in the Federal Highway Administration's Title 23, Code of Federal Regulations, § 710, shall be attached to and become a part of this agreement.

17. CIVIL RIGHTS ASSURANCES

The _____ City _____, for itself, its personal representatives, successors and interests and assigns, as part of the consideration hereof, does hereby covenant and agree as a covenant running with the land that: (1) no persons, on the grounds of race, color, sex, age, national origin, religion or disabling condition, shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facility; (2) that in the construction of any improvements on, over or under such land and the furnishing of services thereon, no person on the ground of race, color, sex, age, national origin, religion or disabling condition, shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination; (3) that the _____ City _____ shall use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-Assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

That if in the event of any breach of the above non-discrimination covenants, the State shall have the right to terminate the agreement and reenter and repossess said land and the facilities thereon, and hold the same as if said agreement had never been made or issued.

18. AMENDMENTS

Any changes in the time frame, character or responsibilities of the parties hereto shall be enacted by a written amendment executed by both parties hereto.

19. LEGAL CONSTRUCTION

In case one or more of the provisions contained in this agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any provision hereof and this agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in this agreement.

20. AUDIT

The State may conduct an audit or investigation of any aspect of this agreement. The _____ City _____ must provide the State with access to any information the State considers relevant to the investigation or audit. The audit can include, but is not limited to, any contract for construction or maintenance of any facility or structure authorized by this agreement or any contract to provide a service to the _____ City _____ if that service is authorized by this agreement.

21. AUTHORITY OF STATE AUDITOR

The state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the contract or indirectly through a subcontract under the contract. Acceptance of funds directly under the contract or indirectly through a subcontract under this contract acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. An entity that is the subject of an audit or investigation must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit.

22. NOTICES

All notices required under this agreement shall be mailed or hand delivered to the following respective addresses:

STATE (Mailing Address)	(Name of other party) (Mailing Address)
Texas Department of Transportation	City of League City
Maintenance Division	Project Management Office
125 East 11th Street	300 West Walker Street
Austin, Texas 78701-2483	League City, TX 77573

23. TIMELY PAYMENT

When required by any provision of this agreement requires a payment to be made to the State, the other party hereto shall within thirty (30) days from receipt of the State's written notification pay the State for the full cost of repairing any damages to the highway facility which may result from the other party's construction, maintenance, repair or operation of the facility.

24. WARRANTS

The signatories to this agreement warrant that each has the authority to enter into this agreement on behalf of the party represented.

List of Attached Exhibits:

- Exhibit A - General Layout
- Exhibit B - Metes and Bounds Description
- Exhibit C - Approved Construction Plans
- Exhibit D - Certificate of Insurance (TxDOT Form 1560)
- Exhibit E - Attachment A (FHWA Additional Requirements)

IN WITNESS WHEREOF, the parties have hereunto affixed their signature, the

_____ on the _____ day of _____, 20____, and the
State on the _____ day of _____, 20_____.

STATE OF TEXAS

Executed and approved for the Texas
Transportation Commission for the purpose and
effect of activating and/or carrying out the orders,
and established policies or work programs
heretofore approved and authorized by the Texas
Transportation Commission.

City of League City

(Name of other party)

By: _____
Signature

John Baumgartner

Printed Name

By: _____
Director, Maintenance Division

City Manager

Title

Printed Name

City of League City

Agency

Date

281-554-1026

Contact Office and Telephone No.

APPROVAL RECOMMENDED:

District Engineer

Printed Name

Date

LOCATION MAP

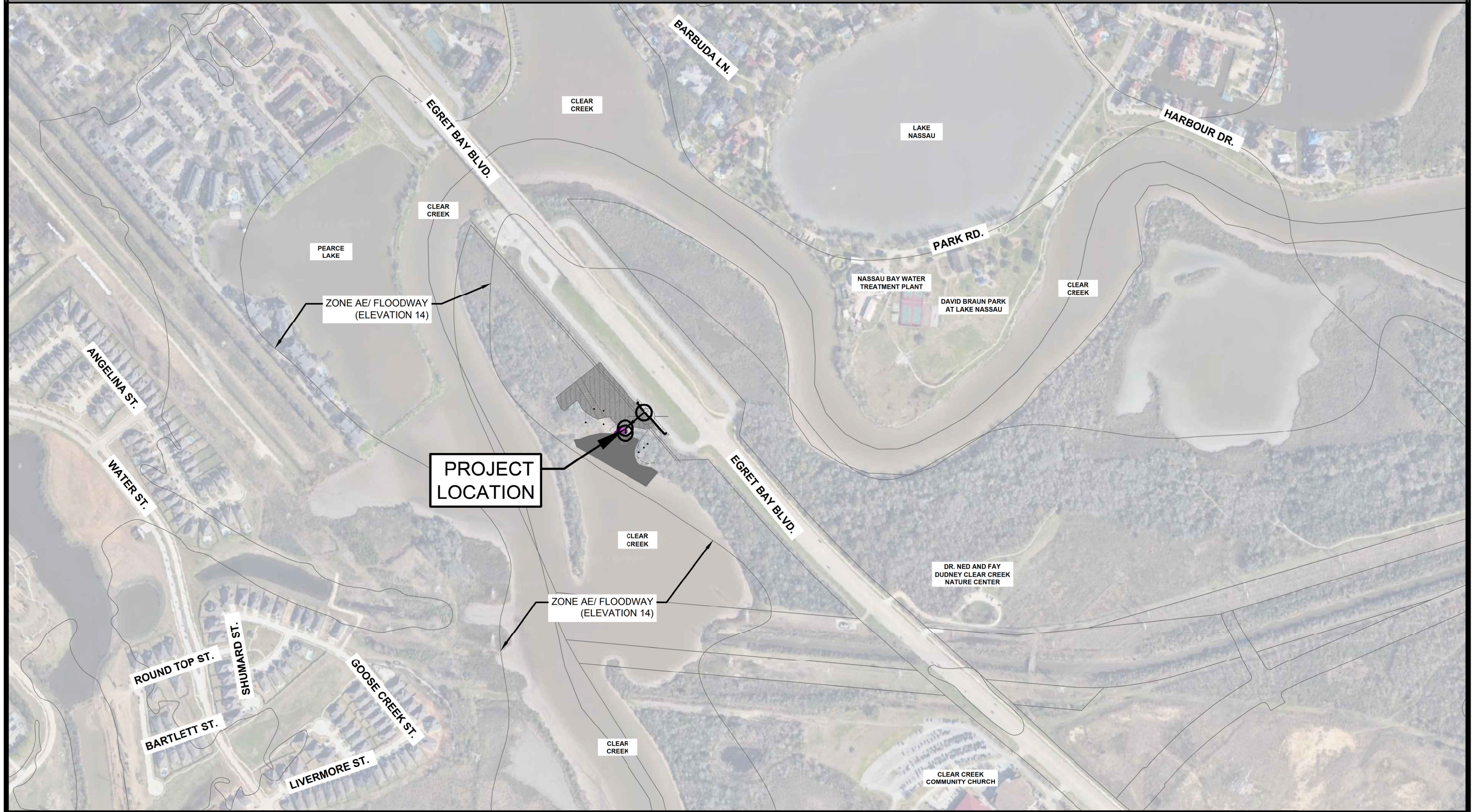


Exhibit B

Metes and Bounds (to be provided prior to application to TxDOT for MUA)

The City of League City

300 WEST WALKER STREET, LEAGUE CITY TEXAS 77573

DR. NED & FAY DUDNEY CLEAR CREEK NATURE CENTER KAYAK LAUNCH

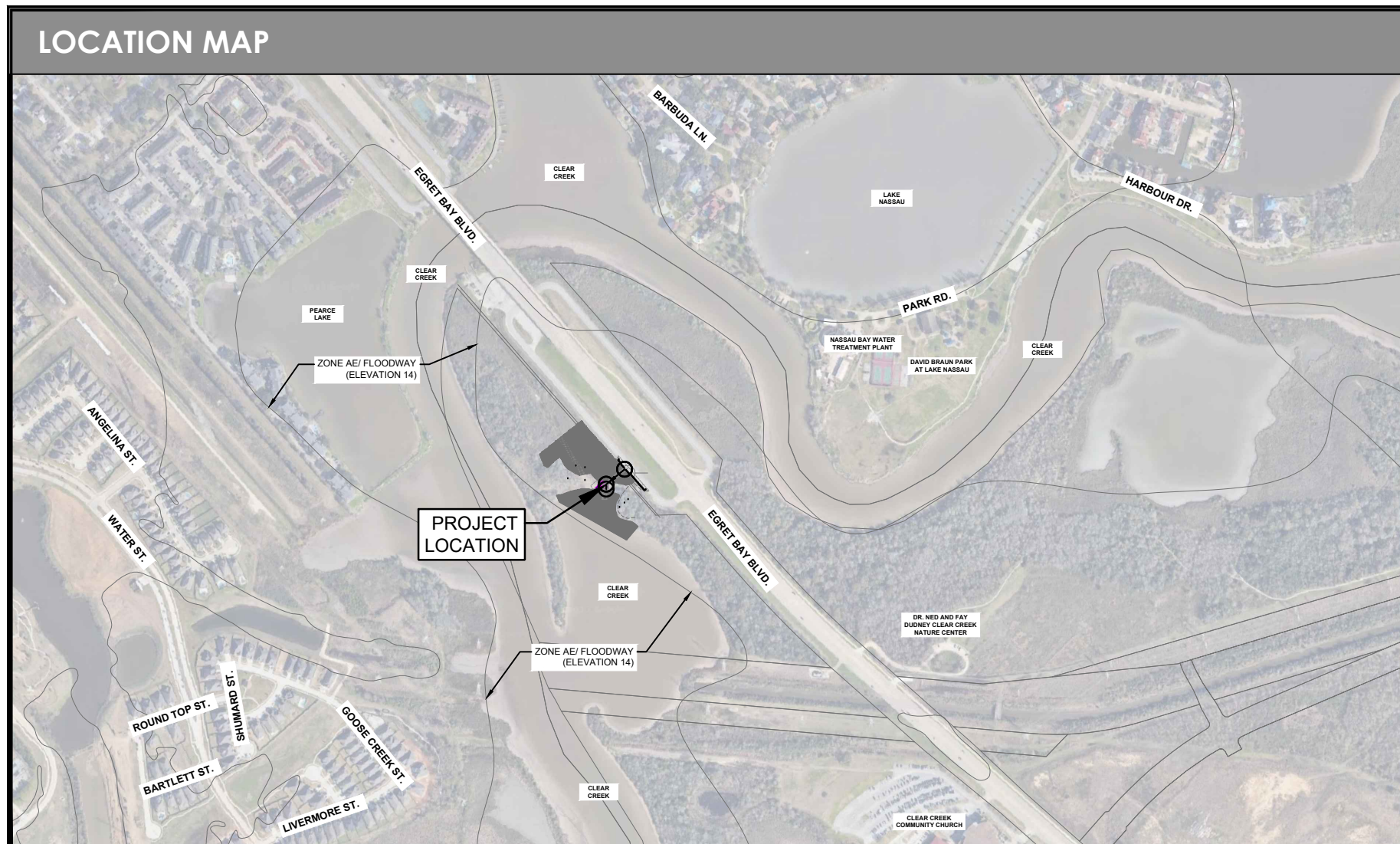
1325 N Egret Bay Blvd.
LEAGUE CITY, TEXAS 77573
APRIL, 2024
CIP/PROJECT ID NO. PK 1910B
PROJECT BID NO. -----

CITY COUNCIL	
NAME	POSITION
NICK LONG	MAYOR
JUSTIN HICKS	MAYOR PRO TEM
ANDY MANN	COUNCIL POSITION 1
TOMMY CONES	COUNCIL POSITION 2
TOM CREWS	COUNCIL POSITION 3
COURTNEY CHADWELL	COUNCIL POSITION 4
	COUNCIL POSITION 5
CHAD TRESSLER	COUNCIL POSITION 6
SEAN SAUNDERS	COUNCIL POSITION 7

SHEET INDEX	
SHEET	DESCRIPTION
CVR	COVER SHEET
SURVEY	SHEET NO. 1 OF 2
SURVEY	SHEET NO. 2 OF 2
L0.00	DEMOLITION PLAN
L0.01	GRADING PLAN
L1.01	HARDSCAPE PLAN
L1.02	SITE DIMENSIONAL PLAN
L1.03	TRAFFIC CONTROL PLAN
L1.04	GENERAL NOTES
L1.21	DETAILS SHEET 1
L1.22	DETAILS SHEET 2
L1.23	DETAILS SHEET 3
C-2000	COVER & DRAWING INDEX
C-2001	STRUCTURAL GENERAL NOTES
C-2002	SWPPP NOTES
C-2003	SWPPP DETAILS
C-2004	HYDRAULIC DATA
C-2005	WALKWAY PILING PLAN
C-2006	WALKWAY DETAILS, SHEET 1 OF 5
C-2007	WALKWAY DETAILS, SHEET 2 OF 5
C-2008	WALKWAY DETAILS, SHEET 3 OF 5
C-2009	WALKWAY DETAILS, SHEET 4 OF 5
C-2010	WALKWAY DETAILS, SHEET 5 OF 5



NOTE:
ALL ELEVATIONS ARE IN NAVD 88.
100 YR WSE = 14.5'
FIRM PANEL NOS. 48167C0037G, 48167C0038G.
EFFECTIVE DATE: AUGUST 15, 2019.
THIS AREA LIES IN A FLOOD ZONE "AE". ELEVATIONS ARE IN NAVD 88.



REVIEW SIGNATURES
PROJECT MANAGEMENT:
ENGINEERING:
FLOODPLAIN ADMINISTRATOR:
UTILITY LINE REPAIR:
WASTEWATER:
WATER PRODUCTION:
STREET, STORM WATER & TRAFFIC:
FIRE MARSHAL:
CITY ARBORIST:
PLANNING & ZONING:
PARKS:
BUILDING CODES:
DIRECTOR INFORMATION TECHNOLOGY:

CHRISTOPHER SIMS, P.E.
EXECUTIVE DIRECTOR OF DEVELOPMENT SERVICES
CITY OF LEAGUE CITY

The signer of this set of plans has no objection to the design of these plans. Through the review process these plans have been found to be in general compliance with League City's "General Design and Construction Standards" manual and Construction Details. It should be noted that all calculations, measurements and overall line work within these plans should be checked and verified. This approval is good for 1 (one) year from the date of signing as shown. The plans submitted have been prepared, signed and sealed by a professional engineer licensed to practice engineering in the state of Texas, which conveys the engineer's responsibility and accountability. Design Engineer assumes all responsibility for any inconsistencies or imperfections in these plans.

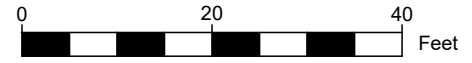
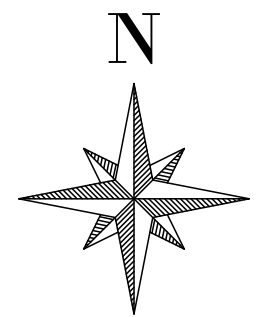
A PRE-CONSTRUCTION MEETING WITH THE CITY OF LEAGUE CITY PMO DEPARTMENT IS REQUIRED AT LEAST 10 WORKING DAYS PRIOR TO ON SITE CONSTRUCTION ACTIVITIES. CALL 281-554-1436 FOR A MEETING DATE AND TIME. A PRE-CONSTRUCTION MEETING FOR THIS PROJECT MAY NOT BE SCHEDULED AND CONSTRUCTION OF THE PROJECT MAY NOT COMMENCE PRIOR TO APPROVAL OF THESE PLANS BY THE CITY ENGINEER AS EVIDENCED BY HIS SIGNATURE.

The review signatures above for this set of plans in no way implies approval or acceptance and is purely a reflection of the City's review process.

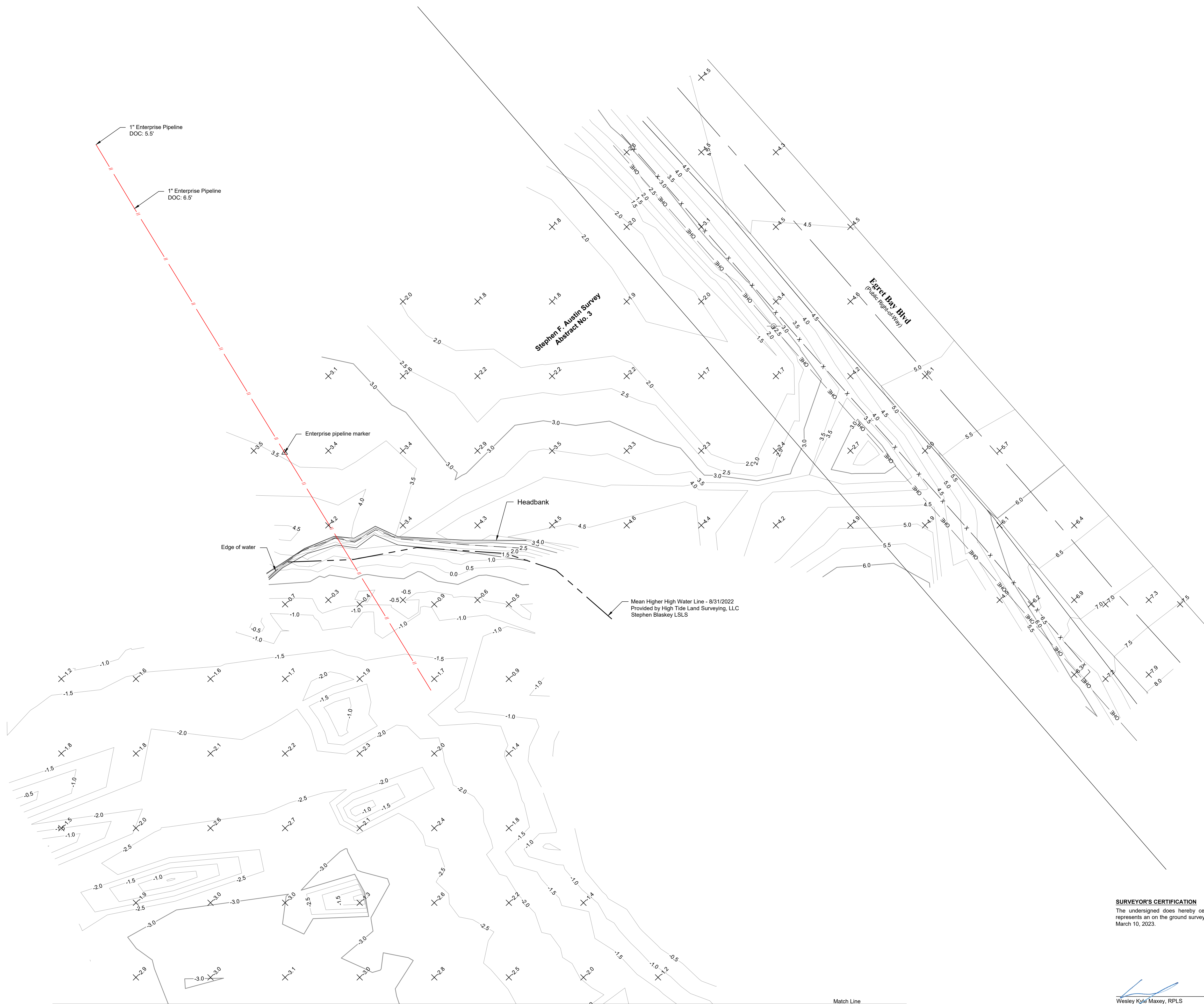
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW, AGENCY APPROVAL, AND COMMENT UNDER THE AUTHORITY OF CLAUDIA T. WALKER, P.L.A. LANDSCAPE ARCHITECT No. 2887. ON 04/02/24 THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES

BURDITT
LAND | PLACE

310 Longmire, Conroe, TX 77304
P: (936) 756-3041 | F: (936) 539-3240
www.burditt.com



- NOTE:
1. HORIZONTAL CONTROL IS BASED UPON THE TEXAS COORDINATE SYSTEM OF 1983 (2010), SOUTH CENTRAL ZONE '4204' (US SURVEY FOOT). ALL COORDINATES ARE IN GRID VALUES.
 2. VERTICAL CONTROL IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88)(GEOID18).
 3. ELECTROMAGNETIC DEPTHS (IF SHOWN) WERE TAKEN BY ELECTRONIC MEANS AND ARE APPROXIMATE. THE DEPTHS REPRESENT DISTANCE FROM GROUND SURFACE TO CENTER OF PIPE/CABLE. LJA SURVEY CANNOT WARRANTY THE ACCURACY OF DEPTH READINGS SHOWN HEREON.



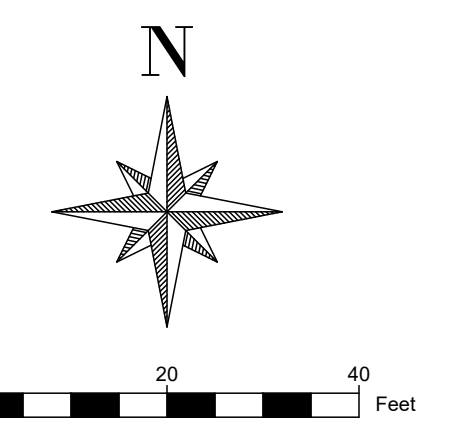
SURVEYOR'S CERTIFICATION
 The undersigned does hereby certify that this survey plat accurately represents an on the ground survey made under my direct supervision on March 10, 2023.

Wesley Kyle Maxey, RPLS
 Registered Professional Land Surveyor No. 6563
 2/29/2024



TOPOGRAPHIC SURVEY PLAT OF THE LEAGUE CITY KAYAK RAMP SITUATED IN THE GALVESTON COUNTY, TEXAS
 DRAWN BY: RCJ FB PG: FB855-PG034
 REV "1" FEBRUARY 28, 2024
 SHEET NO. 1 OF 2 JOB NO. LJA501-B1036-1002
LJA SURVEYING, INC.
 2615 Calder Ave, Suite 500 Tel: 409.833.3363
 Beaumont, Texas 77702 Fax: 409.833.0317
 TBPELS Firm No 10194382


Match Line
See Sheet #1



- NOTE:
1. HORIZONTAL CONTROL IS BASED UPON THE TEXAS COORDINATE SYSTEM OF 1983 (2010), SOUTH CENTRAL ZONE '4204' (US SURVEY FOOT). ALL COORDINATES ARE IN GRID VALUES.
 2. VERTICAL CONTROL IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88)(GEOID18).
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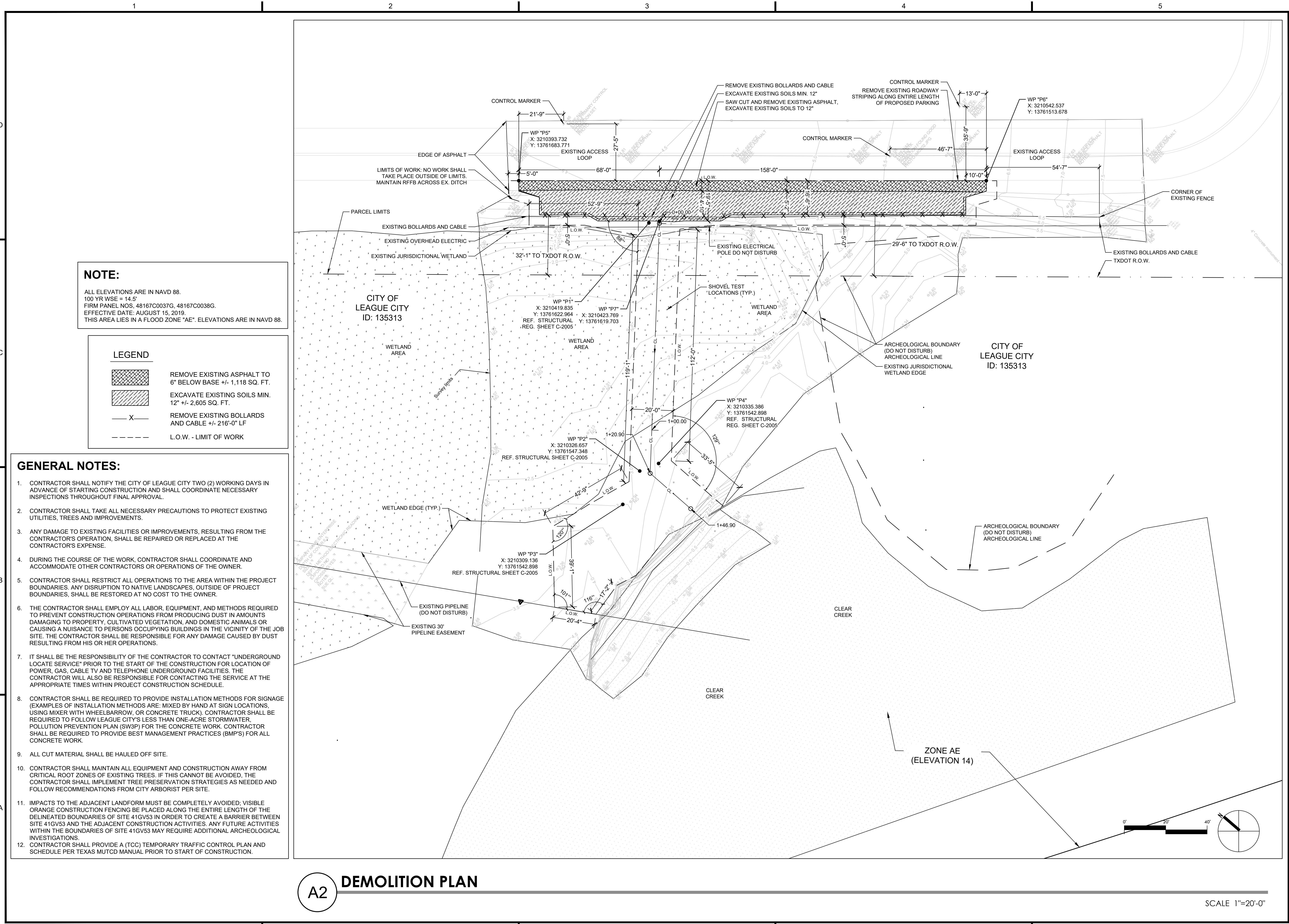


SURVEYOR'S CERTIFICATION
 The undersigned does hereby certify that this survey plat accurately represents an on the ground survey made under my direct supervision on March 10, 2023.


 Wesley Kyle Maxey, RPLS
 Registered Professional Land Surveyor No. 6563



TOPOGRAPHIC SURVEY PLAT OF THE LEAGUE CITY KAYAK RAMP SITUATED IN THE STEPHEN F. AUSTIN SURVEY GALVESTON COUNTY, TEXAS
 DRAWN BY: RCJ FB PG: FB885-PG034
 REV "1" FEBRUARY 28, 2024
 SHEET NO. 2 OF 2 JOB NO. LJA001-B1036-1002
LJA SURVEYING, INC
 2615 Calder Ave, Suite 500 Tel: 409.833.3363
 Beaumont, Texas 77702 Fax: 409.833.0317
 TBPELS Firm No 10194382



NOTE:
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100 YR WSE = 14.5'
FIRM PANEL NOS. 48167C0037G, 48167C0038G.
EFFECTIVE DATE: AUGUST 15, 2019.
THIS AREA LIES IN A FLOOD ZONE "AE". ELEVATIONS ARE IN NAVD 88.

LEGEND

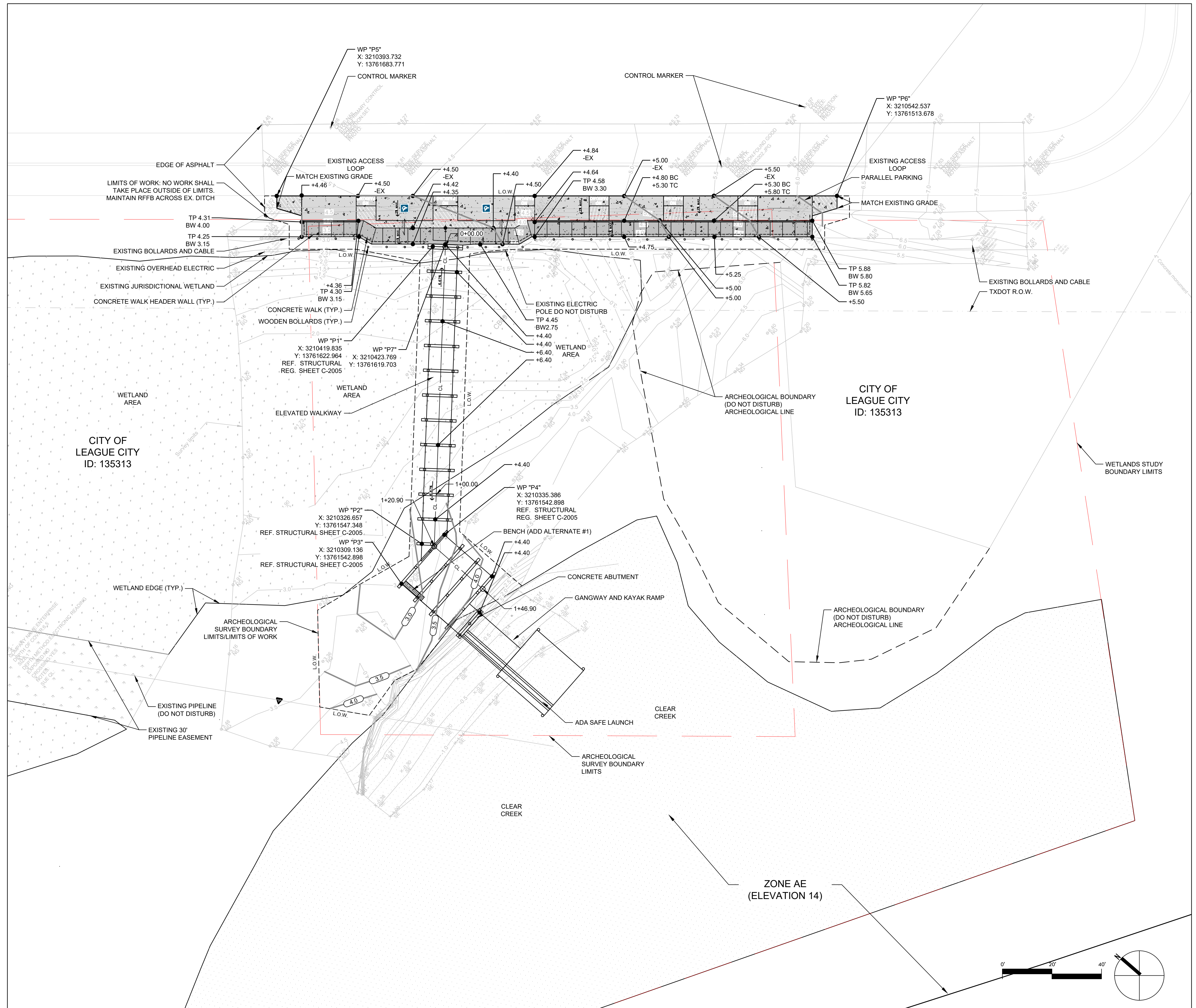
	REMOVE EXISTING ASPHALT TO 6" BELOW BASE +/- 1,118 SQ. FT.
	EXCAVATE EXISTING SOILS MIN. 12" +/- 2,605 SQ. FT.
	REMOVE EXISTING BOLLARDS AND CABLE +/- 216'-0" LF
	L.O.W. - LIMIT OF WORK

GENERAL NOTES:

- CONTRACTOR SHALL NOTIFY THE CITY OF LEAGUE CITY TWO (2) WORKING DAYS IN ADVANCE OF STARTING CONSTRUCTION AND SHALL COORDINATE NECESSARY INSPECTIONS THROUGHOUT FINAL APPROVAL.
- CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES, TREES AND IMPROVEMENTS.
- ANY DAMAGE TO EXISTING FACILITIES OR IMPROVEMENTS, RESULTING FROM THE CONTRACTOR'S OPERATION, SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- DURING THE COURSE OF THE WORK, CONTRACTOR SHALL COORDINATE AND ACCOMMODATE OTHER CONTRACTORS OR OPERATIONS OF THE OWNER.
- CONTRACTOR SHALL RESTRICT ALL OPERATIONS TO THE AREA WITHIN THE PROJECT BOUNDARIES. ANY DISRUPTION TO NATIVE LANDSCAPES, OUTSIDE OF PROJECT BOUNDARIES, SHALL BE RESTORED AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL EMPLOY ALL LABOR, EQUIPMENT, AND METHODS REQUIRED TO PREVENT CONSTRUCTION OPERATIONS FROM PRODUCING DUST IN AMOUNTS DAMAGING TO PROPERTY, CULTIVATED VEGETATION, AND DOMESTIC ANIMALS OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS IN THE VICINITY OF THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST RESULTING FROM HIS OR HER OPERATIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT "UNDERGROUND LOCATE SERVICE" PRIOR TO THE START OF THE CONSTRUCTION FOR LOCATION OF POWER, GAS, CABLE TV AND TELEPHONE UNDERGROUND FACILITIES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CONTACTING THE SERVICE AT THE APPROPRIATE TIMES WITHIN PROJECT CONSTRUCTION SCHEDULE.
- CONTRACTOR SHALL BE REQUIRED TO PROVIDE INSTALLATION METHODS FOR SIGNAGE (EXAMPLES OF INSTALLATION METHODS ARE: MIXED BY HAND AT SIGN LOCATIONS, USING MIXER WITH WHEELBARRROW, OR CONCRETE TRUCK). CONTRACTOR SHALL BE REQUIRED TO FOLLOW LEAGUE CITY'S LESS THAN ONE-ACRE STORMWATER, POLLUTION PREVENTION PLAN (SW3P) FOR THE CONCRETE WORK. CONTRACTOR SHALL BE REQUIRED TO PROVIDE BEST MANAGEMENT PRACTICES (BMP'S) FOR ALL CONCRETE WORK.
- ALL CUT MATERIAL SHALL BE HAULED OFF SITE.
- CONTRACTOR SHALL MAINTAIN ALL EQUIPMENT AND CONSTRUCTION AWAY FROM CRITICAL ROOT ZONES OF EXISTING TREES. IF THIS CANNOT BE AVOIDED, THE CONTRACTOR SHALL IMPLEMENT TREE PRESERVATION STRATEGIES AS NEEDED AND FOLLOW RECOMMENDATIONS FROM CITY ARBORIST PER SITE.
- IMPACTS TO THE ADJACENT LANDFORM MUST BE COMPLETELY AVOIDED; VISIBLE ORANGE CONSTRUCTION FENCING BE PLACED ALONG THE ENTIRE LENGTH OF THE DELINEATED BOUNDARIES OF SITE 41GV53 IN ORDER TO CREATE A BARRIER BETWEEN SITE 41GV53 AND THE ADJACENT CONSTRUCTION ACTIVITIES. ANY FUTURE ACTIVITIES WITHIN THE BOUNDARIES OF SITE 41GV53 MAY REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS.
- CONTRACTOR SHALL PROVIDE A (TCC) TEMPORARY TRAFFIC CONTROL PLAN AND SCHEDULE PER TEXAS MUTCD MANUAL PRIOR TO START OF CONSTRUCTION.

A2 DEMOLITION PLAN

SCALE 1"=20'-0"



NOTE:
ALL ELEVATIONS ARE IN NAVD 88.
100 YR WSE = 14.5'
FIRM PANEL NOS. 48167C0037G, 48167C0038G.
EFFECTIVE DATE: AUGUST 15, 2019.
THIS AREA LIES IN A FLOOD ZONE "AE". ELEVATIONS ARE IN NAVD 88.

GENERAL NOTES:

- IMPACTS TO THE ADJACENT LANDFORM MUST BE COMPLETELY AVOIDED; AND 3) VISIBLE ORANGE CONSTRUCTION FENCING BE PLACED ALONG THE ENTIRE LENGTH OF THE DELINEATED BOUNDARIES OF SITE 41GV53 IN ORDER TO CREATE A BARRIER BETWEEN SITE 41GV53 AND THE ADJACENT CONSTRUCTION ACTIVITIES. ANY FUTURE ACTIVITIES WITHIN THE BOUNDARIES OF SITE 41GV53 MAY REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS.

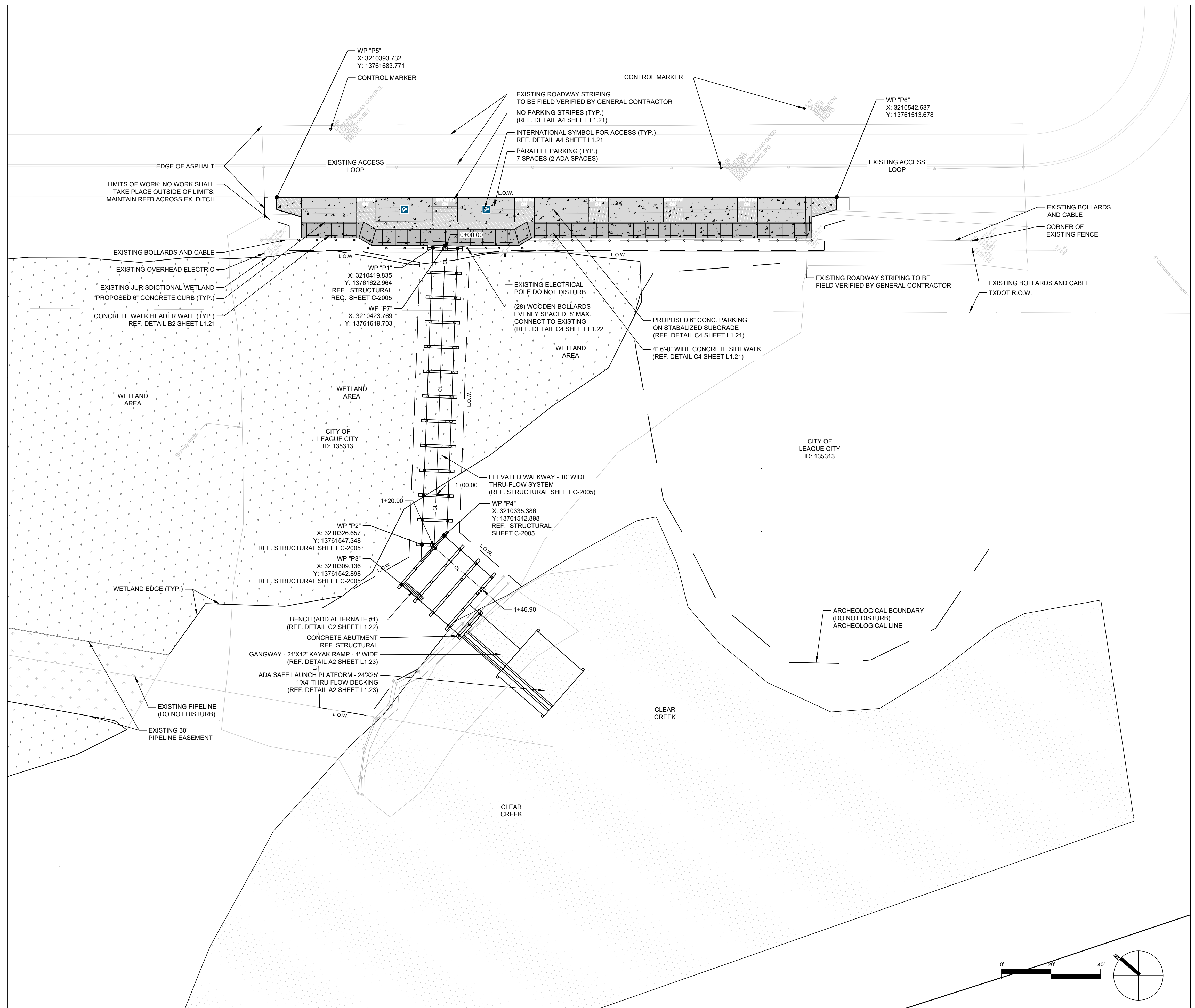
Section No.	Section Location	Fill SF	Cut SF	Vol. C/F	Factor	Total CF	Total Vol. CY
6.0	SE		-127	-127	0.25	-31.75	-1.176
5.5	SE	35		35	0.25	8.75	0.324
5.0	SE	18		18	0.5	9	0.333
4.5	SW	146		146	0.5	73	2.704
4.0	W	90		90	0.5	45	1.667
3.5	SW	14		14	1	14	0.519
3.5	W	207		207	0.5	103.5	3.833
3.0	W	60		60	1	60	2.222
2.5	W	28		28	1.5	42	1.556
2.5	NW	15		15	1.5	22.5	0.833
3.0	NW	313		313	1	313	11.593
3.5	NW	280		280	0.5	140	5.185
3.0	W		-413.0		0.5	-206.5	-7.648
3.0	W		-59		1	-59	-2.185
3.5	W		-584		0.5	-292	-10.815
3.5	W		-25		0.5	-12.5	-0.463
3.5	W		-286		0.5	-143	-5.296
4.0	W		-286		0.25	-71.5	-2.648
4.0	W		-58		0.25	-14.5	-0.537
Total Cut and Fill						0	0.000

GRADING & EXCAVATION NOTES:

- Any existing and / or on-site conditions which vary from those shown on drawings shall be immediately brought to the attention of the owner's representative.
- The contractor shall be responsible for verifying the actual location and elevation in the field prior to beginning construction of the new amenities. The contractor shall protect all existing utilities encountered during construction.
- The debris created by removal operations shall become the property of the contractor and shall be legally disposed of away from the job site. Subsoil shall not be reused for topsoil.
- General contractor shall leave landscape contractor site at approximately final grade, (see note below). Landscape contractor shall establish smooth and uniform grades with a maximum slope of 3:1 unless otherwise noted. Tie into existing adjacent grades smoothly and fine grade for positive drainage and to prevent water from standing. Cut swales to direct water away from all structures and property lines, and towards storm sewer inlets or ditches and culverts. Do not drain any water towards lots, easements, or buildings.
- If there are clumps larger than 1" in diameter after topsoil is spread out over site, sitework contractor to lightly proofroll the topsoil to break up and smooth out finished surface in preparation for hydromulch or solid sod. Final soil surface around the site should be smooth just before sod or hydromulch is installed. Sitework contractor responsible for filling in "erosion veins", tire tracks, or other disturbances to an otherwise smooth and uniform finished grade surface just prior to grass installation.
- Sitework contractor responsible for backfilling behind all curbs, sidewalks, buildings, and structures to have positive drainage everywhere on site. Any "birdbaths" or standing puddles to be filled in and fine graded for positive drainage over entire site. Any area around the site that puddles water where it should have positive drainage will not be accepted.
- Once final grades have been achieved contractor is responsible for maintaining smooth finished surface until topsoil, and final sod/hydromulch have been installed. Any erosion from weather on bare, exposed soil is to be fine graded again to fill in erosion veins and excavate sediment piles at contractors' expense.

A2 GRADING PLAN

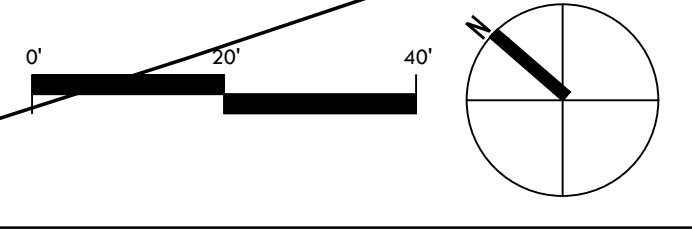
SCALE 1"=20'-0"



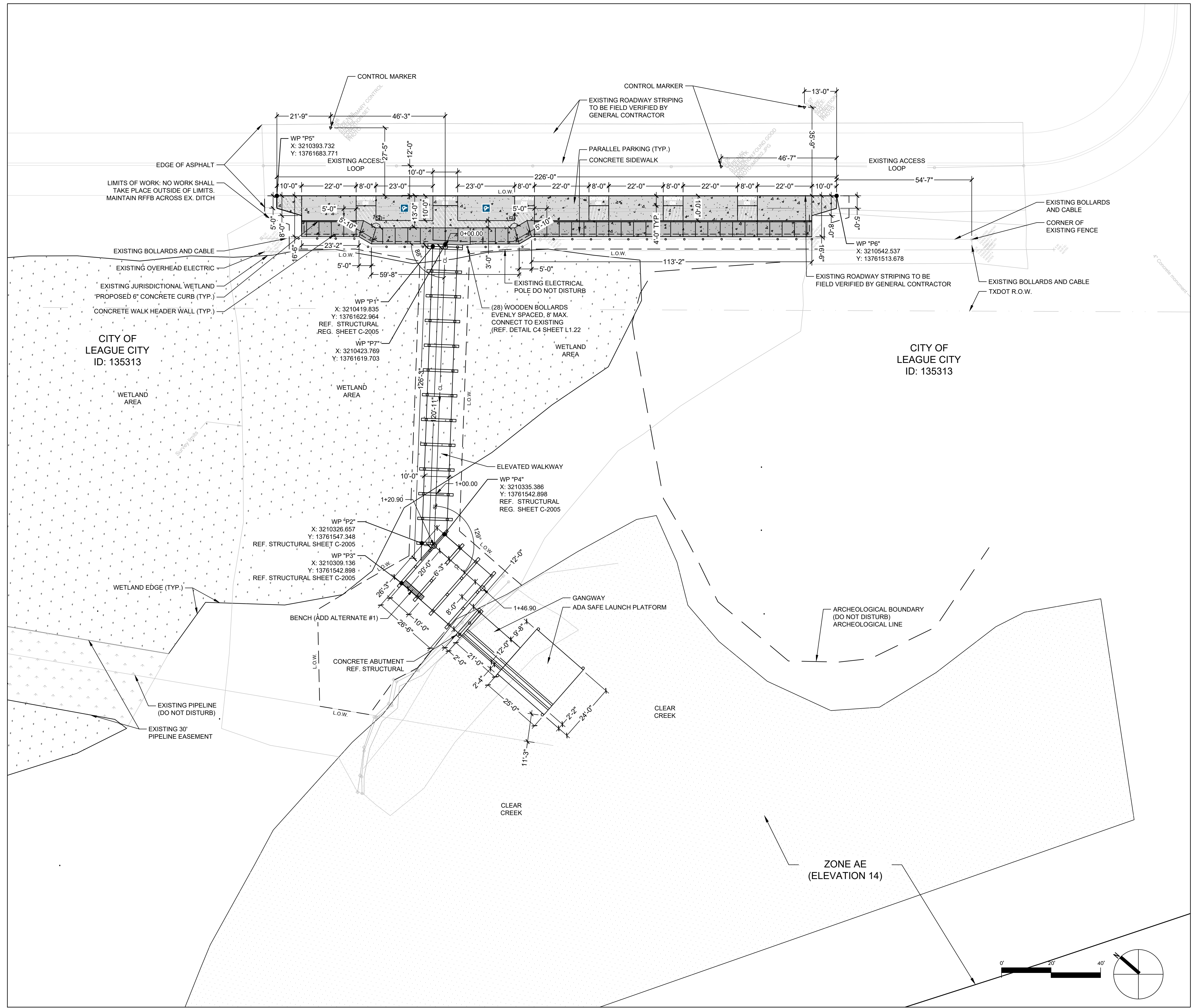
NOTE:
ALL ELEVATIONS ARE IN NAVD 88.
100 YR WISE = 14.5'
FIRM PANEL NOS. 48167C0037G, 48167C0038G.
EFFECTIVE DATE: AUGUST 15, 2019.
THIS AREA LIES IN A FLOOD ZONE "AE". ELEVATIONS ARE IN NAVD 88.

GENERAL NOTES:
1. IMPACTS TO THE ADJACENT LANDFORM ARE COMPLETELY AVOIDED; AND 3) VISIBLE ORANGE CONSTRUCTION FENCING BE PLACED ALONG THE ENTIRE LENGTH OF THE DELINEATED BOUNDARIES OF SITE 41GV53 IN ORDER TO CREATE A BARRIER BETWEEN SITE 41GV53 AND THE ADJACENT CONSTRUCTION ACTIVITIES. ANY FUTURE ACTIVITIES WITHIN THE BOUNDARIES OF SITE 41GV53 MAY REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS.

A2 HARDSCAPE PLAN



SCALE 1"=40'-0"

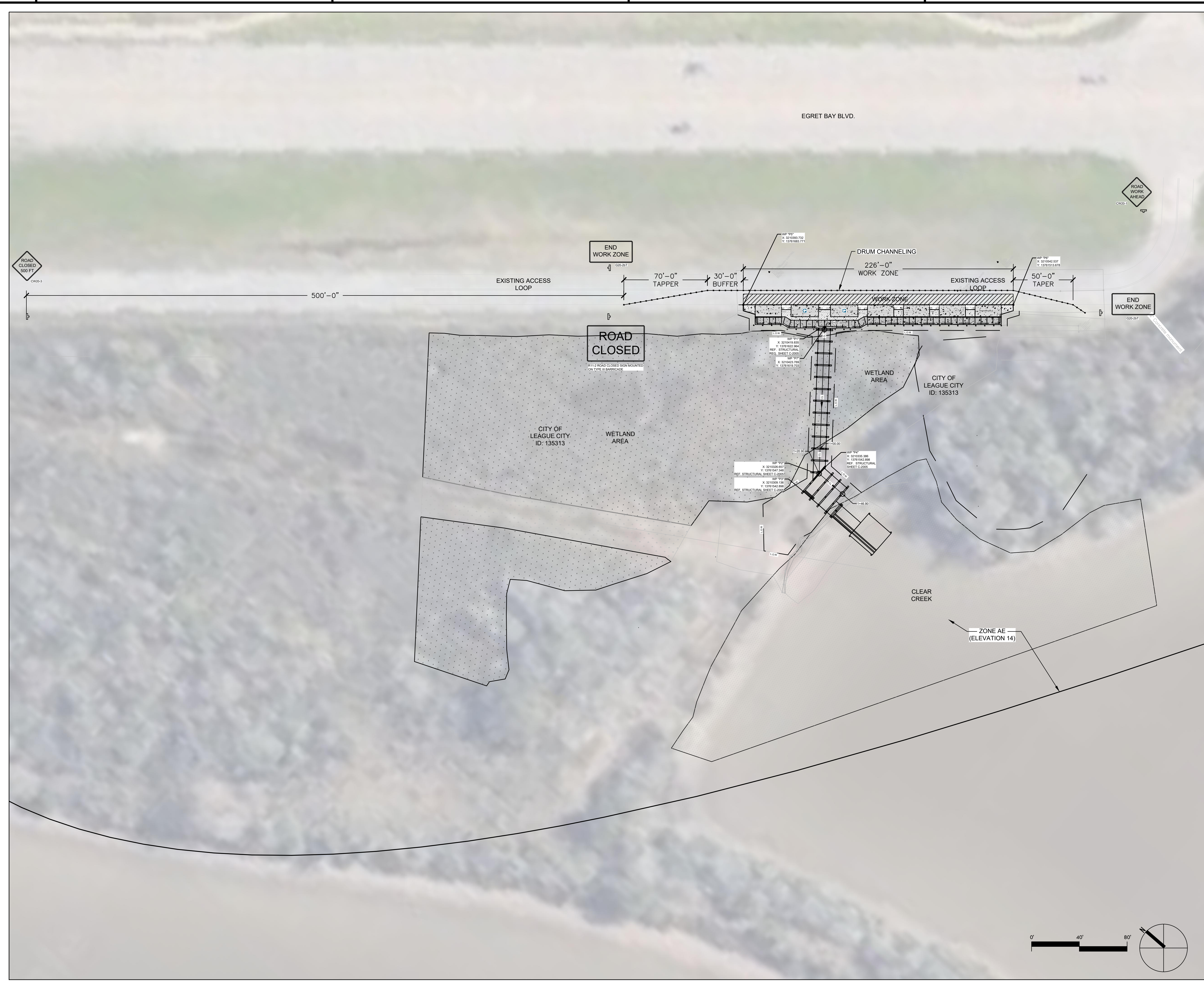


NOTE:
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100 YR WSE = 14.5'
FIRM PANEL NOS, 48167C0037G, 48167C0038G.
EFFECTIVE DATE: AUGUST 15, 2019.
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GENERAL NOTES:
1. IMPACTS TO THE ADJACENT LANDFORM ARE COMPLETELY AVOIDED; AND
3) VISIBLE ORANGE CONSTRUCTION FENCING BE PLACED ALONG THE
ENTIRE LENGTH OF THE DELINEATED BOUNDARIES OF SITE 41GV53 IN
ORDER TO CREATE A BARRIER BETWEEN SITE 41GV53 AND THE
ADJACENT CONSTRUCTION ACTIVITIES. ANY FUTURE ACTIVITIES WITHIN
THE BOUNDARIES OF SITE 41GV53 MAY REQUIRE ADDITIONAL
ARCHEOLOGICAL INVESTIGATIONS.

A2 HARDSCAPE PLAN

SCALE 1"=20'-0"

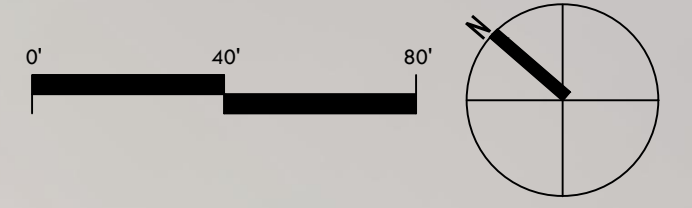


NOTE:
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GENERAL NOTES:

- IMPACTS TO THE ADJACENT LANDFORM ARE COMPLETELY AVOIDED; AND 3) VISIBLE ORANGE CONSTRUCTION FENCING BE PLACED ALONG THE ENTIRE LENGTH OF THE DELINEATED BOUNDARIES OF SITE 41GV53 IN ORDER TO CREATE A BARRIER BETWEEN SITE 41GV53 AND THE ADJACENT CONSTRUCTION ACTIVITIES. ANY FUTURE ACTIVITIES WITHIN THE BOUNDARIES OF SITE 41GV53 MAY REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS.

A2 TRAFFIC CONTROL PLAN



SCALE 1"=40'-0"

GENERAL NOTES: 12-2022

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE CITY OF LEAGUE CITY GENERAL DESIGN AND CONSTRUCTION STANDARDS AND THE CITY OF LEAGUE CITY STANDARD DETAILS AS CURRENTLY AMENDED. CONTRACTOR SHALL OBTAIN (AND USE) COPY FROM THE CITY OF LEAGUE CITY.
2. THERE WILL BE NO SEPARATE PAYMENT FOR WORK SHOWN ON THESE PLANS, UNLESS SPECIFICALLY ESTABLISHED IN THE BID PROPOSAL SECTION OF THE CONTRACT DOCUMENTS. INCLUDE COST OF THIS WORK IN THE CONTRACT UNIT PRICE FOR ITEMS OF WHICH THIS WORK IS A COMPONENT OR INCIDENTAL.
3. EXISTING UTILITY INFORMATION SHOWN IS NOT GUARANTEED TO BE ACCURATE AND ALL INCLUSIVE. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF HIS CONSTRUCTION. ANY CONFLICT OR DISCREPANCY DISCOVERED MUST IMMEDIATELY BE BROUGHT TO THE ENGINEER'S ATTENTION.
4. ANY DAMAGE TO EXISTING PUBLIC UTILITIES MUST BE REPAIRED IMMEDIATELY. THE CONTRACTOR MUST NOTIFY THE APPROPRIATE UTILITY OWNER, WHO WILL MAKE THE REPAIRS AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR ON BEHALF OF THE OWNER, SHALL OBTAIN ALL CONSTRUCTION PERMITS PRIOR TO THE COMMENCEMENT OF WORK.
6. THE WORK AREA SHALL BE BARRICADED AND ILLUMINATED DURING DARKNESS AND PERIODS OF INACTIVITY, WHEN IN AN AREA OF DIRECT PUBLIC ACCESS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIAL AND EQUIPMENT IN A SAFE AND WORKMAN LIKE MANNER TO PREVENT INJURIES, DURING AND AFTER WORKING HOURS UNTIL PROJECT COMPLETION. THERE SHALL BE NO PAYMENT MADE TO THE CONTRACTOR FOR STORED MATERIAL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHIPPING OF ALL MATERIALS. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL AT ALL TIMES BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE SUCH MATERIAL AT THE POINT OF DELIVERY AND TO REJECT ALL DEFECTIVE MATERIAL. THE DEFECTIVE MATERIAL MUST BE REPLACED WITH SOUND MATERIAL.
9. ALL PIPE AND REINFORCEMENT STEEL SHALL BE KEPT FREE OF DIRT AND OTHER DEBRIS. ANY DAMAGE TO THE COATING OF THE VARIOUS MATERIALS MUST BE REPAIRED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE AND POSITIVE DRAINAGE AND TO INSURE NO BLOCKAGE OF EXISTING DRAINAGE WAYS AT ALL TIMES DURING CONSTRUCTION OF PROPOSED FACILITIES. NATURAL GROUND ADJACENT TO UTILITY TRENCH EXCAVATION TO BE GRUBBED PRIOR TO PLACEMENT OF EXCESS TRENCH MATERIAL. (NO SEPARATE PAY).
11. ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
12. THE CONTRACTOR IS REQUIRED TO FOLLOW ALL APPLICABLE OSHA RULES AND REGULATIONS. TRENCH SAFETY SHALL BE DONE IN ACCORDANCE WITH OSHA 29 CFR PART 1926, AS PUBLISHED IN THE FEDERAL REGISTER OCTOBER 31, 1989, AND EFFECTIVE JANUARY 2, 1990, AND AMENDMENTS THERETO.
13. NO CONNECTIONS SHALL BE MADE TO THE EXISTING WATER LINES OR SANITARY SEWERS UNTIL ALL PROPOSED LINES OR SEWERS HAVE BEEN THOROUGHLY CLEANED, TESTED, AND APPROVED BY THE ENGINEER.
14. ALL GEOTECHNICAL REPORTS (IF ANY) FOR THIS PROJECT ARE AVAILABLE AT THE OFFICE OF THE ENGINEER.
15. SURFACE RESTORATION: AT THE END OF ALL CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL RESTORE THE EXISTING FACILITIES, I.E., THE PROPERTY, INCLUDING DITCH, EQUAL TO OR BETTER THAN EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. ALL DISTURBED AREA SHALL BE SEEDED PROPERLY.
16. FINAL ACCEPTANCE OF THE UTILITIES WILL NOT BE GIVEN TO THE CONTRACTOR UNTIL THEY ARE INSPECTED AND APPROVED BY THE CITY OF LEAGUE CITY.
17. ALL MANHOLES ARE TO BE CONSTRUCTED TO ALLOW FOR A MINIMUM OF 1 FOOT OF VERTICAL ADJUSTMENT.
18. ALL TRENCH EXCAVATION, BEDDING AND BACKFILL SHALL BE IN CONFORMANCE WITH THE CITY OF LEAGUE CITY STANDARD DETAILS - EXCAVATION AND BACKFILL FOR UTILITIES AND UTILITY BACKFILL MATERIAL SPECS.
19. ALL UTILITY TRENCHES UNDER OR WITHIN THREE FEET OF EXISTING, PROPOSED, AND/OR FUTURE PAVEMENT OR CURB SHALL BE BACKFILLED WITH NO LESS THAN 1-1/2 SACKS OF CEMENT PER TON OF CEMENT-STABILIZED SAND TO A POINT ONE FOOT BELOW PAVEMENT SUBGRADE. THE REMAINING BACKFILL SHALL BE MADE WITH COMPACTED SUITABLE MATERIAL.
20. THE USE OF WELL POINT SYSTEMS, WHEN REQUIRED BY TRENCH CONDITIONS, SHALL BE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
21. CONTRACTOR SHALL PROTECT ALL TREES ADJACENT TO WORK AREA. NO TREES SHALL BE REMOVED WITHOUT PERMISSION OF OWNER.
22. CONTRACTOR SHALL PROVIDE MINIMUM CLEARANCES AT STORM SEWER, SANITARY SEWER AND WATER LINE CROSSINGS AS DESIGNED PER THE PLANS AND ACCORDING TO THE BEDDING AND BACKFILL DETAILS.
23. ALL AREAS DISTURBED ALONG SIDE AND BACK-OF-LOT EASEMENTS OR OTHER UNNECESSARY DISTURBANCES AS A RESULT OF CONSTRUCTION WORK SHALL BE SEEDED AND FERTILIZED IN ACCORDANCE WITH SEEDING SPECIFICATIONS (NO SEPARATE PAY).
24. EXCAVATE MUCK, ORGANIC MATERIAL AND UNSUITABLE SOIL PRIOR TO PLACING FILL. PLACE SUITABLE MATERIAL IN 8" MAXIMUM LOOSE LIFT AND COMPACT TO 95% STANDARD PROCTOR DENSITY.
25. ALL BACKFILL SHALL BE PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY AND BE TESTED BY AN APPROVED TESTING LAB.
26. ALL TRENCH BACKFILL SHALL HAVE AT LEAST ONE DENSITY TESTING ON EACH LIFT. ONLY STANDARD BACKFILL PROCEDURES ARE ALLOWED. ANY DEVIATION FROM THIS STANDARD MUST BE APPROVED BY THE CITY OF LEAGUE CITY.
27. EXCEPT FOR WATER AND SANITARY SEWER FACILITIES, ALL PROPOSED FACILITIES MUST BE INSTALLED WITH A MINIMUM SEPARATION OF 4 FEET OUTSIDE TO OUTSIDE FROM ALL OTHER EXISTING OR PROPOSED FACILITIES.
28. ALL TESTING PROCEDURES USED ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEAGUE CITY STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTS REQUIRED. IF ANY TEST RESULTS DO NOT MEET THE TESTING STANDARDS, SUCH MATERIAL SHALL BE REMOVED AND REPLACED SO THAT THE TESTING STANDARDS CAN BE MET. COST OF TEST AND LABORATORY SERVICES SHALL BE INCIDENTAL AND INCLUDED IN UNIT PRICE OF BID ITEM. A COPY OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER AND THE CITY OF LEAGUE CITY.
29. ALL UNSATISFACTORY AND OR WASTE MATERIALS INCLUDING VEGETATION, ROOTS, CONCRETE AND DEBRIS SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR, IN 100 YR AND 500 YR FLOOD ZONES EXCESS SPOIL DIRT SHALL BE REMOVED OFFSITE TO AN APPROVED LOCATION OR AS SHOWN PER ENGINEERED PLAN, NO DIRECT PAYMENT WILL BE MADE, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE VARIOUS BID PROPOSAL ITEMS.
30. UTILITY CONTRACTOR SHALL ADJUST RIM ELEVATIONS TO 0.3 FEET ABOVE THE FINISHED GRADE AT EACH MANHOLE LOCATION AFTER PAVEMENT CONTRACTOR HAS COMPLETED FINAL GRADING (NO SEPARATE PAY). SLOPED FILL SHALL BE ADDED FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM.
31. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION BOTH DAY AND NIGHT IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
32. UTILITY CONTRACTOR SHALL AT COMPLETION OF HIS WORK FILL AND GRADE ALL UTILITY EASEMENTS (WET AND DRY) FOR POSITIVE DRAINAGE, AS DIRECTED BY THE OWNER. (NOT SEPARATE PAY)
33. CITY OF LEAGUE CITY SIGNATURES ARE VALID FOR 1 (ONE) YEAR ONLY AFTER DATE & SIGNING OF PLANS.
34. UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURB INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE.

35. CONTRACTOR SHALL CONTACT THE FOLLOWING A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

- A) FOR CIP - CITY OF LEAGUE CITY PROJECT MANAGEMENT (281)-554-1436
- B) FOR SUBDIVISION INFRASTRUCTURE - ENGINEERING DEPT (281)-554-1439
- C) CITY OF LEAGUE CITY FIRE MARSHALL (281)-554-1290
- D) TEXAS ONE CALL SYSTEM 1-800-245-4545
- E) LONE STAR NOTIFICATION CENTER 1-800-669-8344
- F) TEXAS EXCAVATION SAFETY SYSTEM INC. 1-800-344-8377
- G) EL PASO PIPELINE : MR. J.R. LOGAN (281)-331-4693
- H) BP PIPELINE : MR. DARRREL BARBO (409)-938-6995 (MOBIL) (281)-636-6747

36. CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND PAVEMENT BEFORE CONSTRUCTION. ANY VERIFICATIONS THAT ARE INCONSISTENT WITH THE PLANS NEED TO BE REPORTED TO THE ENGINEER BEFORE CONSTRUCTION BEGINS.

37. WITH CITY ENGINEERS APPROVAL, W. S. & D. SPOIL MAY BE SPREAD EVENLY IN THE STREET RIGHT-OF-WAY AFTER UTILITIES ARE IN PLACE.

38. THERE WILL BE NO ADDITIONAL COST FOR INSTALLING WATER LINES AND SEWERS UNDER EXISTING UTILITIES AND PIPELINE. INCLUDE COST OF THIS WORK IN THE CONTRACT UNIT PRICE FOR ITEMS OF WHICH THIS WORK IS A COMPONENT OR INCIDENTAL.

39. LAWS TO BE OBSERVED, THE DEVELOPER/CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH AND AT ALL TIMES SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF THE WORK AND SHALL INDEMNIFY AND SAVE HARMLESS THE CITY AND ITS REPRESENTATIVES AGAINST ANY CLAIM ARISING FROM THE VIOLATION OF ANY SUCH LAW, ORDINANCE, OR REGULATIONS, WHETHER BY HIMSELF OR BY HIS EMPLOYEES.

40. CONTRACTOR SHALL REMOVE ALL MUD, DIRT, AND DEBRIS DEPOSITED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY.

41. CONTRACTOR SHALL CONTACT THE WATER UTILITY DEPARTMENT AT 281-554-1390 TO COORDINATE VALVE OPERATIONS FOR PROPOSED TIE-INS.

42. DISPOSAL OF EXCESS EXCAVATION MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DISPOSAL OF EXCESS EXCAVATION MATERIAL WITHIN LEAGUE CITY SHALL COMPLY WITH ORDINANCE 2009-25 ARTICLE 2.

43. FOR 2-LANE 2-WAY ASPHALT MILL AND OVERLAY PROJECTS, CONTRACTOR IS TO MILL AND OVERLAY 1/2 LANE WIDTH AT A TIME. FOR ROADWAYS WITH MULTIPLE LANES, CONTRACTOR IS TO COORDINATE WITH LEAGUE CITY PROJECT MANAGER.

44. FOR PRIVATE DEVELOPMENT: AS NOTED IN ORDINANCE NO. 2018-46, AN OVERTIME RATE OF \$50/HOUR WITH A 2-HOUR MINIMUM FEE WILL BE CHARGED FOR CITY INSPECTOR'S TIME DURING THE CONSTRUCTION OF PUBLIC INFRASTRUCTURE. AS NOTED IN THIS ORDINANCE, THERE ARE 2 OPTIONS FOR PAYMENT OF THE INCURRED OVERTIME COST: 1) THE DEVELOPER MAY DEPOSIT \$500.00 WITH THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING. IN THIS CASE, THE CITY WOULD REFUND ANY UNUSED FUNDS TO THE DEVELOPER AFTER CITY PROJECT ACCEPTANCE. ANY BALANCE DUE TO THE CITY MUST BE PAID PRIOR TO CITY ACCEPTANCE OF THE PROJECT. 2) THE DEVELOPER MAY OPT TO BE BILLED MONTHLY OR PRIOR TO CITY PROJECT ACCEPTANCE. THE CITY'S ENGINEERING DEPARTMENT MUST BE NOTIFIED BY 12:00 PM ON THURSDAY IF ANY PUBLIC INFRASTRUCTURE WORK IS PLANNED FOR THE WEEKEND

PAVING CONSTRUCTION NOTES: 12-2022

1. GUIDELINES SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE OBSERVED.

2. ALL RETURNS HAVE 25' RADIUS AT BACK OF CURB UNLESS OTHERWISE NOTED.

3. WHEN THE TOP OF CURB ELEVATION OR BOTTOM OF PAVEMENT SLAB IS ABOVE NATURAL GROUND, THE PAVING CONTRACTOR SHALL BACKFILL FROM THE NATURAL GROUND TO TOP OF CURB IN LAYERS NOT EXCEEDING 8 INCHES IN DEPTH AND EACH LAYER COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY AND SHALL FILL FROM CURB TO EDGE OF TRELINE. (NO SEPARATE PAY)

4. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES; AND WILL REPLACE AT HIS EXPENSE ANY FACILITIES DAMAGED DURING PAVING OPERATIONS. ALL MANHOLES AND VALVES FALLING WITHIN PAVEMENT AREA SHALL BE ADJUSTED TO FINISHED GRADE BY PAVING CONTRACTOR WITHOUT THE USE OF BLOCKOUTS WHEN DIRECTED BY OWNER (WITH NO SEPARATE PAY).

5. PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF LEAGUE CITY GENERAL DESIGN AND CONSTRUCTION STANDARDS AND THE CITY OF LEAGUE CITY STANDARD DETAILS AS CURRENTLY AMENDED.

6. EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF LEAGUE CITY STANDARDS.

7. CONDITION OF THE ROAD AND / OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.

8. ALL ROAD WIDTHS, CURB RADII, AND CURB ALIGNMENT SHOWN INDICATE BACK OF CURB. T.C. INDICATES TOP OF CURB. T.P. INDICATES TOP OF PAVEMENT ELEVATIONS.

9. DOUBLE REFLECTORIZED BLUE TRAFFIC MARKERS SHALL BE PLACED 1 FOOT OFFSET OF THE CENTERLINE AT ALL FIRE HYDRANT LOCATIONS BY THE PAVING CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE A BUTTON PLACED ON EACH STREET. NO EXTRA PAY.

10. AREAS TO RECEIVE FILL SHALL BE STRIPPED 4 INCHES AND SCARIFIED PRIOR TO FILL PLACEMENT. PAVEMENT FILL SHALL BE COMPACTED TO A MINIMUM 95% MAXIMUM DENSITY PER ASTM D698 IN MAXIMUM 8" LOOSE LIFTS

11. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 80 FEET.

12. THE SUBGRADE IS TO BE SCARIFIED TO A DEPTH DETERMINED BY TEST LAB, WITH LIME OR CEMENT STABILIZE AS DETERMINED BY LAB RESULTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D698 OR ASTM D1557.

13. WHEN A 6 INCH THICK CONCRETE ROADWAY INTERSECTS WITH A 7 INCH THICK CONCRETE ROADWAY, 7 INCH THICK CONCRETE SHALL BE CONSTRUCTED FOR THE ENTIRE INTERSECTION TO THE ENDS OF ALL CURB RETURNS.

14. AREAS TO BE FILLED SHALL BE SCARIFIED AND COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY PER ASTM D-698, TO A DEPTH OF 8 INCHES PRIOR TO FILL PLACEMENT. FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8 INCH THICK LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS PER ASTM D-698. MOISTURE CONTENT SHALL BE WITHIN 2% OF OPTIMUM UNLESS OTHERWISE DIRECTED BY OWNER'S TESTING LAB OR THE ENGINEER. FILL SHALL BE CLEAN EARTH, SAND, OR A COMBINATION, AND BE FREE FROM TRASH, VEGETATION AND LARGE STONES.

15. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.

16. STREET NAME SIGNS TO BE STANDARD CITY OF LEAGUE CITY SIGNS AND INSTALLED BY CONTRACTOR. CONTACT CITY OF LEAGUE CITY STREET DEPARTMENT FOR EXAMPLE. CONTRACTOR TO VERIFY STREET NAME WITH APPROVED PLAT.

17. ALL EXCESS SUITABLE SOILS FROM WS&D AND PAVING CONSTRUCTION SHALL BE EVENLY APPLIED TO LOT AREAS IN ACCORDANCE WITH ITEM 15 OF THIS PAVING CONSTRUCTION NOTES, AND BE INCIDENTAL TO THE LOT GRADING ITEM OF THIS CONTRACT.

18. CONTRACTOR SHALL GET A COPY OF THE APPROVED PLAT TO DETERMINE THE CORRECT NAMES OF THE STREETS BEFORE ORDERING AND PLACING STREET SIGN NAMES.

19. SIDEWALKS FALLING WITHIN OR ADJACENT TO RESERVES PARALLEL WITH ROAD RIGHT-OF-WAY AND ALL CROSS WALK RAMPS SHALL BE PLACED BY THE OWNER'S CONTRACTOR.

20. FOR 2-LANE 2-WAY ASPHALT MILL AND OVERLAY PROJECTS, CONTRACTOR IS TO MILL AND OVERLAY 1/2 LANE WIDTH AT A TIME. FOR ROADWAYS WITH MULTIPLE LANES, CONTRACTOR IS TO COORDINATE WITH LEAGUE CITY PROJECT MANAGER.

SEAL:

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW, AGENCY APPROVAL, AND COMMENT UNDER THE AUTHORITY OF CLAUDIA T. WALKER, RLA LANDSCAPE ARCHITECT No. 2887, ON 04/03/24. THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES

02.28.2024

90% CONSTRUCTION DOCUMENT

DR. NED & FAY DUDNEY CLEAR CREEK NATURE CENTER KAYAK LAUNCH
1325 N EGRET BAY BLVD.
LEAGUE CITY, TEXAS 77573

1 INCH
IF THIS LINE DOES NOT MEASURE ONE INCH THIS DRAWING IS NOT TO SCALE AND SHOULD NOT BE SCALED FOR DIMENSIONAL INFORMATION.

PROJECT NUMBER:

1144.003

ISSUE DATES:

02.23.2023 - 60% CD

04.03.2023 - 60% CD RESUBMIT

06.07.2023 - 90% CD

11.17.2023 - SITE MODIFICATIONS

12.14.2023 - 90% CD RESUBMIT

02.28.2023 - 90% CD 2ND RESUBMIT

DRAWN BY:

CTW, PDK

CHECKED BY:

CTW

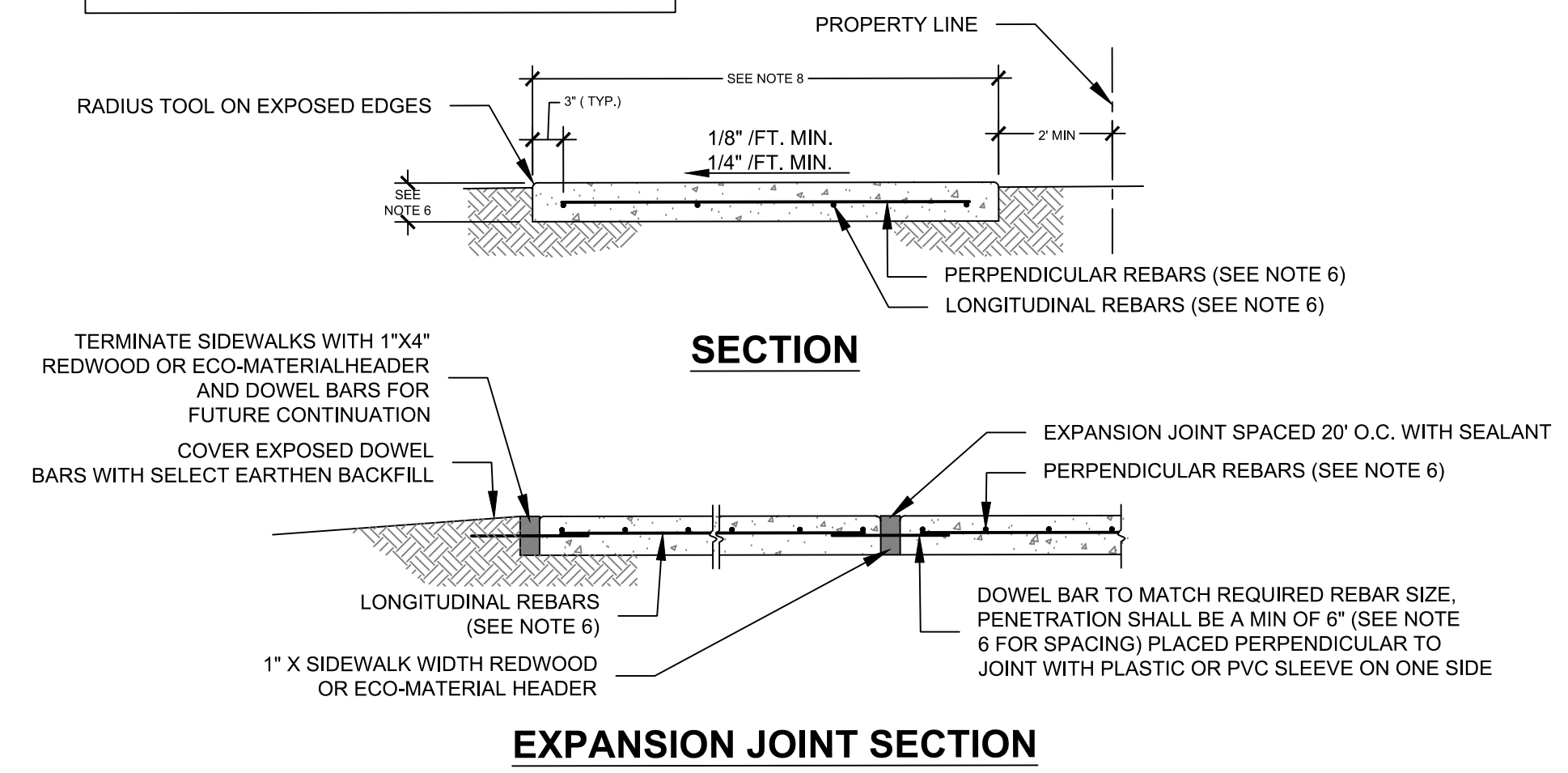
SHEET NO.:

L1.04

GENERAL NOTES

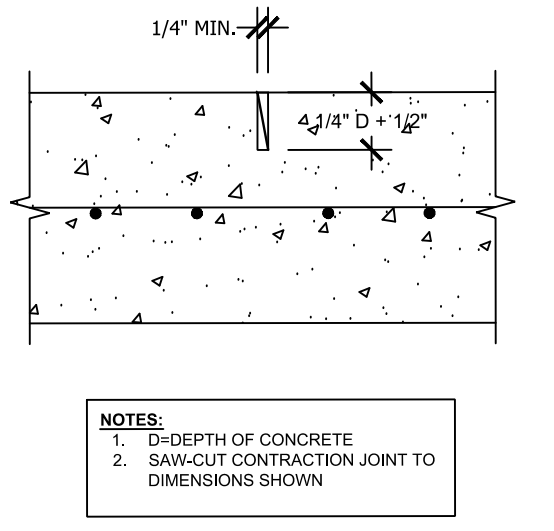
ACCESSIBLE ROUTE GENERAL NOTES:

- The design and construction of all elements of pedestrian facilities shall meet the criteria established in the current edition of the Texas Accessibility Standards (TAS), as prepared and administered by the Texas Department of Licensing and Regulation (TDLR), unless otherwise directed by the engineer.
- The cross slope of an accessible route and/or landing must not exceed 1:50 (2%). Any part of the accessible route with a slope greater than 1:20 (5%) shall be considered a ramp.
- A minimum width of 36 inches shall be provided for landings around obstructions (i.e. sign supports, signal supports, poles, etc.) located adjacent to the pedestrian route.
- Minimum 32 inches of clearance is required for obstructions less than 24 inches in length, and a minimum 36 inches of clearance is required for obstructions greater than or equal to 24 inches in length.

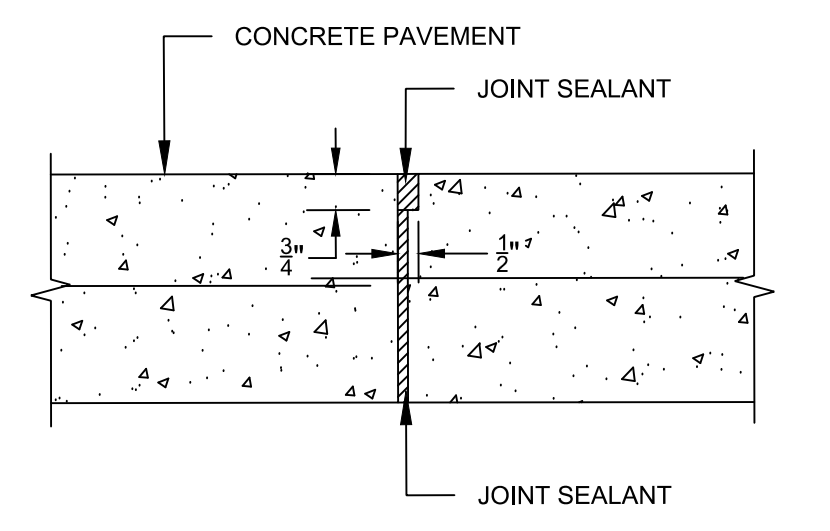


SIDEWALK SECTION AND EXPANSION JOINT DETAIL

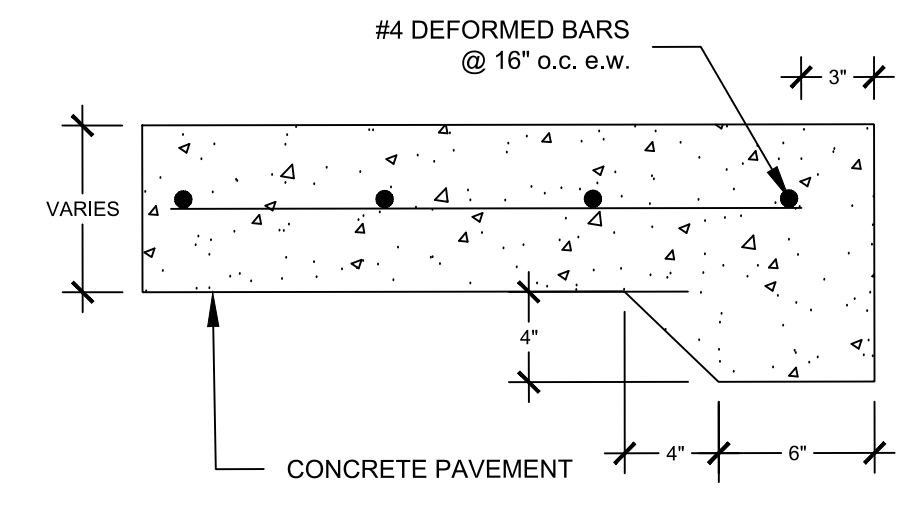
C4 CONCRETE WALK DETAIL N.T.S.



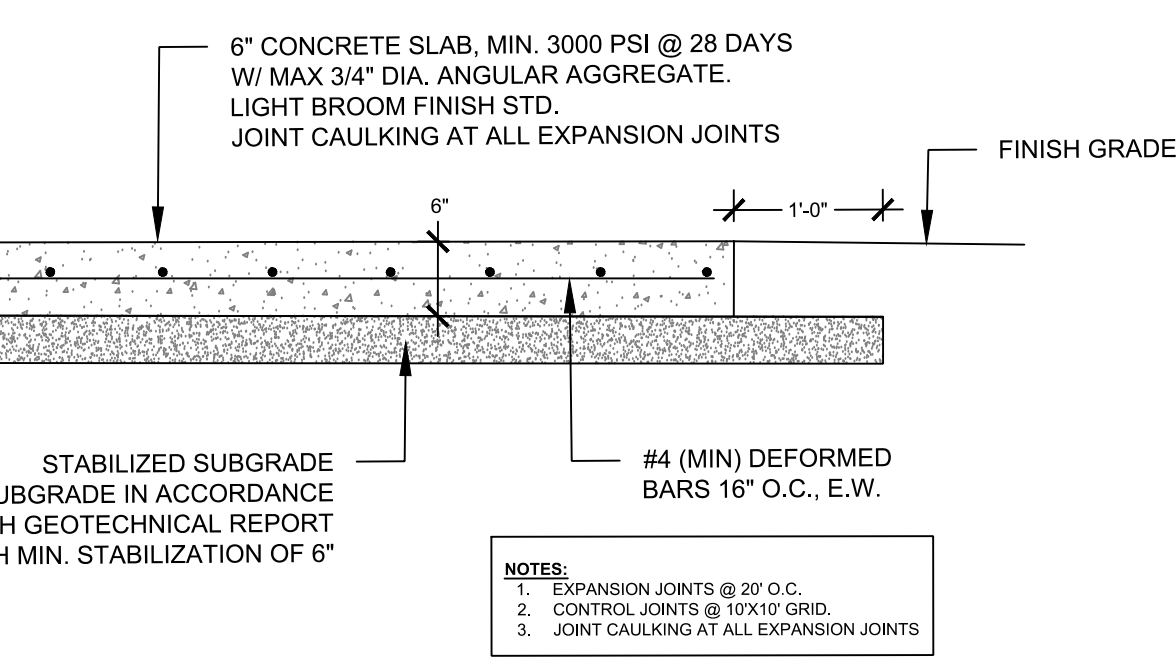
C3 CONTRACTION JOINT N.T.S.



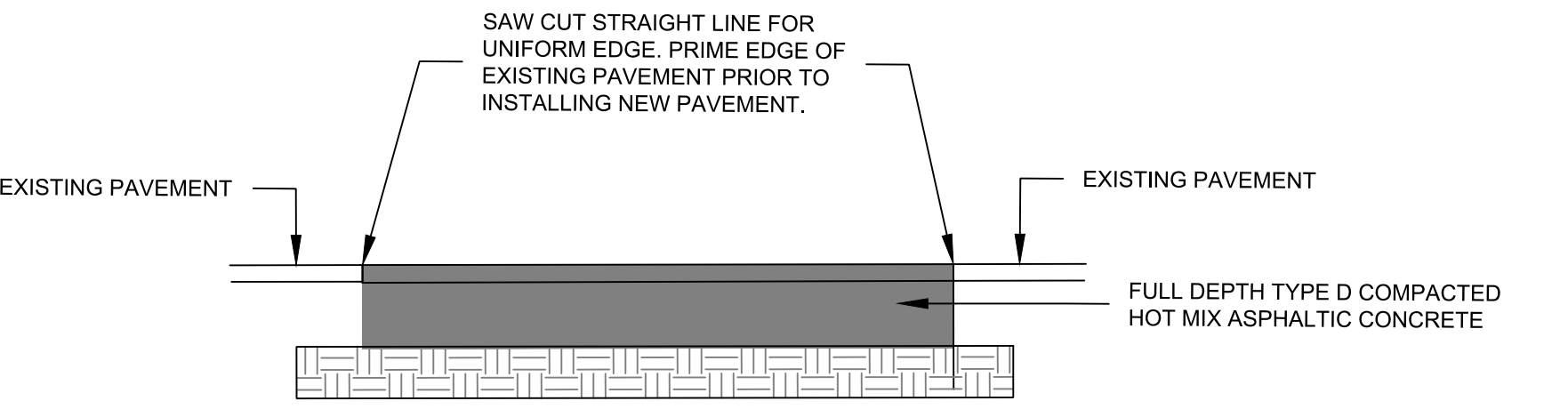
B3 CONSTRUCTION JOINT N.T.S.



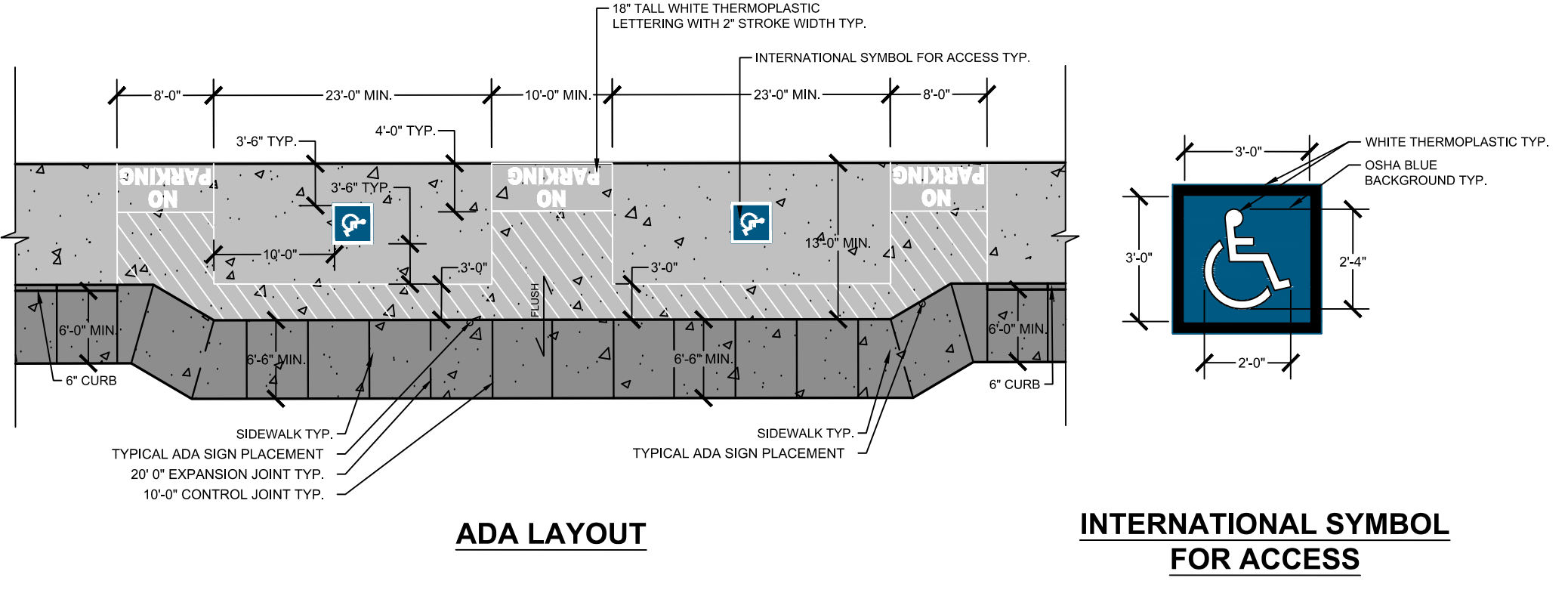
B2 CONCRETE WALK HEADER WALL N.T.S.



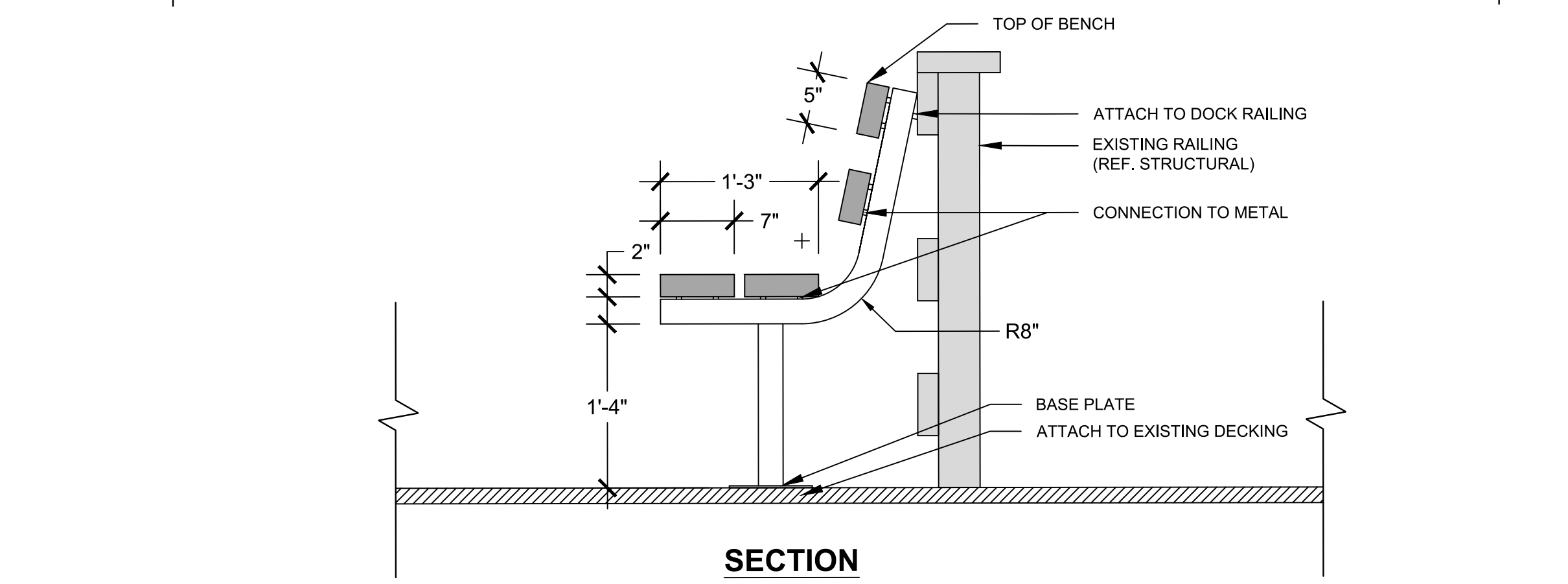
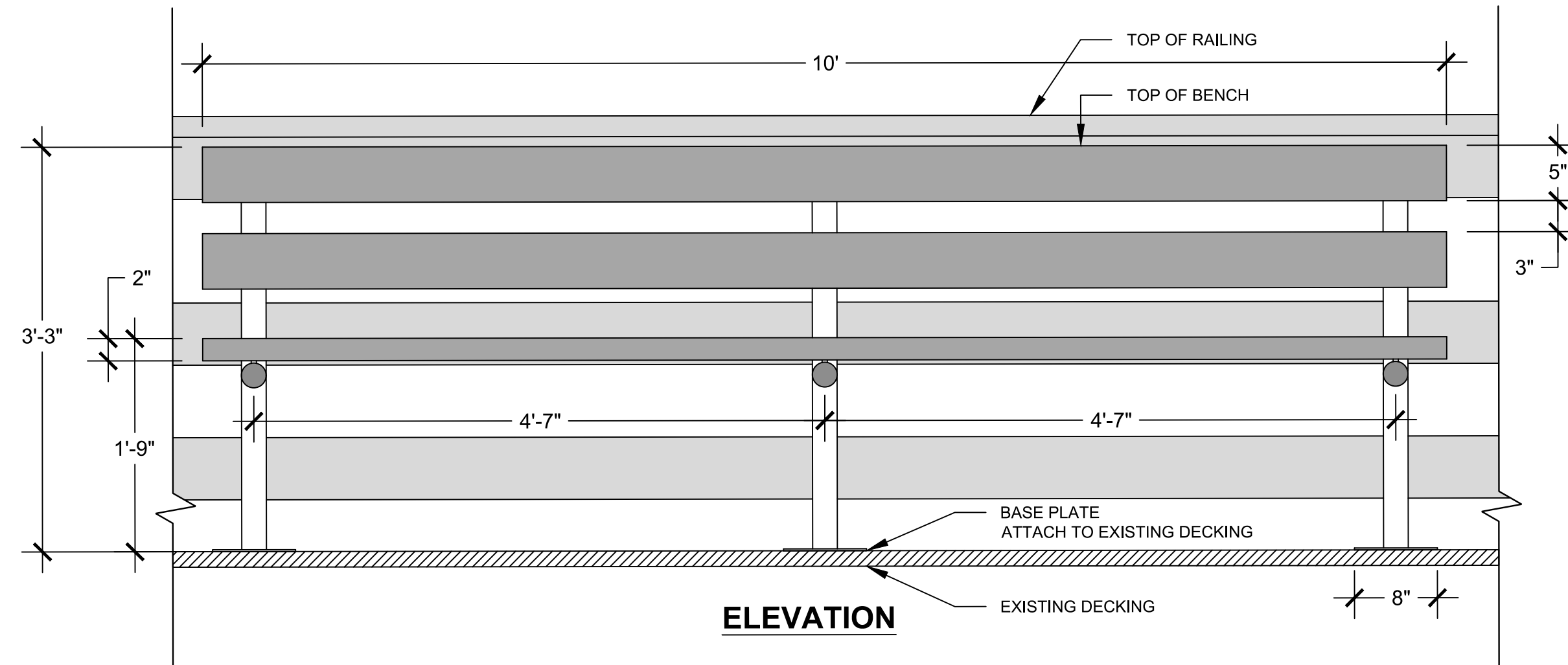
A4 TYPICAL CONCRETE PAVING SECTION N.T.S.



A1 TYP. ASPHALT SPOT PAVEMENT REPAIR N.T.S.

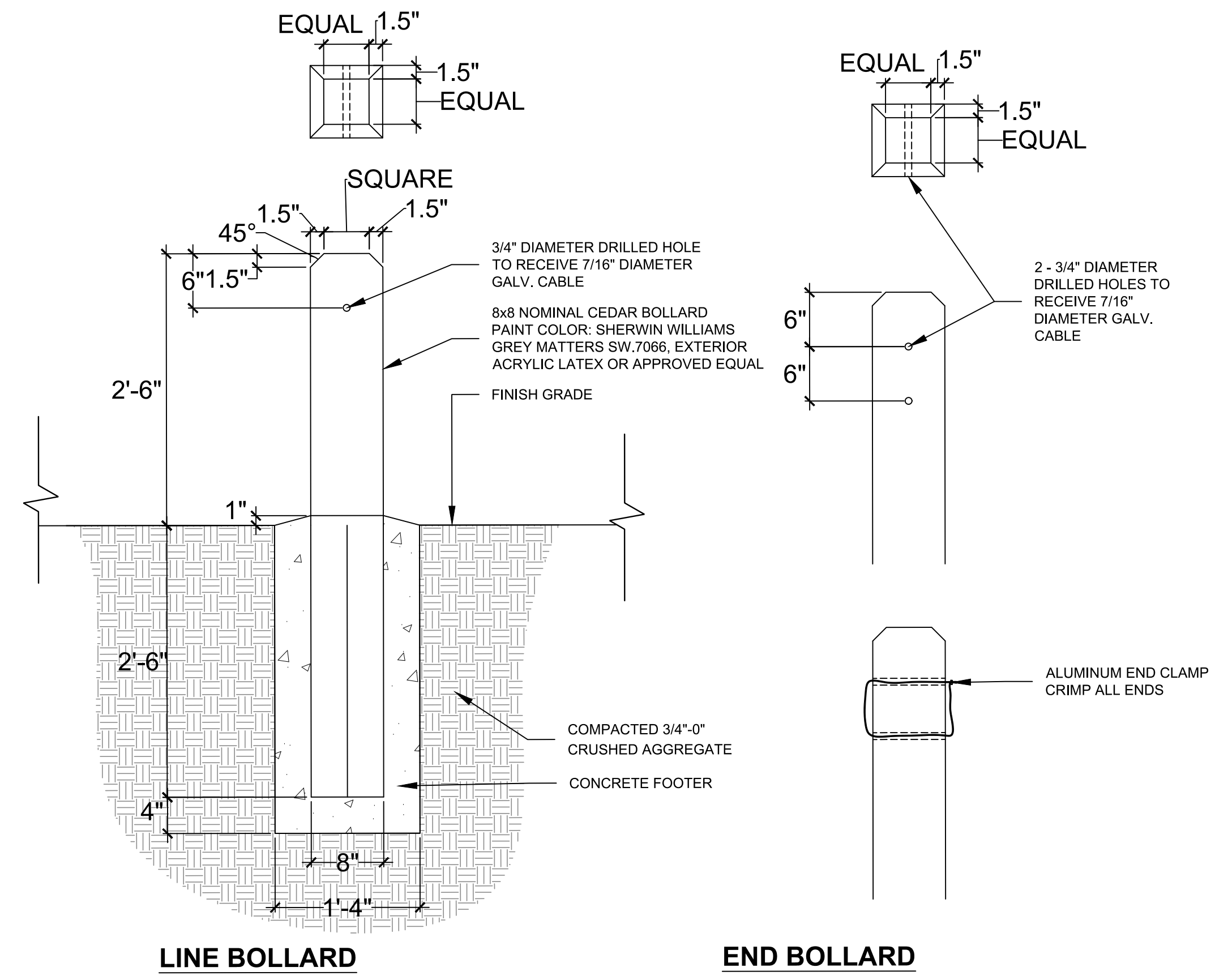


A4 ADA PARALLEL PARKING N.T.S.



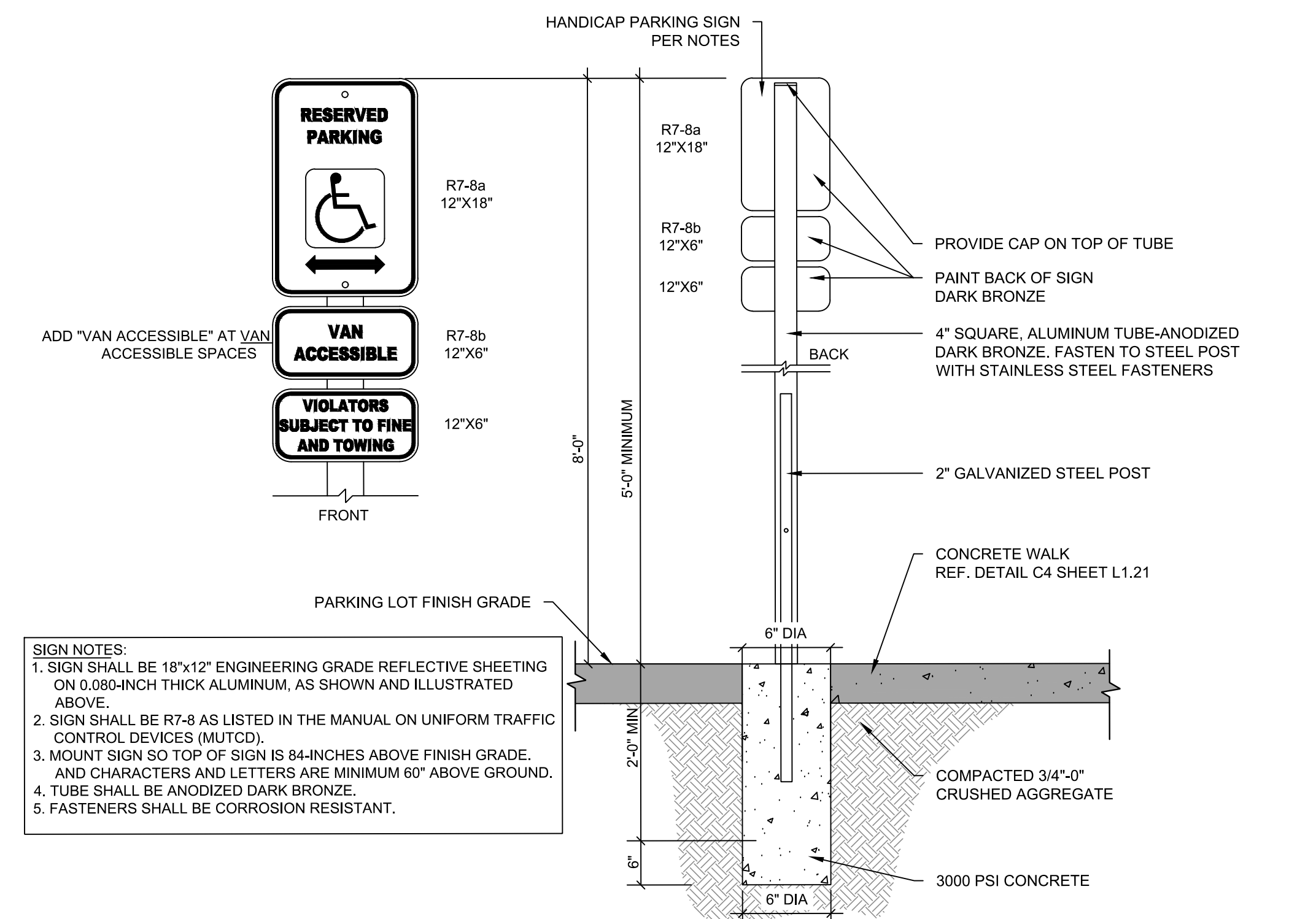
C2 BENCH (ADD ALTERNATE #1)

N.T.S.



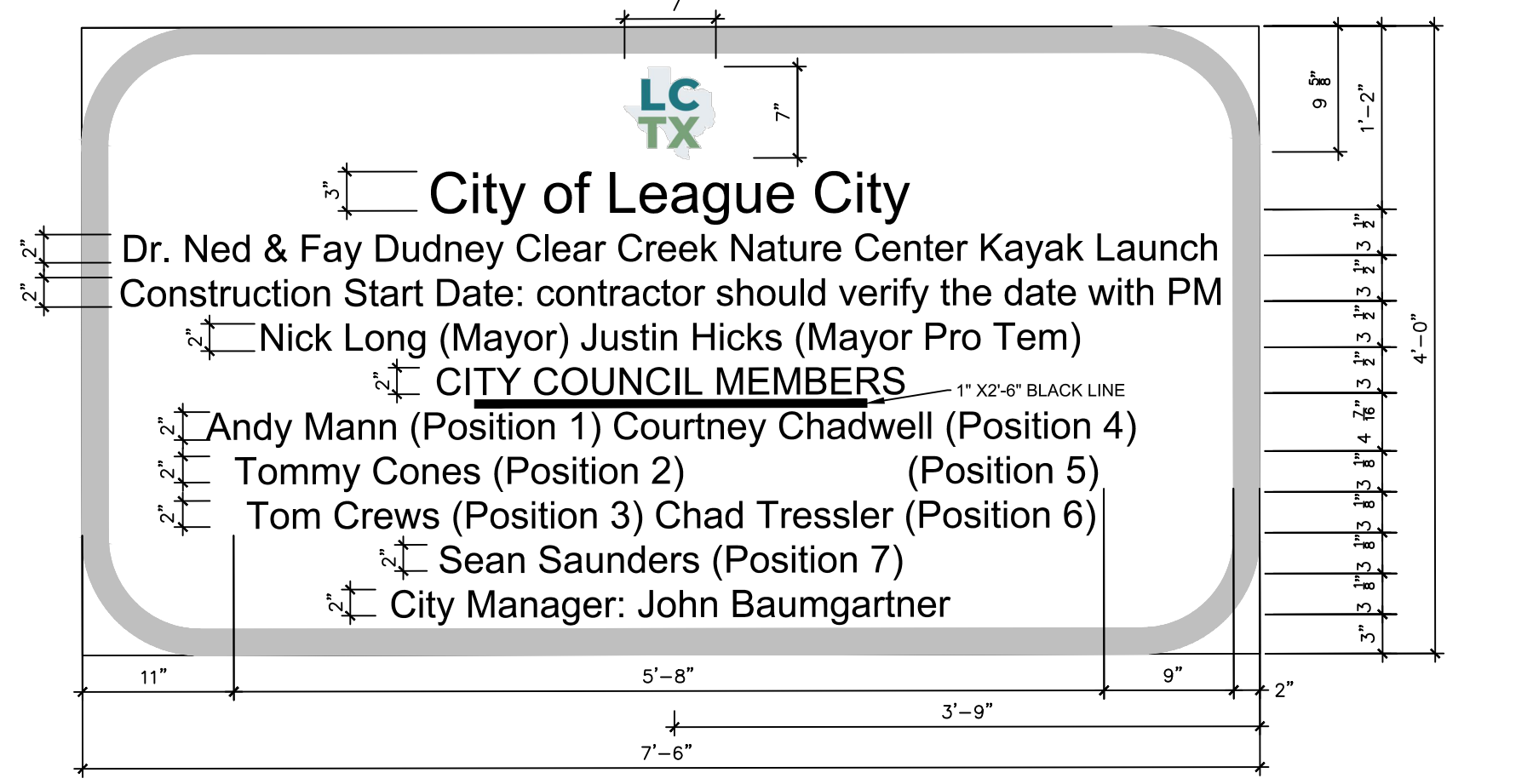
C4 WOLMANIZED WOODEN BOLLARD

N.T.S.



A2 ADA PARKING SIGNAGE

N.T.S.



A4 CONSTRUCTION SIGN DETAIL

N.T.S.

NOTES:
FINAL SIGN CONTENT TO BE SUPPLIED BY OWNER, CONTRACTOR TO SUBMIT LAYOUT FOR APPROVAL PRIOR TO FABRICATION.

SEAL:

THIS DOCUMENT IS RELEASED FOR
THE PURPOSE OF INTERIM REVIEW,
AGENCY APPROVAL, AND COMMENT
UNDER THE AUTHORITY OF
CLAUDIA T. WALKER, RLA
LANDSCAPE ARCHITECT No. 2987, ON 04/03/24
THIS DOCUMENT IS NOT
TO BE USED FOR
CONSTRUCTION PURPOSES

02.28.2024

**90%
CONSTRUCTION
DOCUMENT**

**DR. NED & FAY DUDNEY CLEAR CREEK
NATURE CENTER KAYAK LAUNCH**
1325 N EGRET BAY BLVD.
LEAGUE CITY, TEXAS 77573

1 INCH

IF THIS LINE DOES NOT MEASURE ONE
INCH THIS DRAWING IS NOT TO SCALE
AND SHOULD NOT BE SCALED FOR
DIMENSIONAL INFORMATION.

PROJECT NUMBER:

1144.003

ISSUE DATES:

02.23.2023 - 60% CD

04.03.2023 - 60% CD RESUBMIT

06.07.2023 - 90% CD

11.17.2023 - SITE MODIFICATIONS

12.14.2023 - 90% CD RESUBMIT

02.28.2023 - 90% CD 2ND RESUBMIT

DRAWN BY:

CTW, PDK

CHECKED BY:

CTW

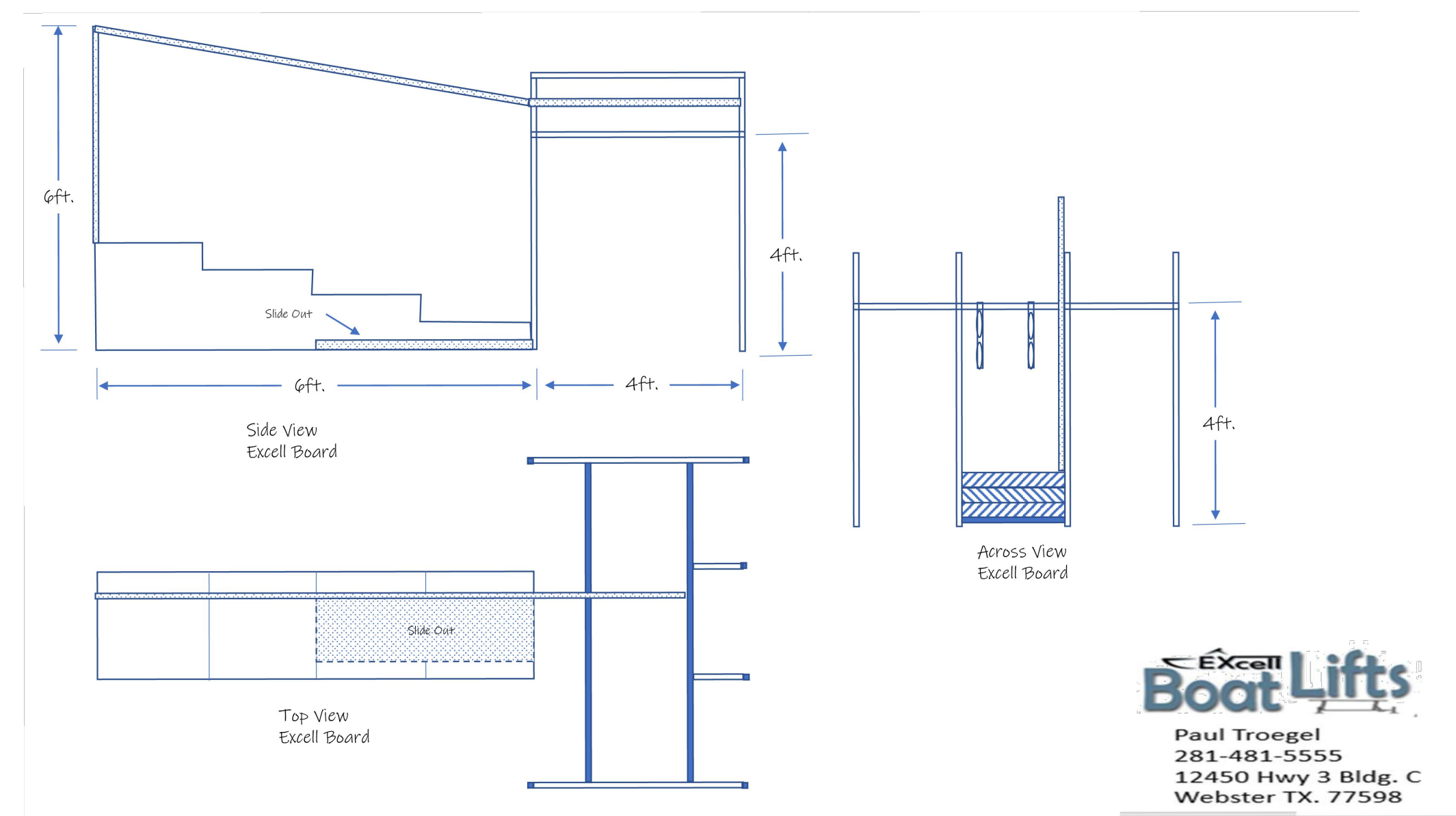
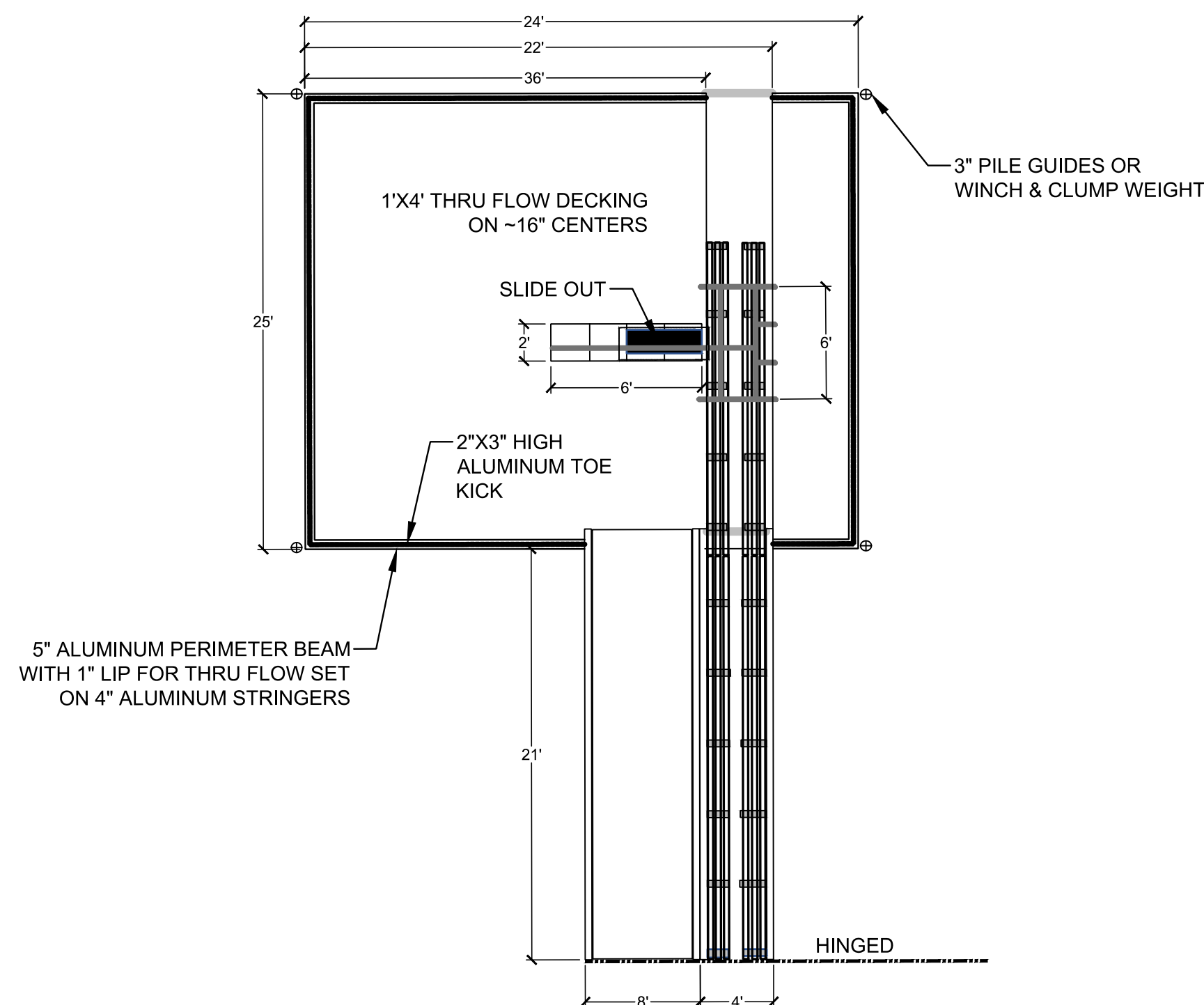
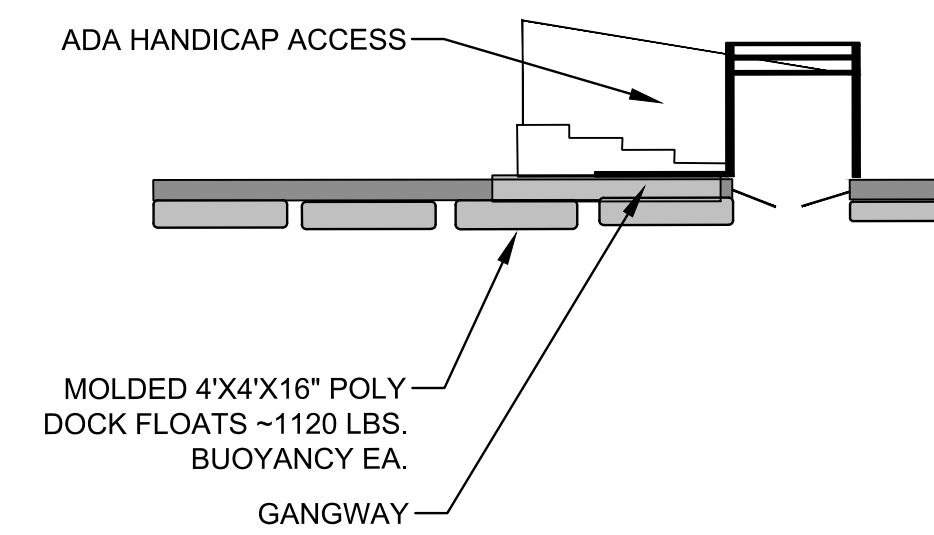
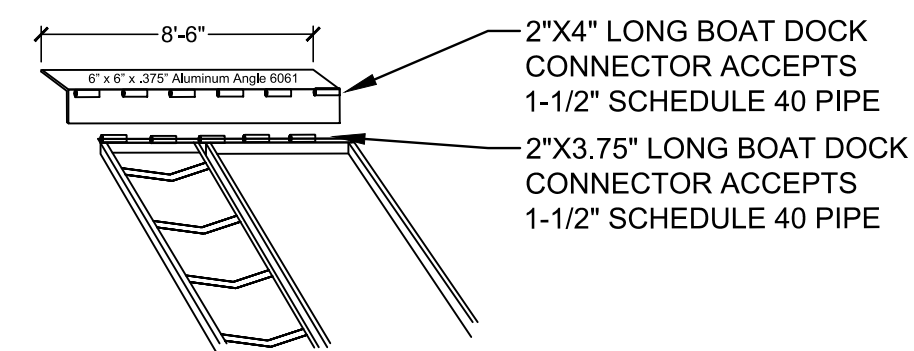
SHEET NO.:

L1.23

**DETAILS
SHEET 3**

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NOTES:
1. REFERENCE SPECIFICATIONS FOR MATERIALS.
2. GENERAL CONTRACTOR TO SUBMIT KAYAK LAUNCH SHOP DRAWINGS, INCLUDING BUT NOT LIMITED TO ALUMINUM ANGLE ABUTMENT CONNECTORS, HINGES, DOCK CONNECTORS AND PILE GUIDES TO BE REVIEWED AND APPROVED BY OWNER REPRESENTATIVE PRIOR TO MANUFACTURING AND INSTALLATION.



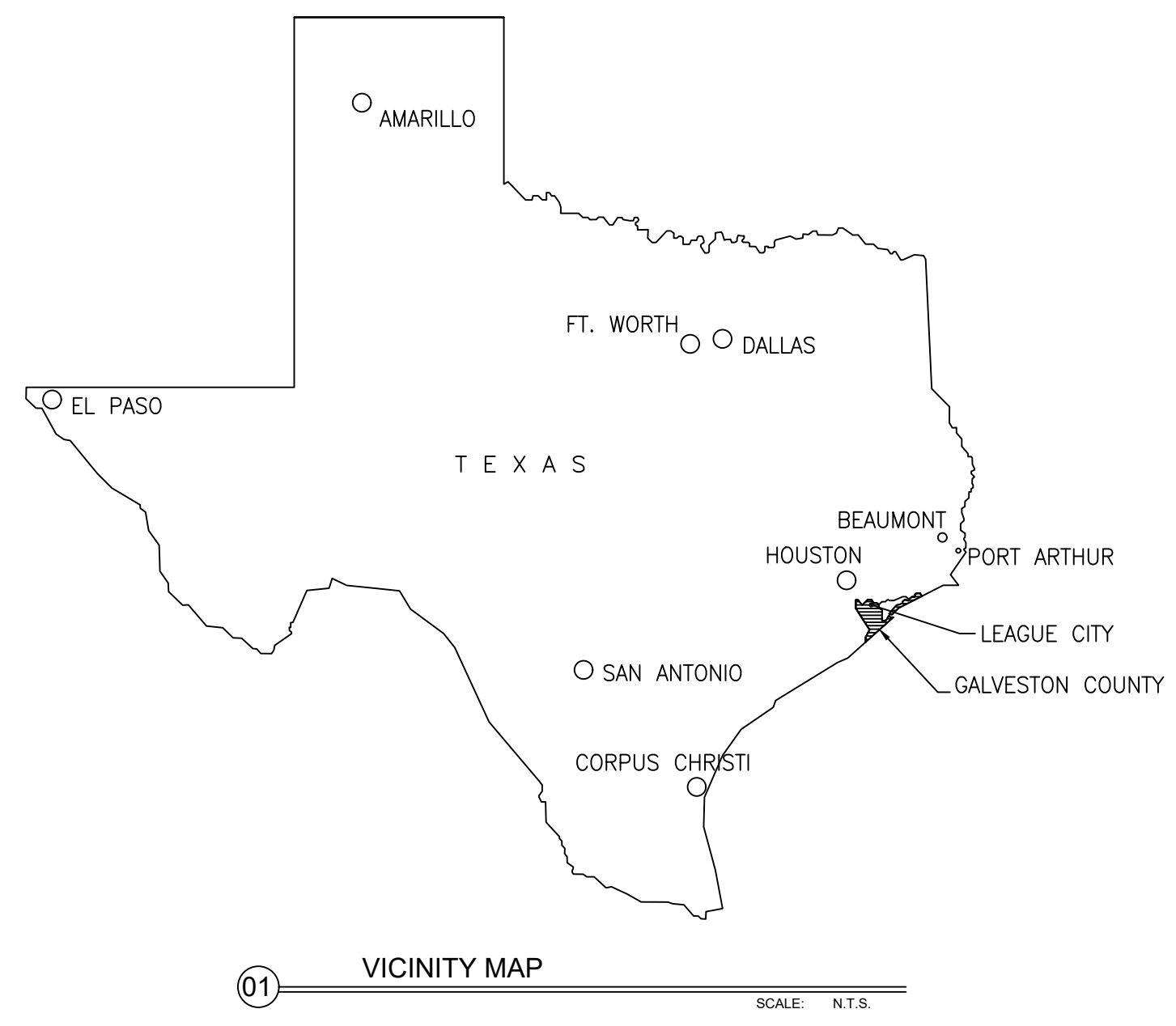
A2 ADA SAFE LAUNCH PLATFORM

N.T.S.

THE CITY OF LEAGUE CITY

DR. NED & FAY DUDNEY CLEAR CREEK NATURE CENTER KAYAK LAUNCH

2913 MARINER DRIVE
 LEAGUE CITY, TX 77573



DRAWING INDEX:	
DRAWING NUMBER	DRAWING TITLE
1036-1002-C-2000	COVER & DRAWING INDEX
1036-1002-C-2001	STRUCTURAL GENERAL NOTES
1036-1002-C-2002	SWPPP NOTES
1036-1002-C-2003	SWPPP DETAILS
1036-1002-C-2004	HYDRAULIC DATA
1036-1002-C-2005	WALKWAY PILING PLAN
1036-1002-C-2006	WALKWAY DETAILS, SHEET 1 OF 5
1036-1002-C-2007	WALKWAY DETAILS, SHEET 2 OF 5
1036-1002-C-2008	WALKWAY DETAILS, SHEET 3 OF 5
1036-1002-C-2009	WALKWAY DETAILS, SHEET 4 OF 5
1036-1002-C-2010	WALKWAY DETAILS, SHEET 5 OF 5

LJA Engineering, Inc.
 Marine Phone 713.953.5200
 3600 W. Sam Houston Pkwy S., Suite 600 Fax 512.439.4716
 Houston, Texas 777042 FRN - F-1386

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

COVER & DRAWING INDEX

KAYAK LAUNCH WALKWAY STRUCTURE

THIS DOCUMENT IS ISSUED FOR INTERIM REVIEW AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.

BING ZHANG, P.E.
 TEXAS P.E. #110956

ISSUED ON:
 MAR 01 2024

DRAWN BY	DATE	SCALE	CHKD	RW
BZ	3/1/24	AS NOTED	APPVD	BZ
DRAWING NO.	ISSUE NO.			
B-1036-1002-C-2000	E			

ALL ELEVATIONS ARE IN NAVD 88.

100 YR WSE = 14.5'

FIRM PANEL NOS.48167C0036G, 48167C0037G, 48167C0038G.
 EFFECTIVE DATE: AUGUST 15, 2019.

THIS AREA LIES IN FLOOD ZONE "AE".

GENERAL REQUIREMENTS

- CONTRACTOR SHALL NOT COMMENCE ANY CONSTRUCTION OPERATION UNTIL THE CONTRACTOR HAS VERIFIED THAT CONSTRUCTION / ENVIRONMENTAL PERMITS FOR THIS PROJECT HAVE BEEN ACQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION METHODS AND THE STABILITY OF THE STRUCTURES DURING CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS, COORDINATES, DIMENSIONS, EXISTING CONDITIONS AND UTILITIES, AND INFORMATION INDICATED ON THE CONTRACT DOCUMENTS PRIOR TO COMMENCEMENT OF FABRICATION AND SITE WORK.
- THE LOCATION AND DEPTH OF UTILITIES SHALL BE PHYSICALLY VERIFIED BY THE CONTRACTOR BEFORE WORK COMMENCES. PRIOR TO ANY EXCAVATION WORK IN THE AREA OF EXISTING UTILITIES, THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATIONS AND DEPTHS TO PREVENT ANY DAMAGE OR INTERFERENCE WITH PRESENT FACILITIES.
- WORKER SAFETY SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH SUBSURFACE CONDITIONS AND REFER TO THE PROJECT GEOTECHNICAL REPORT TO ENSURE COMPLIANCE WITH THE RECOMMENDATIONS.
- SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOAD AS A COMPLETED STRUCTURE.
- ALL EXISTING ROADWAY AND OTHER FEATURES THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER. COORDINATE WITH OWNER (TXDOT) FOR ANY INTERFERENCE WITH VEHICULAR TRAFFIC AND DAILY OPERATION DURING THE COURSE OF THE WORK.
- SAFETY AND REFERENCES:
 ACSE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

DESIGN CRITERIA

- ALL DESIGN CRITERIA BELOW REPRESENT POST CONSTRUCTION DESIGN CRITERIA. CONSTRUCTION PHASE LIVE LOAD SHALL BE LIMITED BASED ON THE SUPPORTS DESIGNED BY THE CONTRACTOR.
- DESIGN WATER LEVELS (VERTICAL DATUM NAVD88)
 MHHW = 1.4 FT
 MLW = 0.1 FT
 MINIMUM WATER LEVEL = -0.1 FT
- LIVE LOADS
 UNIFORMLY DISTRIBUTED LOAD: 100 PSF
 CONCENTRATED LOAD: 1,000 LB AT 10 FT MINIMUM SPACE
- WIND LOADS (ASCE7-10)
 RISK CATEGORY II: 143 MPH
 100-YEAR MRI: 120 MPH
- ICE LOAD
 THICKNESS: 0.5 INCH
 CONCURRENT TEMPERATURE: 15F
 GUST SPEED: 30 MPH
- SEISMIC LOADS
 REFERENCE DOCUMENT: ASCE7-10
 RISK CATEGORY: II
 SITE CLASS: D
 $S_s = 0.071, S_1 = 0.038, S_{D5} = 0.076, S_{D1} = 0.061, PGA = 0.034$
- THE FOLLOWING DESIGN STRENGTHS ARE ASSUMED FOR THE DESIGN. THE GEOTECHNICAL ENGINEER SHALL MONITOR THE FOUNDATION PREPARATION AND BACKFILL TO CONFIRM THE DESIGN STRENGTHS.
 ALLOWABLE FOUNDATION BEARING PRESSURE: 1,500 PSF MINIMUM
 BASE FRICTION COEFFICIENT (μ): 0.35 MINIMUM
 BACKFILL UNIT WEIGHT: 120 PCF MAXIMUM
 BACKFILL FRICTION ANGLE: 28° MINIMUM
 LATERAL BEARING PRESSURE: 100 PCF, PER 2015 IBC TABLE 1806.2 PRESUMPTIVE LOAD-BEARING VALUES, MATERIAL CLASS 5
 LATERAL SLIDING RESISTANCE COHESION: 130 PSF, 2015 IBC TABLE 1806.2 PRESUMPTIVE LOAD-BEARING VALUES, MATERIAL CLASS 5
- DESIGN STRENGTHS:
 - FIBERGLASS COMPOSITE PILE: 12" OD X 0.5" WALL THICKNESS
 AXIAL TENSILE STRENGTH: 68,000 PSI
 AXIAL FLEXURAL STRENGTH: 89,400 PSI
 AXIAL COMPRESSIVE STRENGTH: 66,500 PSI
 TRANSVERSE TENSILE STRENGTH: 24,000 PSI
 EFFECTIVE BENDING STIFFNESS: 1.31X10⁹ LB-IN²
 ELASTIC MODULUS: 4,370,000 PSI
 BOLTHOLE BEARING STRENGTH: 18,000 PSI
 - PLASTIC LUMBER: HIGH DENSITY POLYETHYLENE (HDPE, STRUCTURAL GRADE, FABER REINFORCED)
 SHEAR PARALLEL TO LENGTH: 1,000 PSI
 COMPRESSIVE STRENGTH:
 SECANT MODULUS: 70,000
 STRESS AT 3 PERCENT STRAIN: 1,500 PSI
 COMPRESSION PARALLEL TO GRAIN: 3,000 PSI
 COMPRESSION PERPENDICULAR TO GRAIN: 1,550 PSI
 FLEXURAL STRENGTH: 2,750 PSI
 FLEXURAL MODULUS: 300,000 PSI

- TENSILE STRENGTH: 1,250 PSI
 COEFFICIENT OF THERMAL EXPANSION: 0.00080 IN/IN/DEGREE F
 SCREW WITHDRAWAL: 350 LBS
 NAIL WITHDRAWAL: 150 LBS
- C. TIMBER:
 AWPA USE CATEGORY: 4B
 LUMBER GRADE: SOUTHERN PINE (SELECT STRUCTURAL)
 MOISTURE CONTENT AT TREATMENT: SURFACED DRY 19%
- D. BOLTS:
 ASTM A36, BENDING YIELD STRENGTH: 45,000 PSI. HOT-DIP GALVANIZED
 ANCHOR RODS: ASTM F1554 GR 36. HOT-DIP GALVANIZED
 STAINLESS STEEL BOLTS: ASTM A193 GRADE B8M
- E. CONCRETE:
 CONCRETE COMPRESSIVE STRENGTH: F'c = 4,000 PSI AT 28 DAYS
 REINFORCING STEEL: FY = 60,000 PSI
- F. STEEL PLATES, ANGLES: FY = 36 KSI, HOT-DIP GALVANIZED

SOIL BORINGS

- FOR BORING LOGS, REFER TO GEOTECHNICAL REPORT TITLED: "REPORT OF GEOTECHNICAL CONSULTING SERVICES, NED & FAY DUDNEY CLEAR CREEK NATURE CENTER KAYAK LAUNCH, LEAGUE CITY, GALVESTON COUNTY, TEXAS", PREPARED BY TOLUNAY-WONG ENGINEERS, INC., TWE PROJECT NO. 21.14.209, JANUARY 26, 2023.
- SOIL INVESTIGATION DATA IS PROVIDED FOR THE INFORMATION AND CONVENIENCE OF THE CONTRACTOR. SOIL BORING LOGS ARE FOR DESIGN REFERENCE PURPOSES ONLY. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY, TRUE LOCATION AND EXTENT OF THE SOIL INVESTIGATION THAT HAS BEEN PREPARED BY OTHERS. THEY FURTHER DISCLAIM RESPONSIBILITY FOR INTERPRETATION OF THAT DATA BY THE CONTRACTOR, AS IN PROJECTING SOIL-BEARING VALUES, SOIL STABILITY, AND THE PRESENCE, LEVEL, AND EXTENT OF UNDERGROUND WATER, ETC. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SUBSURFACE AND GROUND WATER CONDITIONS PRIOR TO CONSTRUCTION.

PILE INSTALLATION

- DRIVING EQUIPMENT SELECTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PILE DRIVING HAMMER SHALL HAVE SUFFICIENT ENERGY AND SUITABLE TO DRIVE PILE TO REQUIRED PENETRATION WITHOUT DAMAGE.
- PILES MUST BE ACCURATELY PLACED IN THE CORRECT LOCATION AND ALIGNMENTS BOTH Laterally AND VERTICALLY. AT CUTOFF ELEVATION, PILES MUST BE WITHIN 2 INCHES Laterally OF THE LOCATION INDICATED. A VARIATION OF NOT MORE THAN 0.25 INCH PER FOOT OF PILE LENGTH FROM THE VERTICAL OR THE REQUIRED BATTER WILL BE PERMITTED. THE CORRECT RELATIVE POSITION OF PILES AT EACH BENT MUST BE MAINTAINED USING TEMPLATES OR BY OTHER APPROVED MEANS FOR PROPER FIT AT CONNECTIONS TO BENT CAPS.
- PILES MUST BE DRIVEN TO THE TIP ELEVATIONS SHOWN. REDRIVE HEAVED PILES TO THE REQUIRED TIP ELEVATION. CUT OFF PILES WHICH SUPPORT TIMBER CAPS TO THE EXACT PLANE OF THE CAP SO THAT THEY EXACTLY FIT IT. THE CUTOFF ELEVATIONS ARE INDICATED IN THE PILING PLAN.
- REMOVE AND REPLACE WITH NEW PILES THOSE DAMAGED, MISPLACED, DRIVEN BELOW THE DESIGN CUTOFF, OR DRIVEN OUT OF ALIGNMENT, OR PROVIDE ADDITIONAL PILES, DRIVEN AS DIRECTED AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE SHIM WHERE NEEDED FOR GAP AT CONNECTION DUE TO ACCEPTABLE MISALIGNMENT WITHIN TOLERANCE.

FOUNDATIONS & BACKFILLS

- THE EXCAVATION, PREPARATION OF THE FOUNDATION AND BACKFILLING SHALL BE UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER OF RECORD. THE GEOTECHNICAL ENGINEER SHALL MONITOR THE FOUNDATION PREPARATION TO ACHIEVE THE DESIGN STRENGTH OF THE PREPARED FOUNDATION. EXCAVATION SLOPE STABILITY AND DESIGN IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE FOUNDATION PREPARATION SHALL BE EXTENDED AT LEAST 2 FEET BEYOND THE EDGES OF THE PROPOSED STRUCTURES. SOIL EXPOSED BY THE EXCAVATIONS FOR FOUNDATIONS SHOULD BE PROTECTED FROM DISTURBANCES DUE TO CONSTRUCTION ACTIVITIES AND EXPOSURE TO FREE WATER.
- IF UNANTICIPATED SUBSURFACE CONDITIONS ARE RECOGNIZED, THE UNSUITABLE MATERIAL SHALL BE EXCAVATED AND SUITABLE STRUCTURAL FILL AS DETERMINED BY THE GEOTECHNICAL ENGINEER SHALL BE USED TO BACKFILL OVER-EXCAVATED AREAS.

PLASTIC LUMBER

- LABEL PLASTIC PRODUCTS TO BE INCORPORATED INTO THE PROJECT IN ACCORDANCE WITH ASTM D1972, OR PROVIDE PRODUCT DATA INDICATING POLYMERIC INFORMATION IN THE OPERATION AND MAINTENANCE MANUAL.
- PLASTIC LUMBER INTENDED FOR USE IN EXTERIOR APPLICATIONS MUST HAVE NO FADING OR DISCOLORATION AND NO CHANGE IN DIMENSIONAL STABILITY AS TESTED IN ACCORDANCE WITH ASTM D1435 FOR A PERIOD OF 10 YEARS.

WALKWAY DECKING

- THRUFLOW DECKING PANELS DESIGNATED AS AQUA-DEK SERIES BY THRUFLOW INC. THE PANEL SHALL BE SUITABLE FOR INSTALLATION ON 2-FT SUPPORT SPACING. THE STRUCTURAL CAPACITY OF THE PANEL

SHALL MEET REQUIREMENTS STATED IN THE DESIGN CRITERIA. THE PANEL SHALL HAVE THE FOLLOWING CHARACTERISTICS:
 A. LIGHT PENETRATION: 45% MIN
 B. WEIGHT: 1.25 PSF MAX

CONCRETE

- UNLESS STATED OTHERWISE, ALL CONCRETE SHALL BE GOVERNED BY ITEMS 420 (CONCRETE SUBSTRUCTURES) AND 421 (HYDRAULIC CEMENT CONCRETE) OF THE TEXAS DEPARTMENT OF TRANSPORTATION'S NOVEMBER 1, 2014 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS & BRIDGES.
- PROVIDE CLASS S CONCRETE.
- CONCRETE MIXTURE PROPORTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. READY-MIX CONCRETE SHALL HAVE MIX DESIGN DATA CONFORMING TO ACI 301 PART 2.
- ALL EXPOSED CORNERS SHALL BE PROVIDED WITH MINIMUM 3/4-INCH CHAMFER, UNLESS OTHERWISE NOTED.
- PRIOR TO CASTING NEW CONCRETE AGAINST EXISTING CONCRETE SURFACE, ROUGHEN THE EXISTING SURFACE. THE EXISTING SURFACE SHALL BE FREE OF LAITANCE AND SHALL BE ROUGHENED TO FULL AMPLITUDE OF APPROXIMATELY 1/8-INCH. APPLY BONDING AGENT IN ACCORDANCE WITH TECHNICAL SPECIFICATION.
- NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL WALL UNTIL WALLS HAVE ATTAINED THE SPECIFIED STRENGTH.
- CLEAR COVER FOR REINFORCING BARS SHALL BE 3 INCHES, UNLESS OTHERWISE INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
- JOINT FILLER:
 ASTM D1751 OR ASTM D1752, 1/2 INCH THICK UNLESS OTHERWISE INDICATED
 JOINT SEALANT:
 HORIZONTAL SURFACE: ASTM D6690 OR ASTM C920, TYPE M, CLASS 25, USE T.
 VERTICAL SURFACE: ASTM C920, TYPE M, GRADE NS, CLASS 25, USE T. FS SS-S-200, NO SAG.

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315.
- THE CONTRACTOR SHALL DETERMINE ANY SPLICE LOCATIONS IN ADDITION TO THOSE SHOWN, SUBJECT TO SHOP DRAWING APPROVAL.
- MINIMUM REINFORCING BARS DEVELOPMENT LENGTH (Ld) AND LAP SPLICE LENGTH SHALL BE AS FOLLOWS.

BAR SIZE	REINFORCEMENT EMBEDMENT AND SPLICE - 4000 PSI			
	MINIMUM EMBEDMENT LENGTH, INCHES		MINIMUM LAP LENGTH, INCHES	
	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR
3	18	14	24	18
4	25	19	32	25
5	31	24	40	31
6	37	28	48	37
7	54	42	70	54
8	62	47	80	62
9	70	54	90	70
10	78	60	102	78
11	87	67	113	87

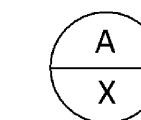
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST UNDER THEM.

ABBREVIATIONS

- | | |
|--------------------------|-------------------------|
| CJ – CONSTRUCTION JOINT | Crj – CONTRACTION JOINT |
| CJ – CONTROL JOINT | EJ – EXPANSION JOINT |
| EF – EACH FACE | EW – EACH WAY |
| T&B – TOP AND BOTTOM | Ld – DEVELOPMENT LENGTH |
| CLR – CLEAR | TYP – TYPICAL |
| HDG – HOT-DIP GALVANIZED | |

LEGEND

- SECTION AND DETAILS CALLOUT



A - DETAIL OR SECTION NUMBER
 X - DETAIL OR SECTION LOCATION SHEET NUMBER
 FOR DETAIL OR SECTION SHOWN ON THE SAME SHEET, X = "–" OR BLANK
 DRAWINGS IN SERIES (I.E. SHEET X OF XX) ARE CONSIDERED THE SAME SHEET.

LJA Engineering, Inc.

Marine Phone 713.953.5200
 3600 W. Sam Houston Pkwy S., Suite 600 Fax 512.439.4716
 Houston, Texas 777042 FRN - F-1386

E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD

STRUCTURAL GENERAL NOTES

KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	BZ	DATE	3/1/24	SCALE	AS NOTED	CHKD	RW
DRAWING NO.	B-1036-1002-C-2001	APPROV	BZ	ISSUE NO.	E		

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BING ZHANG, P.E.
 TEXAS P.E. #110956

ISSUED ON:
 MAR 01 2024

STORM WATER POLLUTION PREVENTION

- IF THE SWPPP IS CHANGED AFTER THE CITY HAS APPROVED THE PLAN SET, THE CONTRACTOR MUST RESUBMIT CHANGES TO THE STORM WATER INSPECTOR FOR APPROVAL BEFORE CHANGES ARE MADE ON-SITE.
- THE CONTRACTOR SHALL MAINTAIN SILT FENCING AND SEDIMENT DEVICES AT ALL TIMES AND DO AN INSPECTION EVERY 7 DAYS AND/OR WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT. ALL EROSION CONTROL DEVICES SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
 - SILT FENCING & SEDIMENT DEVICES SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETEIORATION.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
 - SILT FENCING SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCING WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE SILT FENCE.
 - THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO A RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
 - CONTRACTOR PARKING SHALL BE LIMITED TO THE TXDOT RIGHT-OF-WAY ALONG THE ACCESS LOOP ROAD. TEMPORARY STORAGE AREA SHALL BE LIMITED TO THE CONSTRUCTION WORK AREA DESIGNATED IN THE PLANS. TEMPORARY PARKING AND STORAGE AREAS SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF TEMPORARY PARKING AS CONDITIONS DEMAND.
- CONTRACTOR WILL SWEEP STREETS AND CURB LINES ONCE A DAY UNTIL ALL CONCRETE/PAVING IS IN PLACE. ALL MATERIAL SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF TEXAS NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEMS GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- CONTRACTOR MUST KEEP DUMPSTERS CLEAN AND ALL TRASH PICKED UP ON PROJECT SITE AT ALL TIMES.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.
- MAINTAIN OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

- DUST SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 21 DAYS SHALL BE TEMPORARILY SEEDED WITHIN 7 DAYS.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.
- IF SOIL STOCKPILING IS EMPLOYED ON THIS SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.
- SEDIMENT BASINS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.
- DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION. THE LEAGUE CITY STORM WATER INSPECTOR SHALL HAVE FINAL APPROVAL OF ANY CHANGES MADE TO THE EROSION CONTROL MEASURES.
- ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

FLOATING TURBIDITY BARRIER

- FURNISH, INSTALL, MAINTAIN, AND REMOVE FLOATING TURBIDITY BARRIER (FTB) TO MINIMIZE TRANSPORT AND ACCOMPLISH THE ISOLATION OF DISTURBED MATERIALS RESULTING FROM CONSTRUCTION OPERATIONS (SEE DETAIL 2 THIS SHEET).
- THE FTB AND INSTALLATION MUST BE ENOUGH FOR A FLOW CONDITION WHERE THE VELOCITY OF FLOW MAY REACH 5 FT. PER SEC. (3 KTS).
- THE FTB SUPPLIED MUST BE A STANDARD MANUFACTURED PRODUCT BASED ON SITE-SPECIFIC CRITERIA IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL MATERIALS MUST BE CORROSION RESISTANT. MATERIALS AT THE WATER SURFACE MUST NOT DEGENERATE WHEN EXPOSED TO SUNLIGHT, OILS, AND PETROLEUM PRODUCTS. THE CONTRACTOR MUST SUPPLY DOCUMENTATION FROM THE MANUFACTURER TO DEMONSTRATE THE FTB MEETS THE FOLLOWING REQUIREMENTS.

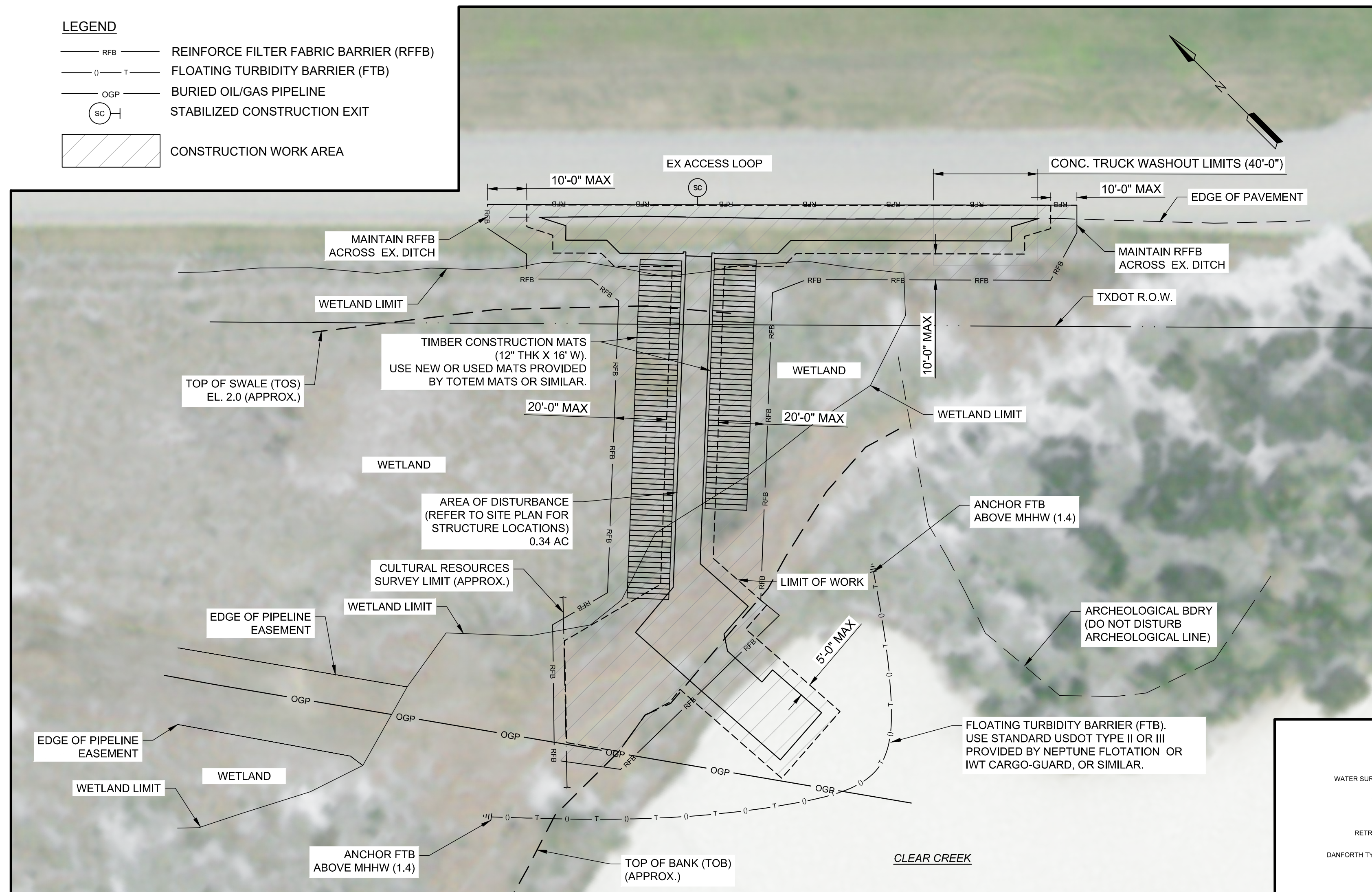
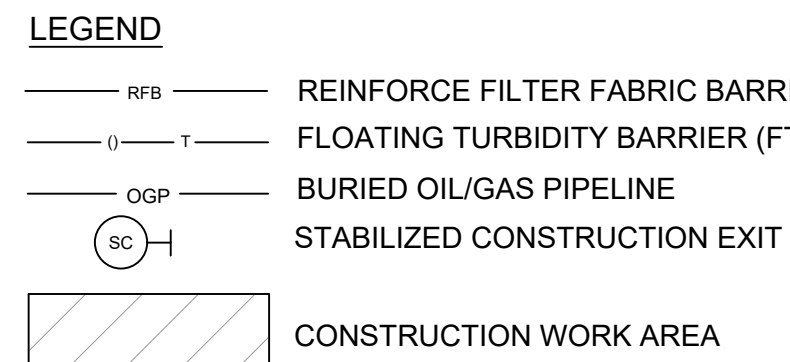
- THE FTB CONSISTS OF A PVC COATED NYLON SECTION AND A GEO-SYNTHETIC BARRIER OR CURTAIN SECTION, LOAD LINE, MOORING LINES, ADJUSTMENT LINES AND TIE-DOWNS, FLOATATION, BALLAST, AND ANCHORS.
- THE TURBIDITY BARRIER OR CURTAIN GEO-SYNTHETICS MUST HAVE THE FOLLOWING PROPERTIES:
 - THE TOP SECTION MUST CONSIST OF AN 18-22 OZ. PVC COATED NYLON FABRIC. IT MUST BE A BRIGHT YELLOW OR ORANGE COLOR TO INCREASE VISIBILITY;
 - THE BOTTOM SECTION MUST CONSIST OF A GEO-SYNTHETIC WITH A FILTRATION APPARENT OPENING SIZE (AOS) OF 0.220 MM MAX. FOR NON-WOVEN GEOTEXTILES, AND AOS OF 0.425 MM MAX. FOR WOVEN TEXTILES, WHEN TESTED IN ACCORDANCE WITH ASTM D 4751-99A;
 - BE A NON-WOVEN OR WOVEN MATERIAL SUCH THAT THE OPENING SIZE CANNOT BE ENLARGED UNDER PRESSURE OR BY BEING SNAGGED; AND
 - THE TURBIDITY BARRIER OR CURTAIN MUST HAVE A MIN. GRAB STRENGTH OF 300 PSI WHEN TESTED IN ACCORDANCE WITH ASTM D 4632-91.
- TURBIDITY BARRIER OR CURTAIN FLOATATION MATERIAL MUST BE A CLOSED-CELL, SOLID FOAM MATERIAL WHICH HAS ENOUGH BUOYANCY TO PROVIDE THE CURTAIN WITH CONTINUOUS SUPPORT AND A MINIMUM OF 6 IN. FREEBOARD.
 - THE SECTIONS OF FLOATATION MUST BE INSTALLED SUCH THAT THEY CANNOT MOVE ALONG INSIDE THE SLEEVE, AND THE SPACE BETWEEN SECTIONS MUST NOT BE MORE THAN TWICE THE THICKNESS OF THE FLOATATION MATERIAL.
- LOAD LINES MUST BE MIN. 5/16 IN. VINYL COATED GALVANIZED AIRCRAFT CABLE WITH 9800 LB. BREAKING STRENGTH. THE LOAD LINE MUST HAVE GALVANIZED CONNECTORS WITH TOOL FREE DISCONNECT.
- MOORING LINES, ADJUSTMENT LINES AND TIE-DOWNS MUST BE MINIMUM 1/2 IN. NYLON ROPE. BALLAST MUST BE MIN. 5/16 IN. STEEL CHAIN. THE FTB MUST HAVE ENOUGH BALLAST TO ANCHOR THE BARRIER ALONG THE CHANNEL BOTTOM.
- ANCHORS MUST HAVE ENOUGH MASS AND SPACED TO SECURE THE BARRIER AS RECOMMENDED BY THE MANUFACTURER DEPENDING ON THE CURRENT VELOCITIES.
- MOORING BUOYS MUST HAVE PROVISIONS FOR THE MOORING LINE TO BE SECURELY ATTACHED WITH ENOUGH BUOYANCY TO REMAIN AFLOAT UNDER NORMAL LOAD CONDITIONS.
- PLACE THE FTB BEFORE COMMENCEMENT OF ANY WORK THAT COULD IMPACT THE AREA OF CONCERN. ENSURE THAT THE TYPE OF BARRIER USED AND THE DEPLOYMENT AND MAINTENANCE OF THE BARRIER WILL MINIMIZE DISPERSION OF TURBID WATER FROM THE EXCAVATION AND DREDGING AREA. MAINTAIN FTB UNTIL SEDIMENT GENERATING ACTIVITIES HAVE CEASED, AND THE AREA HAS BEEN STABILIZED.
- OPERATE THE TURBIDITY BARRIER IN SUCH A MANNER TO AVOID OR MINIMIZE THE DEGRADATION OF THE WATER QUALITY OF SURROUNDING WATERS. WHEN LOCATED ADJACENT TO A SHORELINE OR BANK, THE ENDS OF THE CURTAIN WILL BE SECURED TO FULLY ENCLOSE THE AREA.

CONCRETE TRUCK WASHOUT

- CONCRETE TRUCK WASHOUT BASIN MUST BE CONSTRUCTED AS "ABOVE GRADE" TYPE (SEE DETAIL "CONCRETE TRUCK WASHOUT" PLAN AND SECTION F-F ON SHEET C-2003.) NO EXCAVATION IS PERMITTED.
- WASHOUT BASIN FRAME MAY BE CONSTRUCTED OF 2"x12" LUMBER OR STRAW BALES STRAW BALES MUST BE STAKED WITH TWO 2"x2" WOOD STAKES PER BALE EMBEDDED 12" MIN INTO THE GROUND.

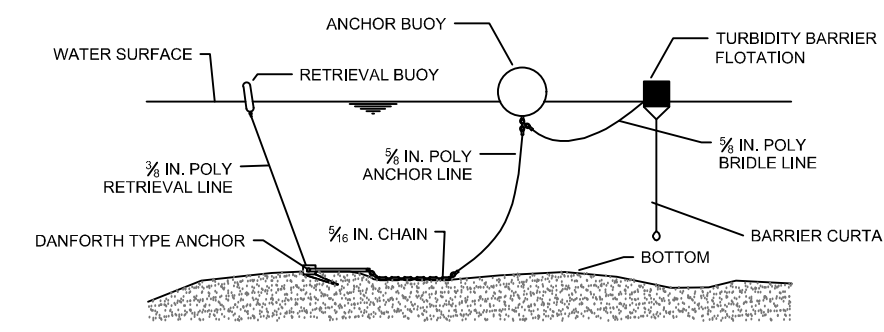
CONTROL

- THE OWNER AND GENERAL CONTRACTOR INCLUDING SUBCONTRACTORS INVOLVED WITH THIS PROJECT WILL NEED PROPER SITE NOTICES FROM TCEQ.
 - POST THE SITE NOTICES FROM TCEQ ON SITE WHERE THEY ARE SAFELY AND READILY AVAILABLE FOR VIEWING BY THE GENERAL PUBLIC, LOCAL, STATE, AND FEDERAL AUTHORITIES, PRIOR TO COMMENCING CONSTRUCTION, AND MAINTAIN THE NOTICE IN THAT LOCATION UNTIL COMPLETION OF THE CONSTRUCTION ACTIVITY.
- MS4 OPERATOR: THE CITY OF LEAGUE CITY. ADDRESS: 500 W WALKER STREET CONTACT: ALEX NOEL TITLE: STORMWATER MANAGEMENT COORDINATOR PHONE: 281-554-1428
- THE CITY OF LEAGUE CITY, ITS CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO ADHERE TO THE SWPPP PER THE PROJECT PLANS AND SPECIFICATIONS.
- ONLY REINFORCED SILT FENCING CAN BE USED ON PROJECTS.
- SAND/GRAVEL BAGS ARE NOT ALLOWED FOR INLET PROTECTION.
- THE OWNER/OPERATOR OF ALL POST CONSTRUCTION BMPs MUST HAVE STRUCTURAL CONTROL DEVICES INSPECTED ANNUALLY BY A TEXAS REGISTERED PROFESSIONAL ENGINEER, AND FILE A "PERMITTEE CERTIFICATION OF PROPER MAINTENANCE" WITH THE CITY ANNUALLY.
- CONTRACTOR'S SWPPP:
 - MUST HAVE A NOTE SPECIFYING EXISTING AND POST CONSTRUCTION BMPs AS TO WHERE THEY ARE LOCATED, THE TYPE, AND MAINTENANCE RESPONSIBILITY.
 - IF SEEDING/SOD/HYDROMULCHING IS SPECIFIED AS A POST-CONSTRUCTION BMP, PROVIDE A NOTE ON SEEDING/SOD/HYDROMULCH: HOW IT WILL BE MAINTAINED, 80% COVERAGE MUST BE ESTABLISHED, ETC.
 - MUST SHOW LOCATION OF PROTECTED INLETS & DITCHES OUTSIDE OF PROPERTY/PROJECT.



1 PLAN: MINIMUM BMPs
1" = 30'-0"

2 DETAIL: FLOATING TURBIDITY BARRIER
N.T.S.



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DOUGLAS S. DUSINI, P.E.
TEXAS P.E. #127813

ISSUED ON:
APR 04 2024

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ALL ELEVATIONS ARE IN NAVD 88.
100 YR WSE = 14.5'
FIRM PANEL NOS. 48167C0036G, 48167C0037G, 48167C0038G.
EFFECTIVE DATE: AUGUST 15, 2019.
THIS AREA LIES IN FLOOD ZONE "AE".

NOTES:

- FOR SITE PLAN, REFER TO CIVIL DRAWINGS.

LJA Engineering, Inc.
Marine Phone 713.953.5200
3600 W. Sam Houston Pkwy S., Suite 600 Fax 512.439.4716
Houston, Texas 77042 FRN - F-1386

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
D	4/4/24	DSD	90% REVIEW	RCW	DSD
C	6/5/23	DSD	90% REVIEW	RCW	DSD
B	03/29/23	DSD	60% REVIEW	RCW	DSD

SWPPP NOTES

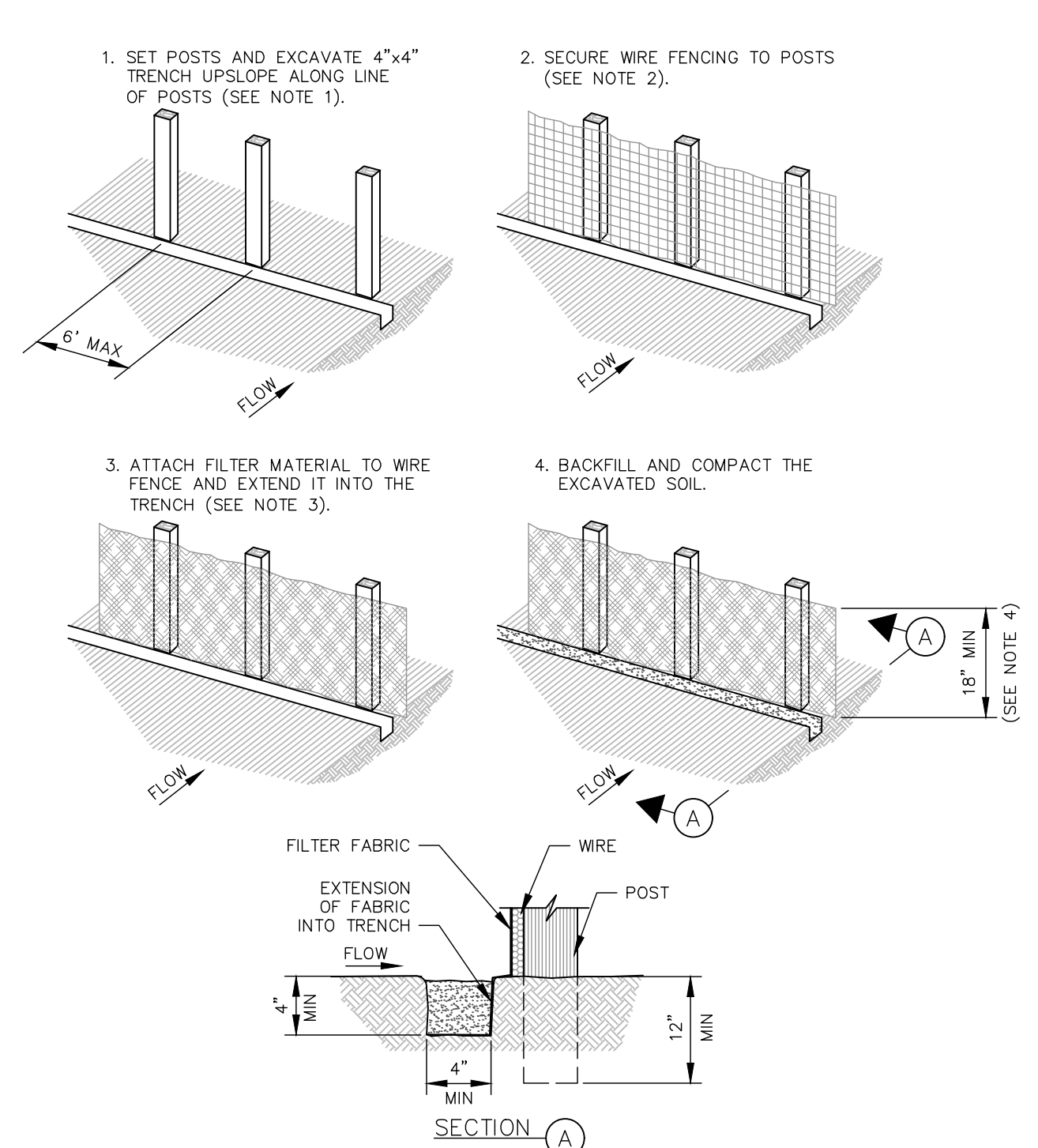
KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	DSD	DATE	02/01/2021	SCALE	1" = 30'	GRID	RCW
DRAWING NO.	B1036-1002-C-2002	ISSUED ON:	APR 04 2024	GRID	DSD	ISSUE NO.	D

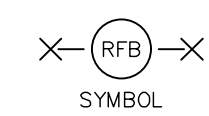
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ALL ELEVATIONS ARE IN NAVD 88.
 100 YR WSE = 14.5'
 FIRM PANEL NOS. 48167C0036G, 48167C0037G, 48167C0038G.
 EFFECTIVE DATE: AUGUST 15, 2019.
 THIS AREA LIES IN FLOOD ZONE "AE".

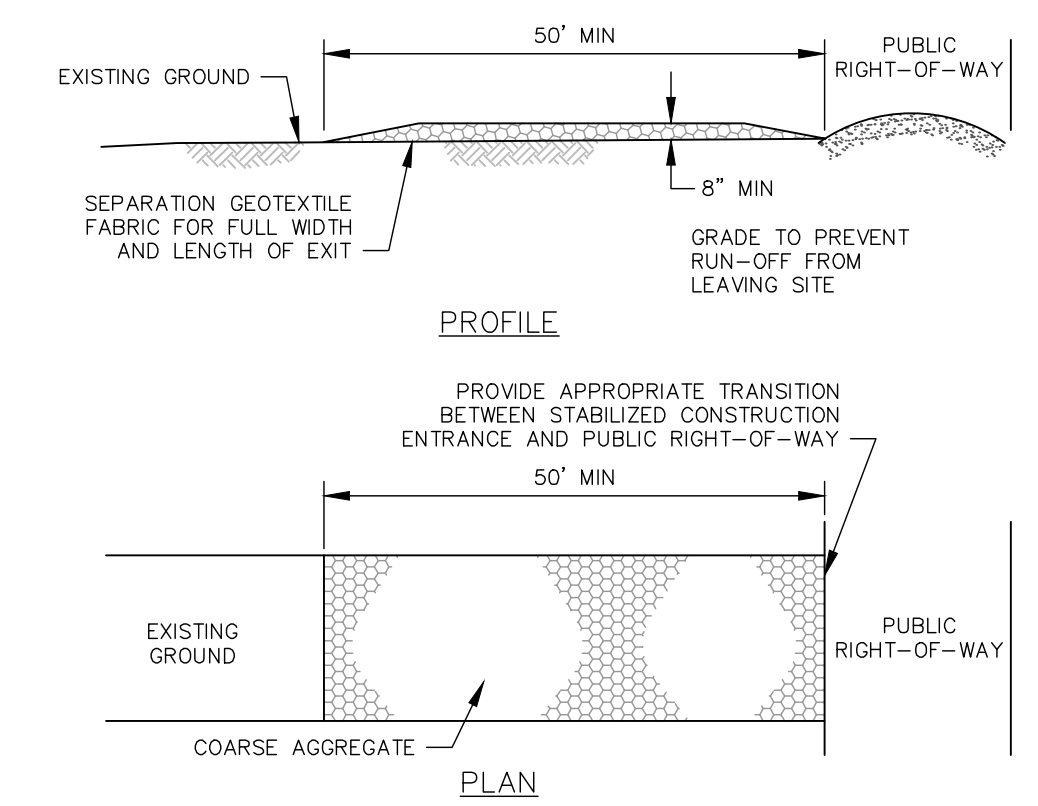
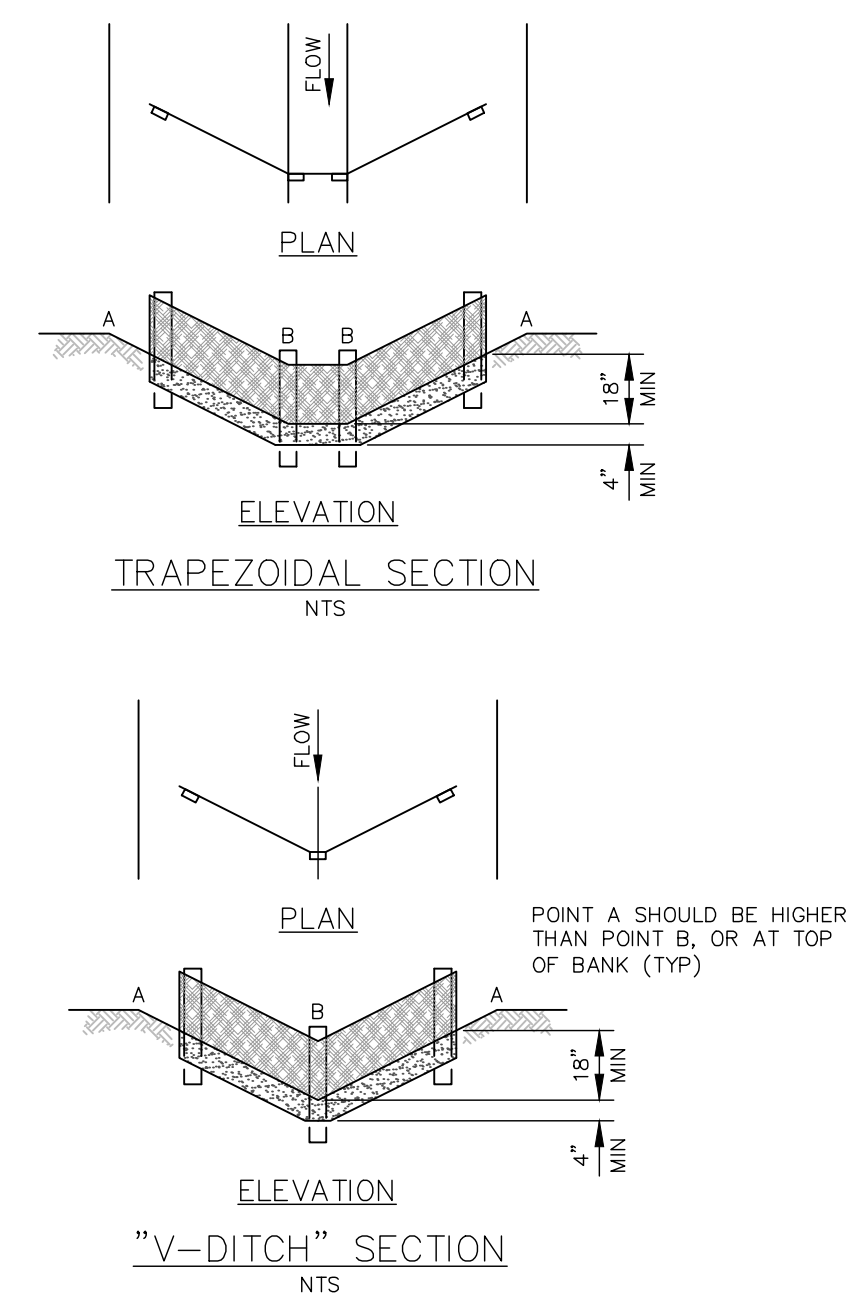
NOTES:
 1. FOR SITE PLAN, REFER TO CIVIL DRAWINGS.



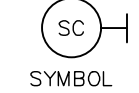
- NOTES**
- SET 2 INCH BY 2 INCH WOODEN STAKES SPACE A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
 - WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
 - MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS AND FOLDED.



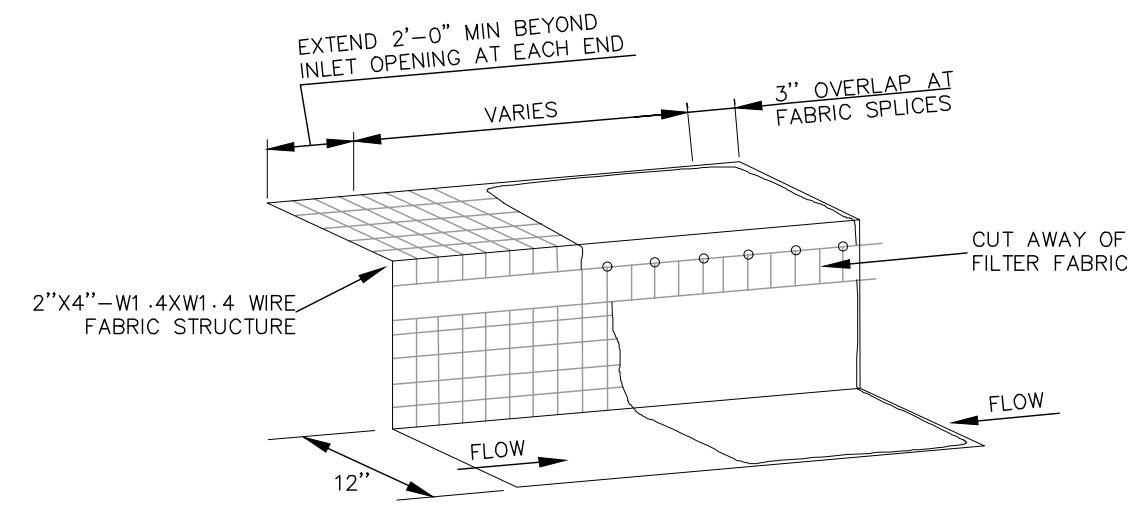
REINFORCED FILTER FABRIC BARRIER
 NTS



- NOTES**
- LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
 - THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
 - WIDTH SHALL BE NOT LESS FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
 - STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
 - STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A TRUCK WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE TRUCK WASHING AREA.
 - STABILIZED CONSTRUCTION EXIT SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

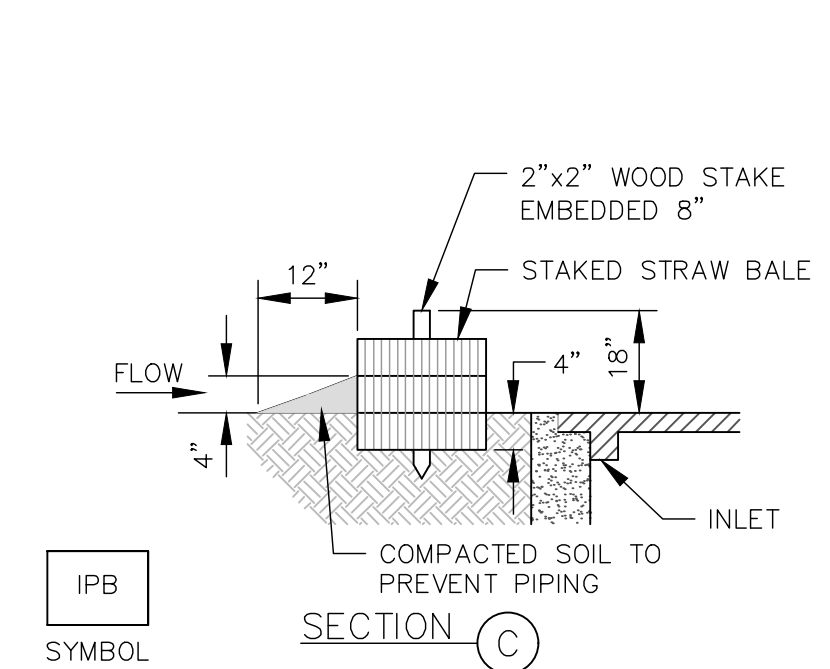
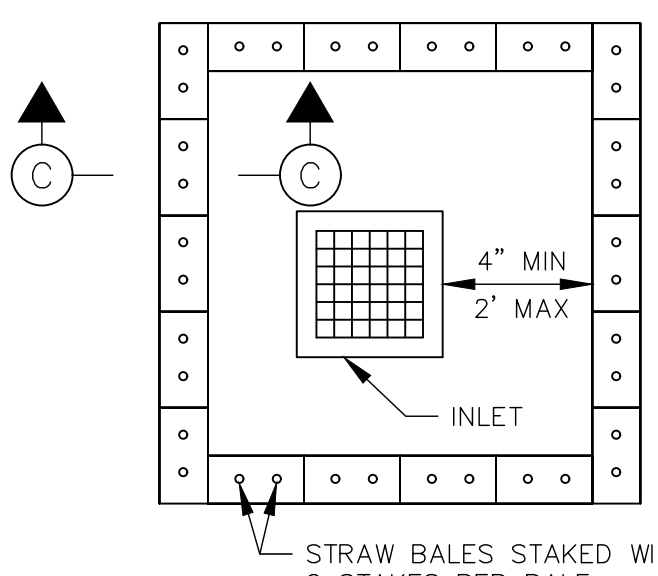


STABILIZED CONSTRUCTION EXIT
 NTS

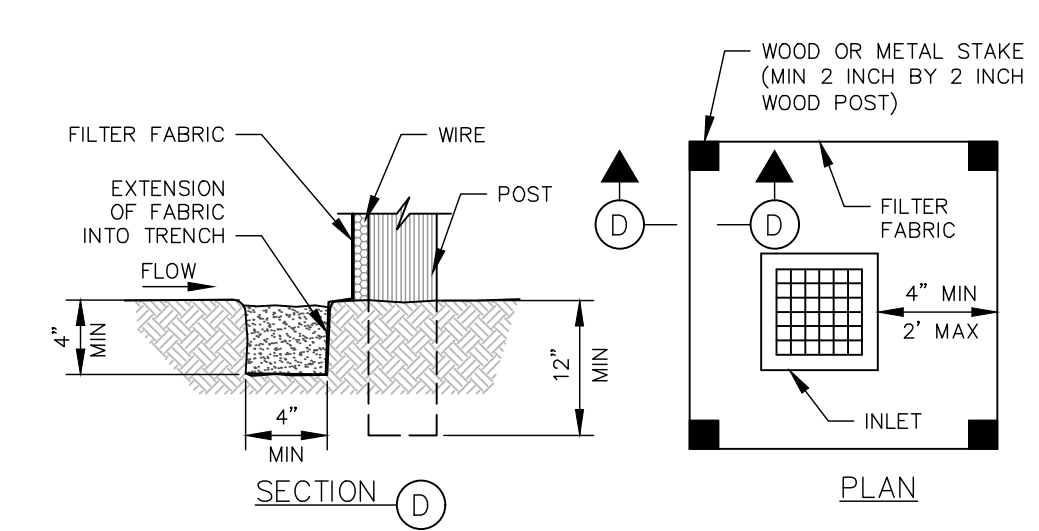


- ** CONTRACTOR TO PAY SPECIAL ATTENTION TO NOTE 1.**
- NOTES**
- DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
 - A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
 - CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
 - INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

WIRE/FILTER FABRIC CURB INLET PROTECTION
 NTS

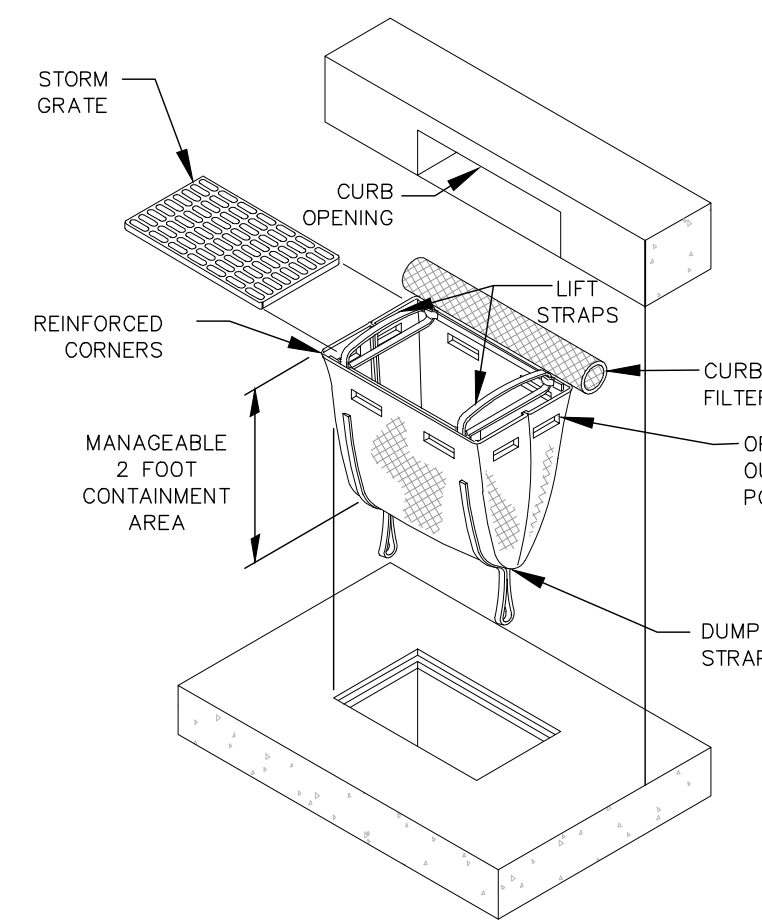


STRAW BALE DROP INLET PROTECTION BARRIER
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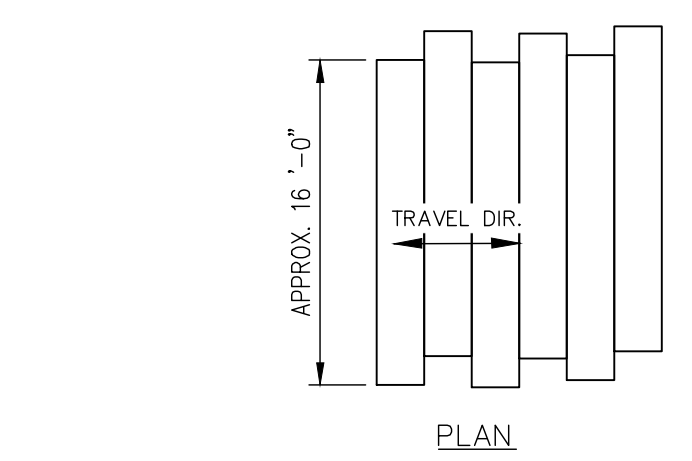
- NOTE**
 SEE CONSTRUCTION NOTES FOR REINFORCED FILTER FABRIC BARRIER

SILT FENCE DROP INLET PROTECTION BARRIER
 NTS



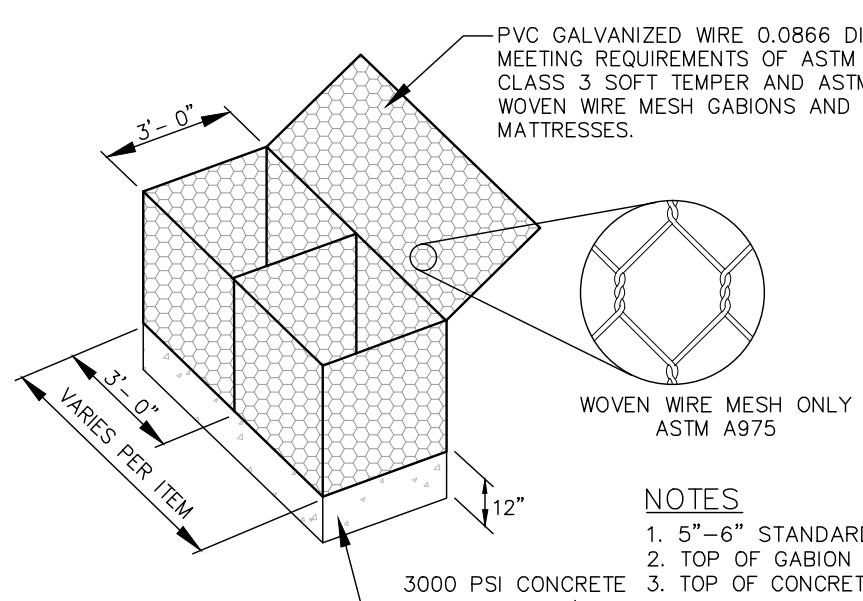
- REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM THE VICINITY OF THE UNIT AFTER EACH STORM EVENT.
- AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE UNIT. IF UNIT IS MORE THAN 1/3 FULL OF ACCUMULATED SEDIMENT, THE UNIT MUST BE EMPTIED.
- EMPTY THE UNIT IN A LOCATION WHERE IT WILL NOT ENTER THE STORM SEWER SYSTEM.
- INLET PROTECTION SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

INSERT CURB INLET PROTECTION
 NTS



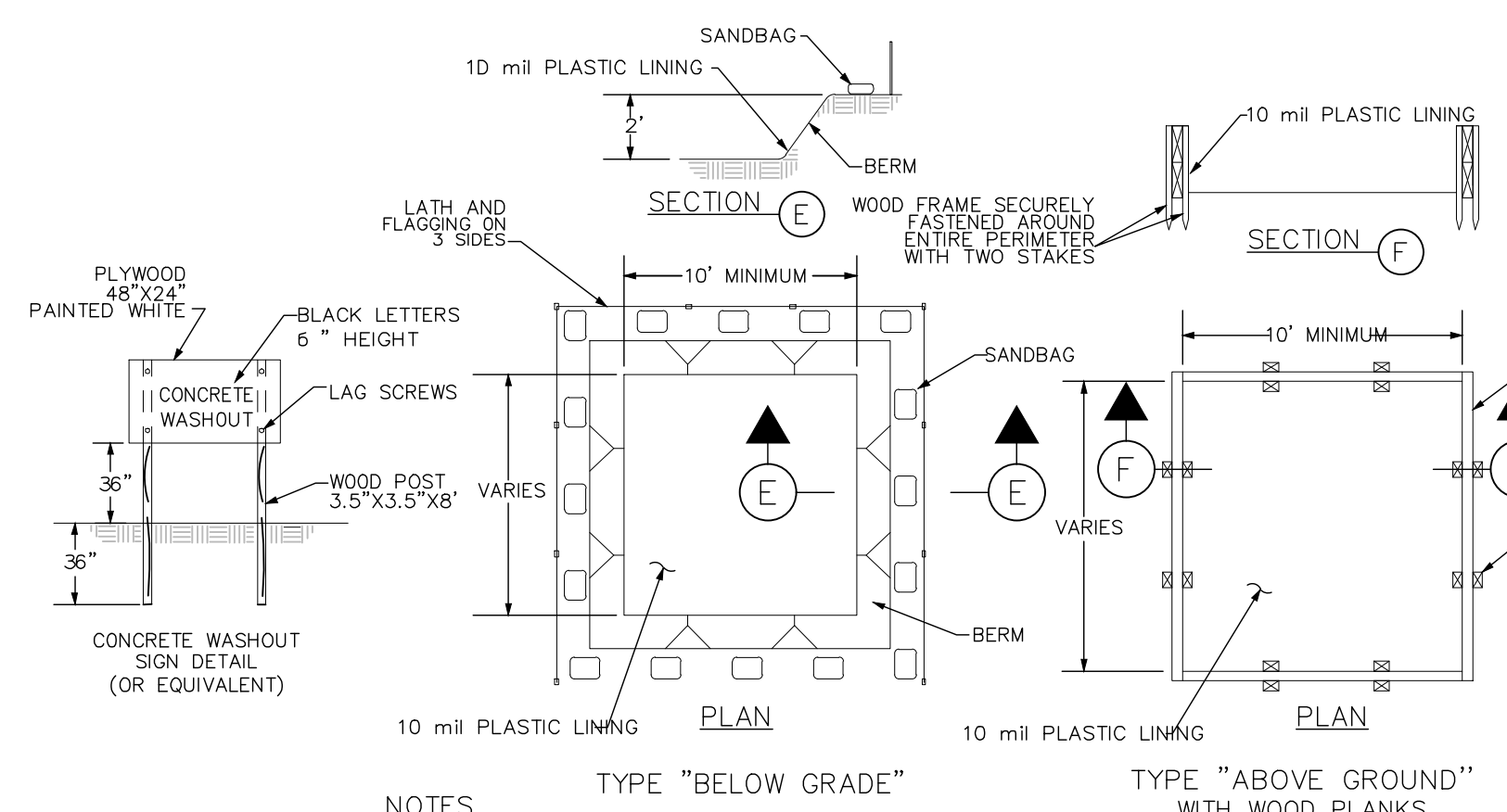
- NOTES**
- PLACE INDIVIDUAL MATS ALONG THE TRAVEL AREA SO THAT INDIVIDUAL BOARDS ARE RESTING PERPENDICULAR TO THE DIRECTION OF TRAFFIC.
 - NO GAPS SHOULD EXIST BETWEEN MATS.
 - EMPTY THE UNIT IN A LOCATION WHERE IT WILL NOT ENTER THE STORM SEWER SYSTEM.
 - REMOVE MATS BY BACKING OUT OF THE SITE, REMOVING MATS ONE AT A TIME.
 - REGRADE ANY RUTTING OR SIGNIFICANT INDENTATIONS AFTER REMOVAL.

TYPICAL DETAIL OF CONSTRUCTION MATS
 NTS



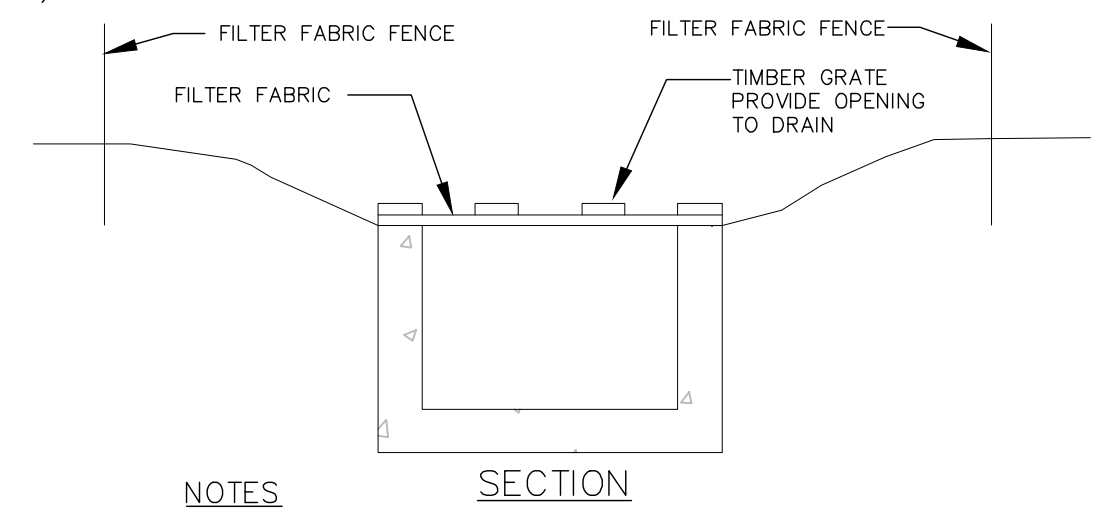
- NOTES**
- 5"-6" STANDARD ROCK SIZE
 - TOP OF GABION =
 - TOP OF CONCRETE FOUNDATION =
- TYPE G = 0.66 CY EA
 TYPE H = 1.00 CY EA
 TYPE I = 1.33 CY EA

GABION WALL DETAIL
 NTS



- NOTES**
- CONCRETE WASHOUT FACILITIES ARE TO BE LOCATED AT LEAST 50' FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, CONSTRUCTION ENTRANCE OR WATER BODIES.
 - A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE CONCRETE WASHOUT FACILITY.
 - ONCE 75% OF THE ORIGINAL VOLUME OF THE WASHOUT PIT IS FILLED OR IF THE LINER IS TORN, THE MATERIAL MUST BE REMOVED AND PROPERLY DISPOSED OF ONCE IT IS COMPLETELY HARDENED. ONCE THE HARDENED CONCRETE IS REMOVED, THE LINER MUST BE REPLACED (IF TORN). A NEW PIT MUST BE CONSTRUCTED IF THE ORIGINAL STRUCTURE IS NO LONGER SUITABLE.
 - ONCE THE PIT IS NO LONGER NEEDED, ENSURE ALL WASHOUT MATERIAL HAS COMPLETELY HARDENED, THEN REMOVE AND PROPERLY DISPOSE OF ALL MATERIALS.

CONCRETE TRUCK WASHOUT
 NTS



NOTES

- A CONTINUOUS SILT BARRIER FENCE SHALL BE CONSTRUCTED AROUND ALL FIRST STAGE INLETS BY THE UTILITY CONTRACTOR.

CURB INLET (STAGE 1) INLET FABRIC COVERING
 NTS

- CONTRACTOR NOTES**
- CONTRACTOR IS RESPONSIBLE FOR DEVELOPING, IMPLEMENTING AND ADHERING TO THE CONTRACTOR DEVELOPED STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
 - CONTRACTOR SHALL PREPARE ALL NOTICE OF INTENT FORMS FOR THE WORK AND OBTAIN THE NECESSARY CERTIFICATES AND SIGNATURES FROM THE OWNER, APPLICABLE SUBCONTRACTORS AND OTHERS AS REQUIRED.

THIS DOCUMENT IS ISSUED FOR INTERIM REVIEW AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.
 DOUGLAS S. DUSINI, P.E.
 TEXAS P.E. #127813
 ISSUED ON:
 MAR 01 2024

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 Houston, Texas 77042 FRN - F-1386

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
C	6/5/23	DSD	90% REVIEW	RCW	DSD
B	3/27/23	DSD	60% REVIEW	RCW	DSD

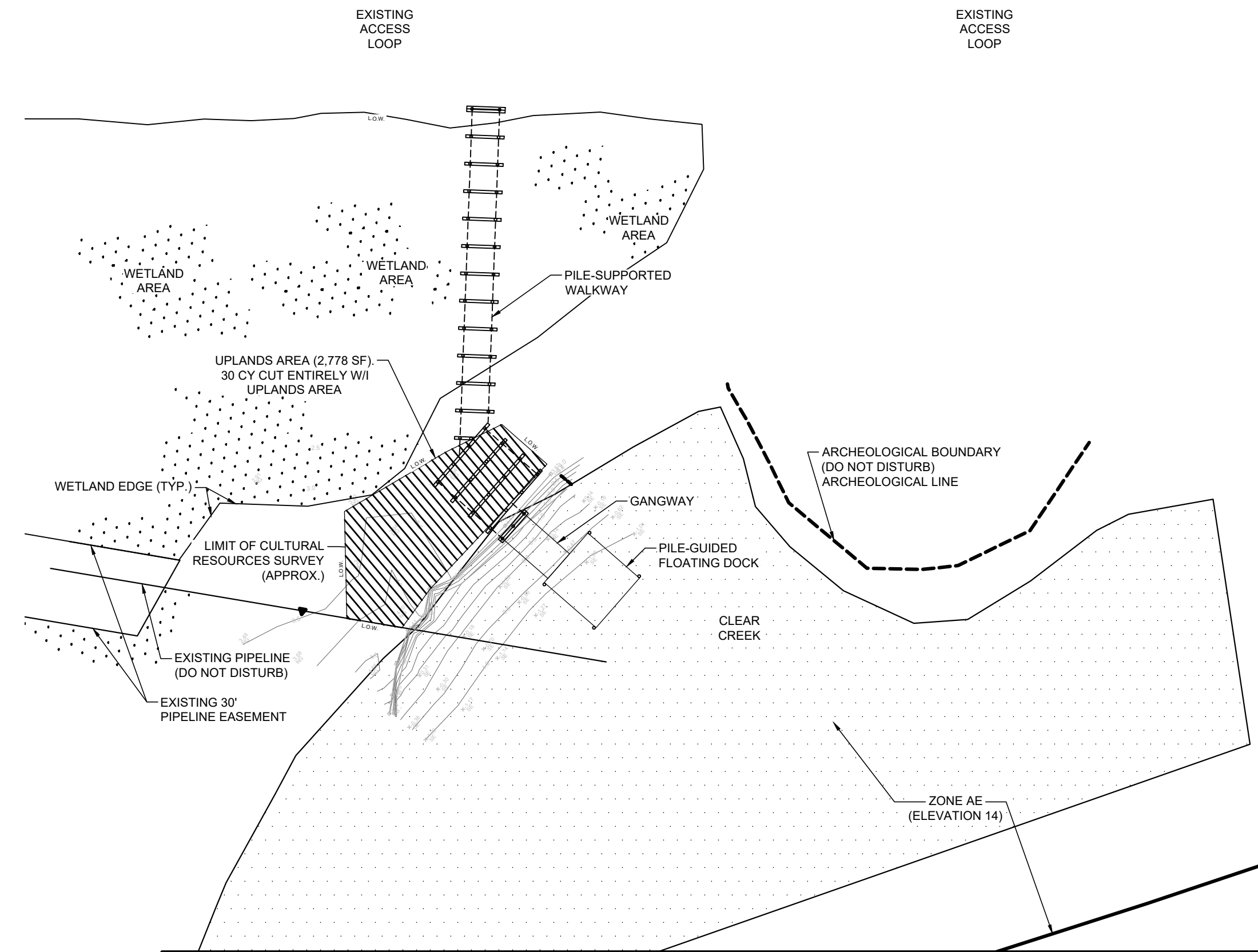
SWPPP DETAILS

NO.	DESCRIPTION
1	5"-6" STANDARD ROCK SIZE
2	TOP OF GABION =
3	TOP OF CONCRETE FOUNDATION =

KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	DATE	SCALE	CHKD	RCW
DSD	3/27/23	N.T.S.	APPV	DSD

DRAWING NO. B1036-1002-C-2003



1 PLAN: KAYAK LAUNCH SITE
1" = 40'-0"

HYDRAULIC ANALYSIS METHODOLOGY

THE EFFECTIVE HEC-RAS MODEL FOR CLEAR CREEK (A100-00-00) WAS OBTAINED FROM THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S (HCFCD) MODEL MANAGEMENT SYSTEM (M3). THE A100-00-00 M3 MODEL USES HEC-RAS VERSION 3.0.1 AND HAS AN EFFECTIVE DATE NOVEMBER 2021. A REVISED EFFECTIVE SCENARIO WAS CREATED TO ACCOUNT OF THE EXISTING CONDITIONS. NO CROSS-SECTIONS WERE LOCATED NEAR THE KAYAK LAUNCH. A CROSS-SECTION WAS INTERPOLATED AT RIVER STATION 37679.5. THIS CROSS-SECTION WAS MODIFIED FOR THE GEOMETRY OF THE EXISTING CONDITIONS. NEXT, A PROPOSED SCENARIO WAS CREATED TO ACCOUNT FOR THE PROPOSED KAYAK LAUNCH. CROSS-SECTION 37679.5 FROM THE REVISED EFFECTIVE SCENARIO WAS MODIFIED TO MATCH THE GEOMETRY OF THE PROPOSED KAYAK LAUNCH. THE EFFECTIVE FLOWS REMAIN UNCHANGED IN BOTH SCENARIOS.

HYDRAULIC ANALYSIS RESULTS

TWO MODEL RUN SCENARIOS WERE CREATED: REVISED EFFECTIVE (REVISED EFFECTIVE MULTI-PROFILE 2021) AND THE PROPOSED (PROP. EFFECTIVE MULTI-PROFILE 2021). THE WATER SURFACE ELEVATIONS WERE COMPARED BETWEEN THE TWO SCENARIOS AT THE CROSS-SECTION WHERE THE KAYAK LAUNCH IS LOCATED AND SEVERAL CROSS-SECTIONS UPSTREAM AND DOWNSTREAM. THERE WERE NO INCREASES TO THE WATER SURFACE ELEVATIONS BETWEEN THE REVISED EFFECTIVE AND PROPOSED CONDITIONS. THE TABLE BELOW SUMMARIZES THE WATER SURFACE ELEVATIONS AT THOSE CROSS-SECTIONS.

HYDRAULIC ANALYSIS CONCLUSION

THE HYDRAULIC ANALYSIS FOR THE PROPOSED KAYAK LAUNCH UTILIZED THE LATEST EFFECTIVE HEC-RAS VERSION 3.0.1 MODEL FROM THE HCFCD M3 SYSTEM AND WERE MODIFIED TO ACCOUNT FOR THE EXISTING AND PROPOSED CONDITIONS. THE ANALYSIS DETERMINED THAT THERE WILL BE NO INCREASES IN WATER SURFACE ELEVATION ALONG CLEAR CREEK DUE TO THE PROPOSED KAYAK LAUNCH. IN CONCLUSION, THE PROPOSED KAYAK LAUNCH WILL RESULT IN NO ADVERSE IMPACTS TO CLEAR CREEK OR ADJACENT PROPERTIES.

NO-RISE CERTIFICATION STATEMENT

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS (PE NUMBER 91867, EXPIRES 03/31/2025) AND THAT ALL DOCUMENTS SUBMITTED ARE CORRECT TO THE BEST OF MY KNOWLEDGE.

I HEREBY CERTIFY THAT THERE WILL BE NO INCREASE IN THE BASE FLOOD ELEVATION DURING THE OCCURRENCE OF THE BASE FLOOD EVENT FLOOD FROM THE PROPOSED KAYAK LAUNCH ON CLEAR CREEK IN THE CITY OF LEAGUE CITY, TEXAS.

River Station	Revised Effective				Proposed				Delta (PROP-REVISED EFFECTIVE)			
	10-yr	50-yr	100-yr	500-yr	10-yr	50-yr	100-yr	500-yr	10-yr	50-yr	100-yr	500-yr
	(ft)											
39765.40	6.44	8.34	9.16	10.75	6.41	8.32	9.13	9.13	-0.03	-0.02	-0.03	-1.62
39772.55	6.42	8.33	9.14	10.73	6.39	8.30	9.11	9.11	-0.03	-0.03	-0.03	-1.52
38380.74	6.39	8.29	9.10	10.69	6.36	8.26	9.08	9.08	-0.03	-0.03	-0.02	-1.61
37679.5*	6.21	8.16	8.99	10.62	6.17	8.11	8.95	8.95	-0.04	-0.05	-0.04	-1.67
37273.21	5.84	7.70	8.52	10.09	5.84	7.70	8.52	8.52	0	0	0	-1.57
37222.00	0	0	0	0	0	0	0	0	0	0	0	0
37212.22	5.79	7.60	8.41	9.96	5.79	7.60	8.41	8.41	0	0	0	-1.55
36556.81	5.75	7.57	8.39	9.96	5.75	7.57	8.39	8.39	0	0	0	-1.57
35776.77	5.54	7.32	8.13	9.96	5.54	7.32	8.13	8.13	0	0	0	-1.53

CONFIDENTIAL - RESTRICTED USE

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LJA Engineering, Inc.



Marine Phone 713.953.5200
3600 W. Sam Houston Pkwy S., Suite 600 Fax 512.439.4716
Houston, Texas 77042 FRN - F-1386



Jessica L. Koutny
04/08/2024
JESSICA L. KOUTNY, P.E. #91867

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
C	6/6/23	DSD	60% REVIEW	RCW	DSD

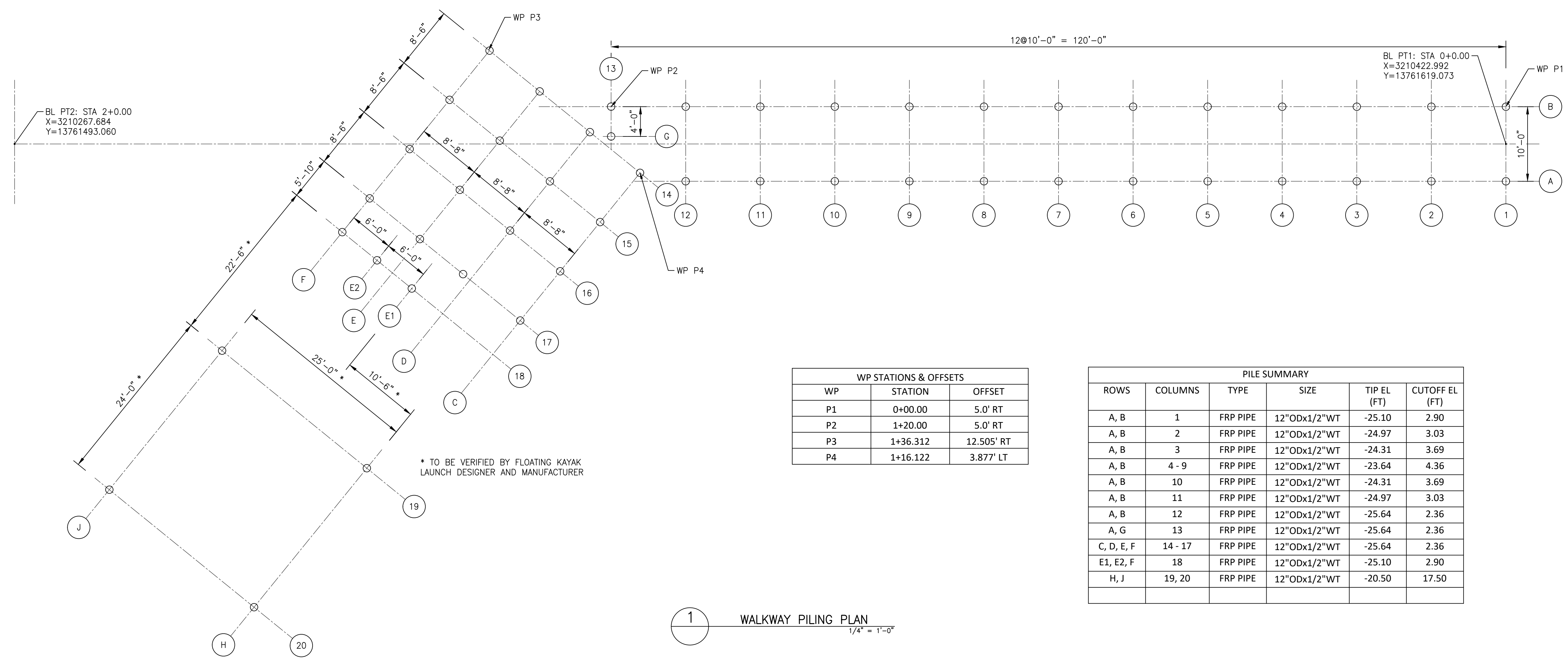
HYDRAULICS CALCULATIONS

KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	DSD	DATE	4/9/2024	SCALE	1" = 40'	DWG APP'D	RCW	DSD	
DRAWING NO.	B1036-1002-C-2004							ISSUE NO.	C

ALL ELEVATIONS ARE IN NAVD 88.
 100 YR WSE = 14.5'
 FIRM PANEL NOS. 48167C0036G, 48167C0037G, 48167C0038G.
 EFFECTIVE DATE: AUGUST 15, 2019.
 THIS AREA LIES IN FLOOD ZONE "AE".

NOTES:
 1. FOR SITE PLAN, REFER TO CIVIL DRAWINGS.

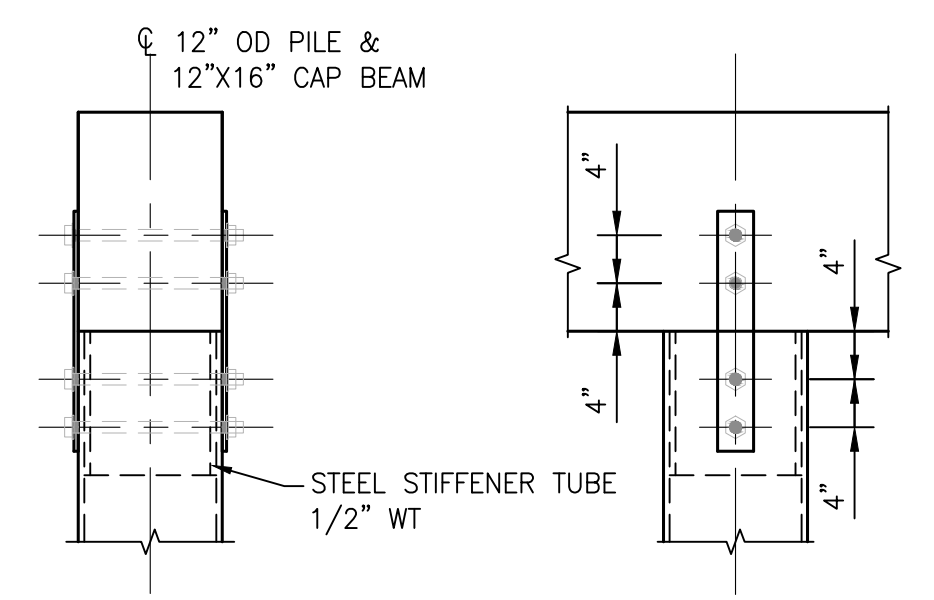


WP STATIONS & OFFSETS		
WP	STATION	OFFSET
P1	0+00.00	5.0' RT
P2	1+20.00	5.0' RT
P3	1+36.312	12.505' RT
P4	1+16.122	3.877' LT

PILE SUMMARY					
ROWS	COLUMNS	TYPE	SIZE	TIP EL (FT)	CUTOFF EL (FT)
A, B	1	FRP PIPE	12"ODx1/2"WT	-25.10	2.90
A, B	2	FRP PIPE	12"ODx1/2"WT	-24.97	3.03
A, B	3	FRP PIPE	12"ODx1/2"WT	-24.31	3.69
A, B	4 - 9	FRP PIPE	12"ODx1/2"WT	-23.64	4.36
A, B	10	FRP PIPE	12"ODx1/2"WT	-24.31	3.69
A, B	11	FRP PIPE	12"ODx1/2"WT	-24.97	3.03
A, B	12	FRP PIPE	12"ODx1/2"WT	-25.64	2.36
A, G	13	FRP PIPE	12"ODx1/2"WT	-25.64	2.36
C, D, E, F	14 - 17	FRP PIPE	12"ODx1/2"WT	-25.64	2.36
E1, E2, F	18	FRP PIPE	12"ODx1/2"WT	-25.10	2.90
H, J	19, 20	FRP PIPE	12"ODx1/2"WT	-20.50	17.50

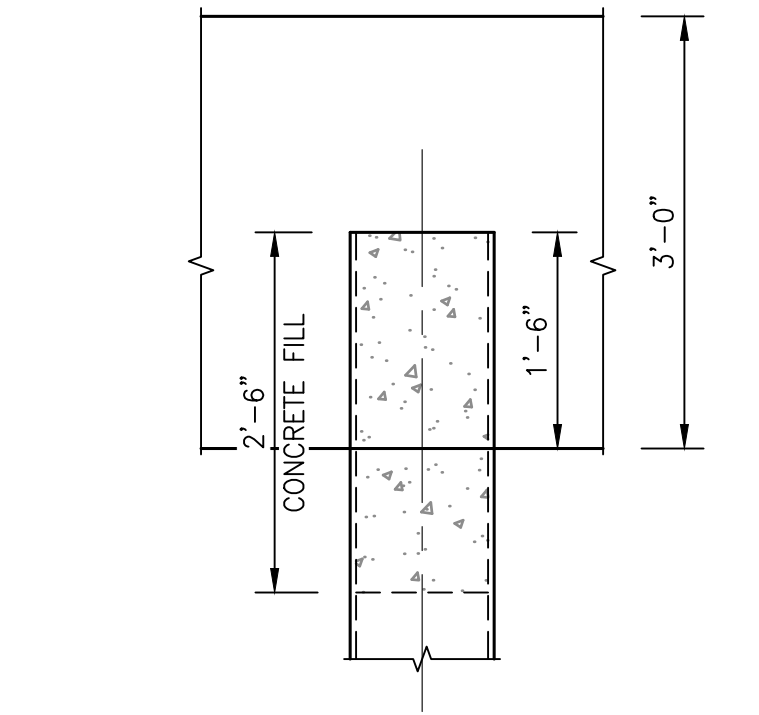
1 WALKWAY PILING PLAN
 1/4" = 1'-0"

* TO BE VERIFIED BY FLOATING KAYAK LAUNCH DESIGNER AND MANUFACTURER

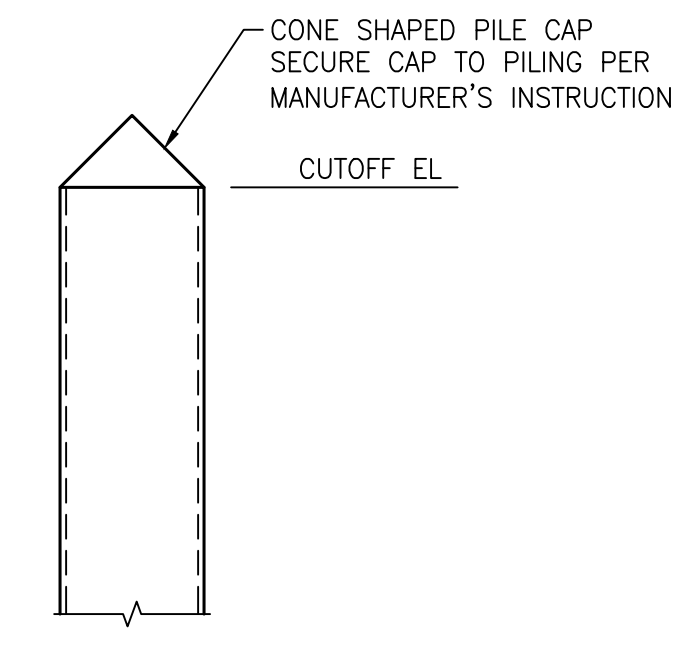


NOTE: PROVIDE SPACER PLATE WITH MATCHING MATERIAL, SIZE AND HOLE PATTERN AT CONNECTION, IF NEEDED

A PILE CONNECTION AT CAP BEAM
 3/4" = 1'-0"



B PILE CONNECTION AT ABUTMENT
 3/4" = 1'-0"



C PILE CAP OF ANCHOR PILES
 3/4" = 1'-0"

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ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

WALKWAY PILING PLAN

KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	BZ	DATE	3/1/24	SCALE	AS NOTED	CHKD	RW
ISSUED ON:	MAR 01 2024	APPVD	BZ	ISSUE NO.	E		


DRAWING NO. B-1036-1002-C-2005

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BING ZHANG, P.E.
 TEXAS P.E. #110956
 ISSUED ON:
 MAR 01 2024

ALL ELEVATIONS ARE IN NAVD 88.
 100 YR WSE = 14.5'
 FIRM PANEL NOS. 48167C0036G, 48167C0037G, 48167C0038G.
 EFFECTIVE DATE: AUGUST 15, 2019.
 THIS AREA LIES IN FLOOD ZONE "AE".

NOTES:
 1. FOR SITE PLAN, REFER TO CIVIL DRAWINGS.

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 Houston, Texas 777042 FRN - F-1386

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

WALKWAY DETAILS, SHEET 1 OF 5

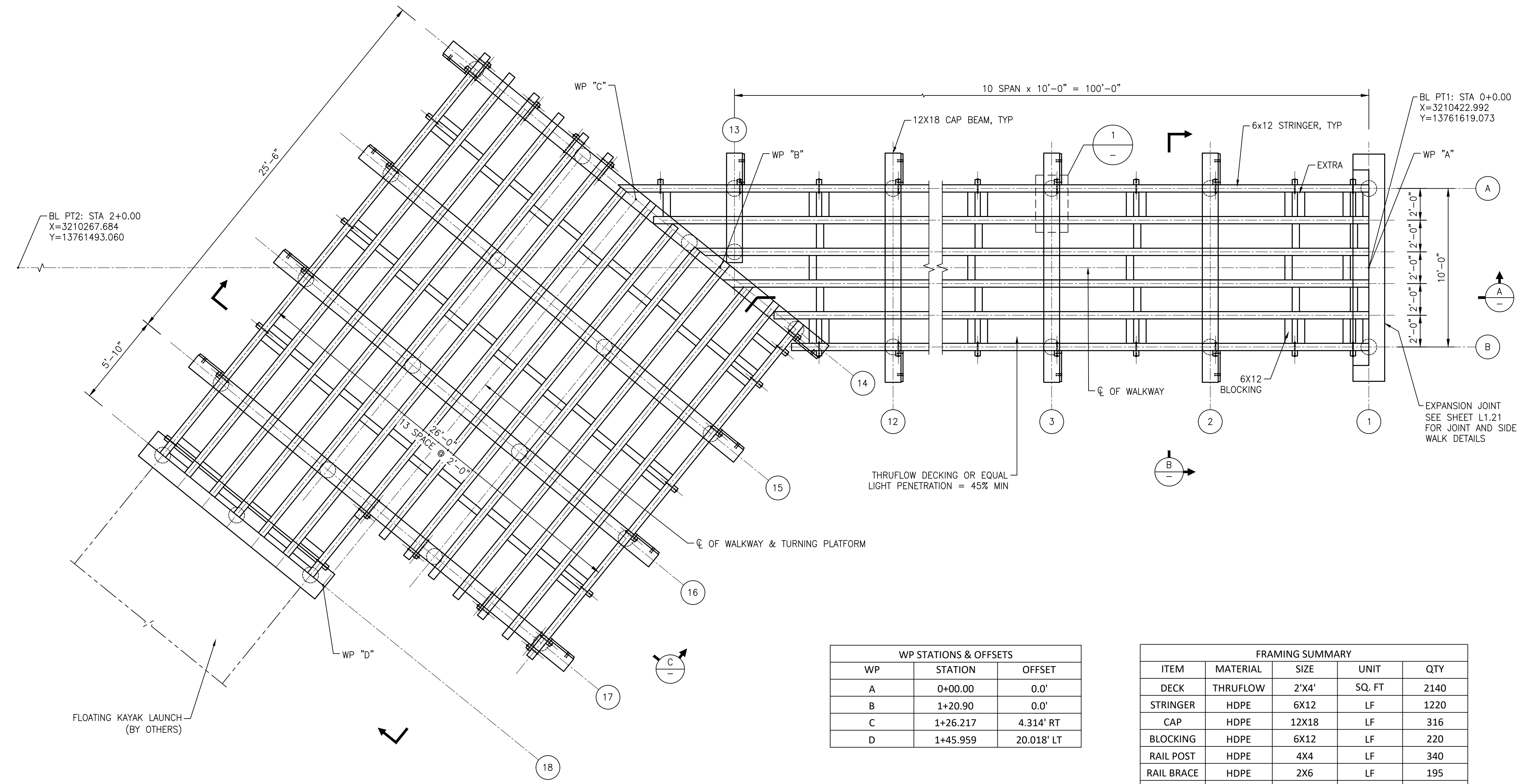
KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	DATE	SCALE	CHKD	RW
BZ	3/1/24	AS NOTED	APPVD	BZ

DRAWING NO. B-1036-1002-C-2006

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 ISSUED ON:
 MAR 01 2024



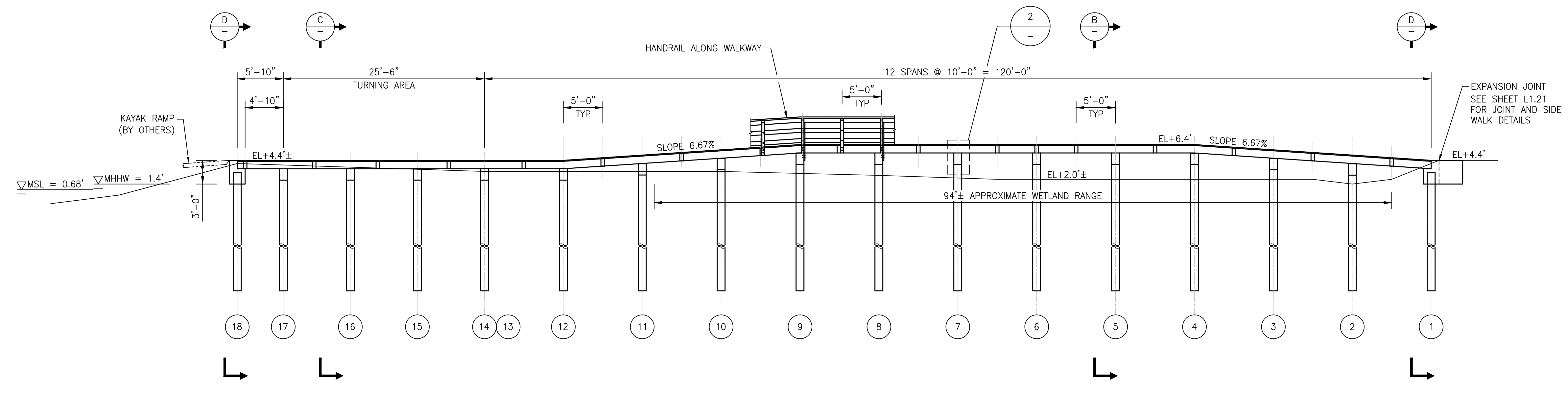
WP STATIONS & OFFSETS		
WP	STATION	OFFSET
A	0+00.00	0.0'
B	1+20.90	0.0'
C	1+26.217	4.314' RT
D	1+45.959	20.018' LT

FRAMING SUMMARY				
ITEM	MATERIAL	SIZE	UNIT	QTY
DECK	THRUFLOW	2'X4'	SQ. FT	2140
STRINGER	HDPE	6X12	LF	1220
CAP	HDPE	12X18	LF	316
BLOCKING	HDPE	6X12	LF	220
RAIL POST	HDPE	4X4	LF	340
RAIL BRACE	HDPE	2X6	LF	195
RAILING	HDPE	3X6	LF	1140
RAILING	HDPE	2X8	LF	380

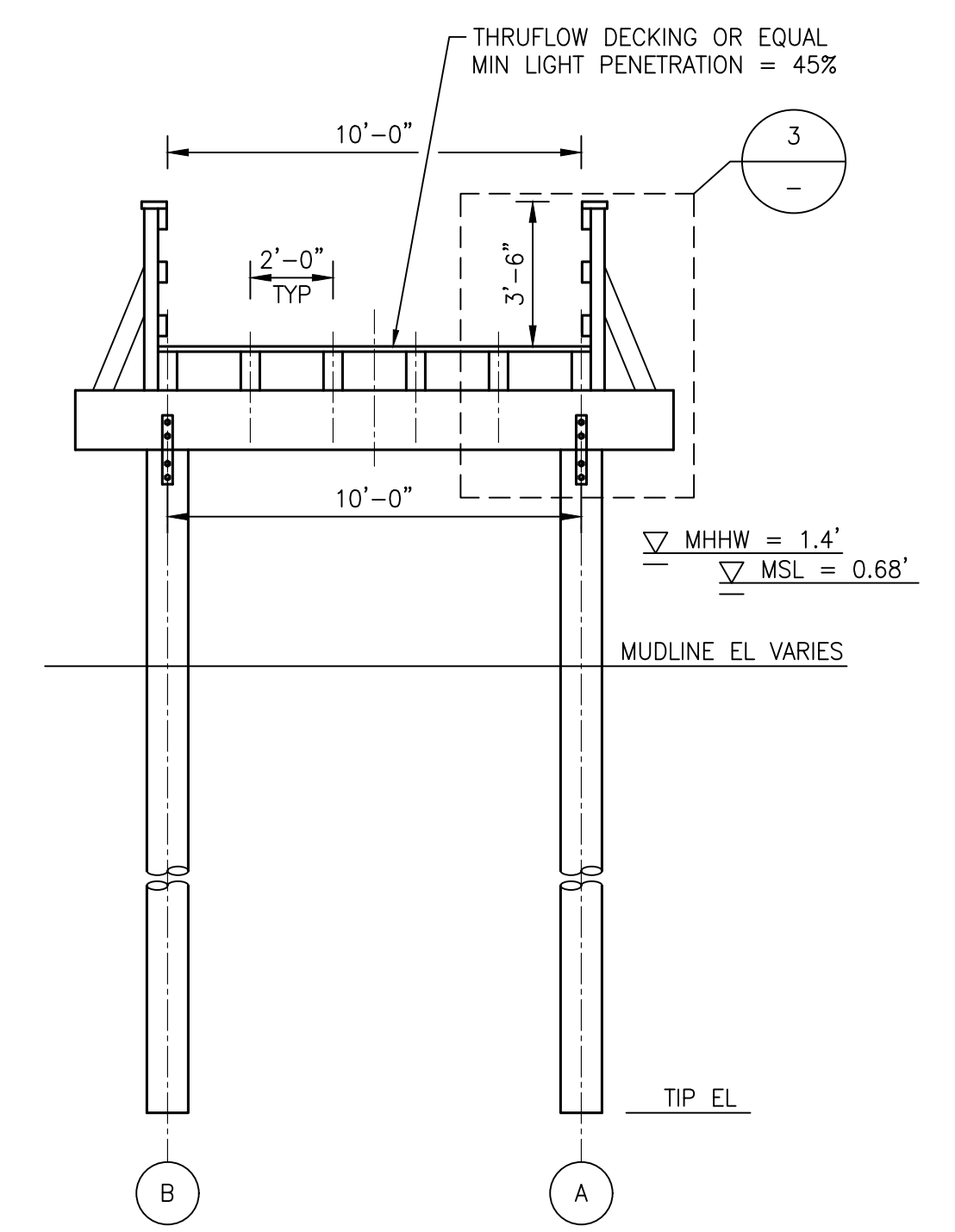
ESTIMATED QUANTITIES ARE FOR THE CONTRACTOR'S INFORMATION ONLY

1 WALKWAY FRAMING PLAN
 1/4" = 1'-0"

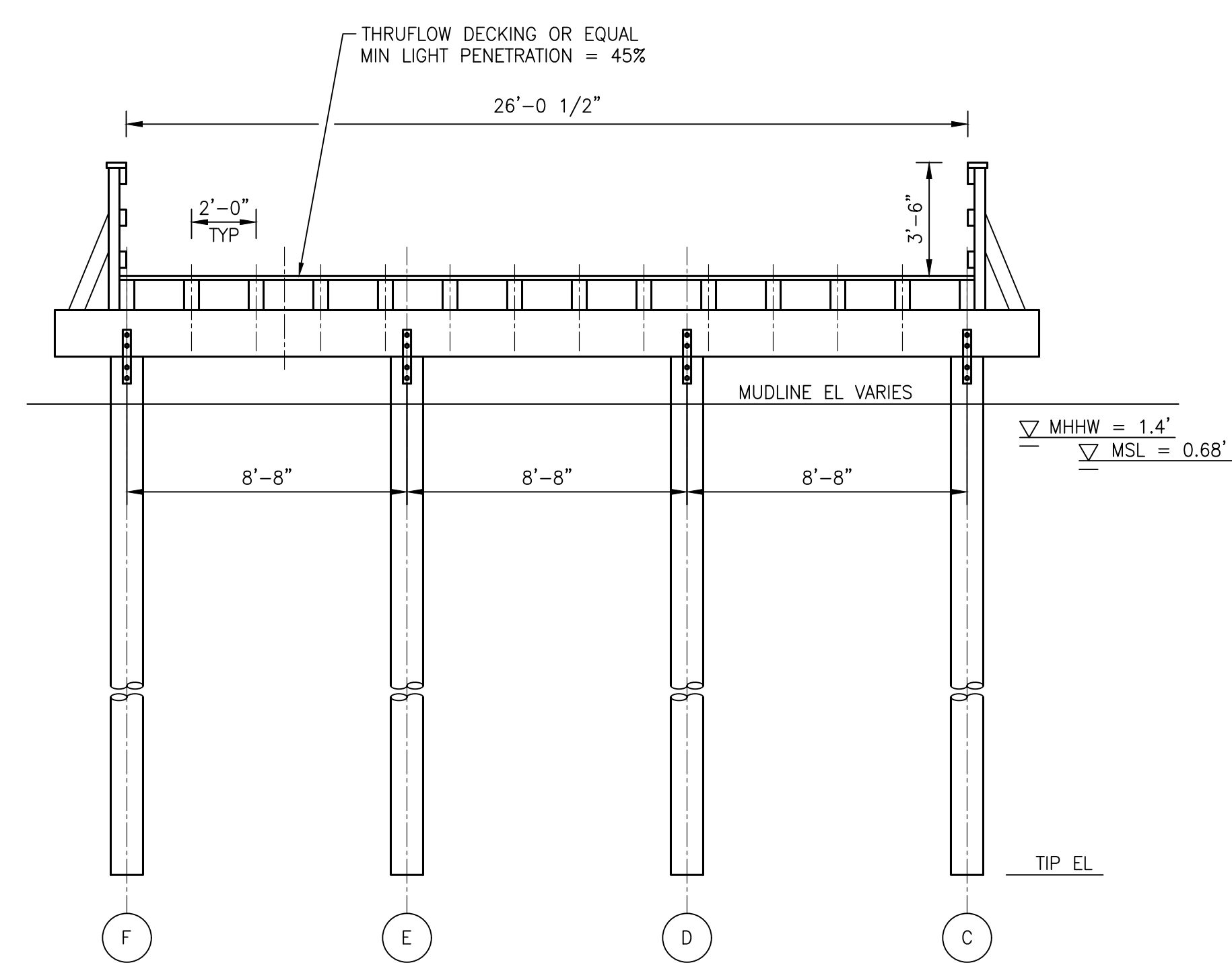
ALL ELEVATIONS ARE IN NAVD 88.
 100 YR WSE = 14.5'
 FIRM PANEL NOS. 48167C0036G, 48167C0037G, 48167C0038G.
 EFFECTIVE DATE: AUGUST 15, 2019.
 THIS AREA LIES IN FLOOD ZONE "AE".



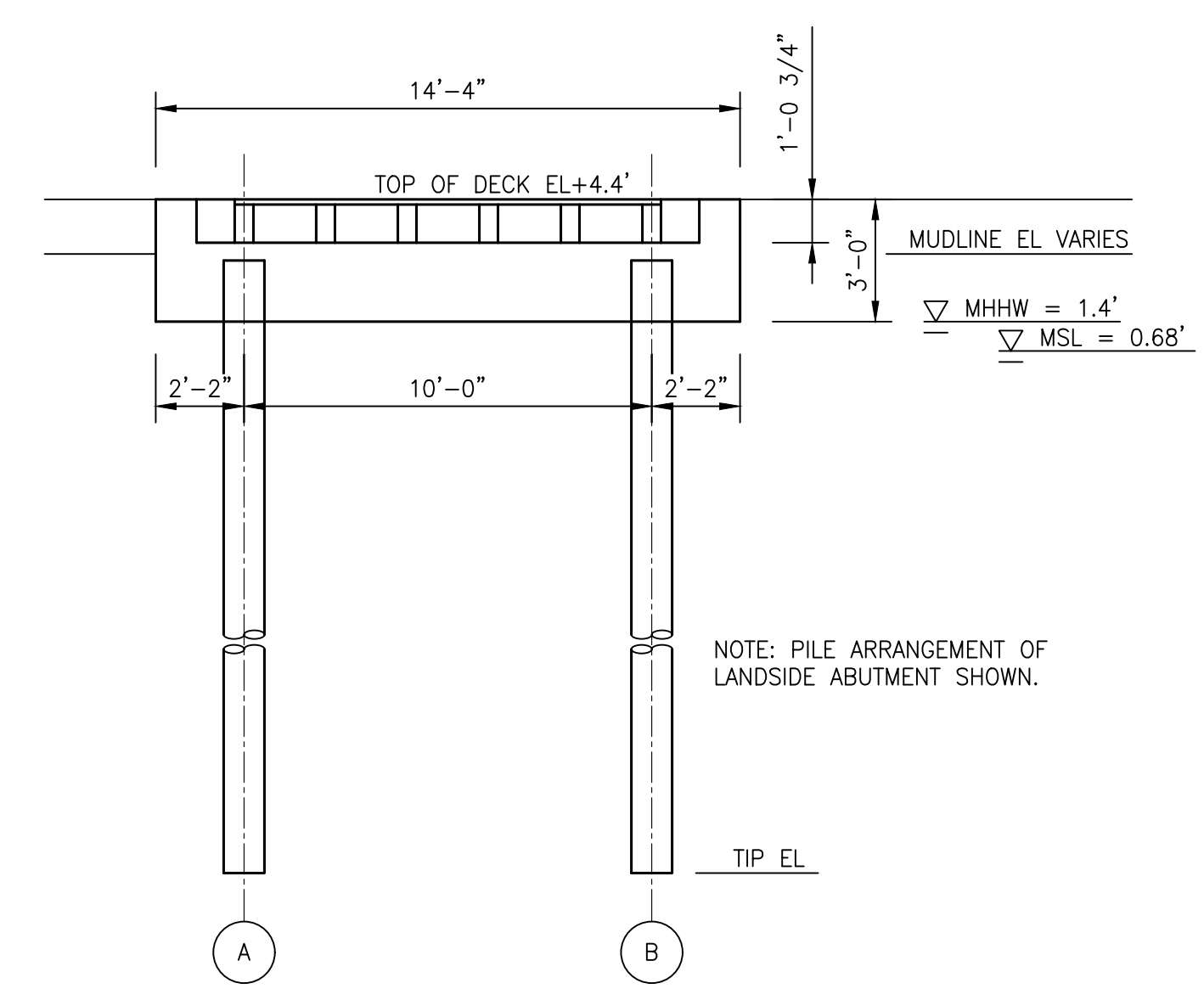
A WALKWAY ELEVATION
 1/4" = 1'-0"



B WALKWAY TYPICAL SECTION
 1/4" = 1'-0"



C WALKWAY TYPICAL SECTION
 1/4" = 1'-0"



D WALKWAY TYPICAL SECTION
 1/4" = 1'-0"

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 Marine
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 Houston, Texas 777042
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 Fax 512.439.4716
 FRN - F-1386

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

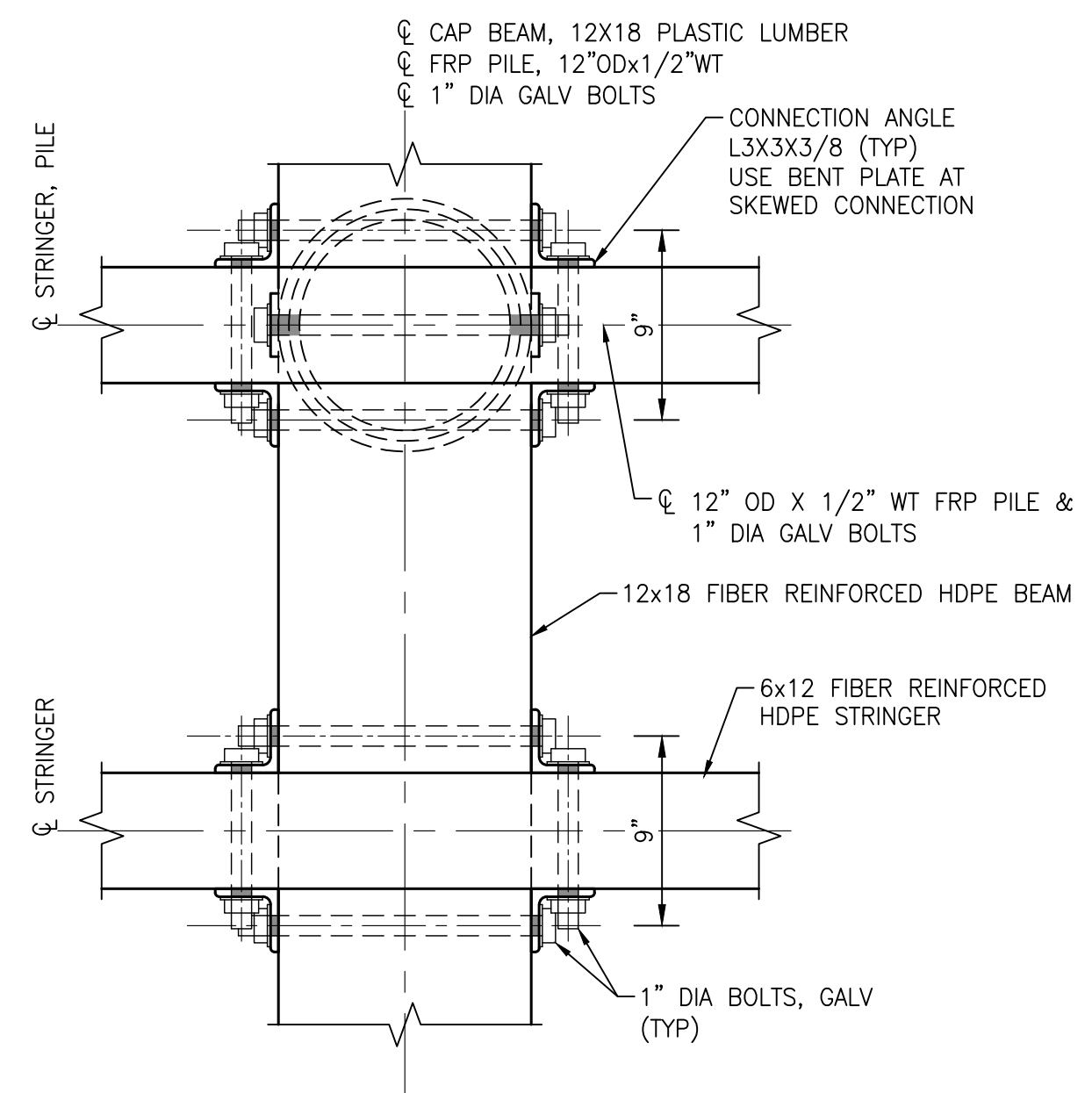
WALKWAY DETAILS, SHEET 2 OF 5

KAYAK LAUNCH WALKWAY STRUCTURE

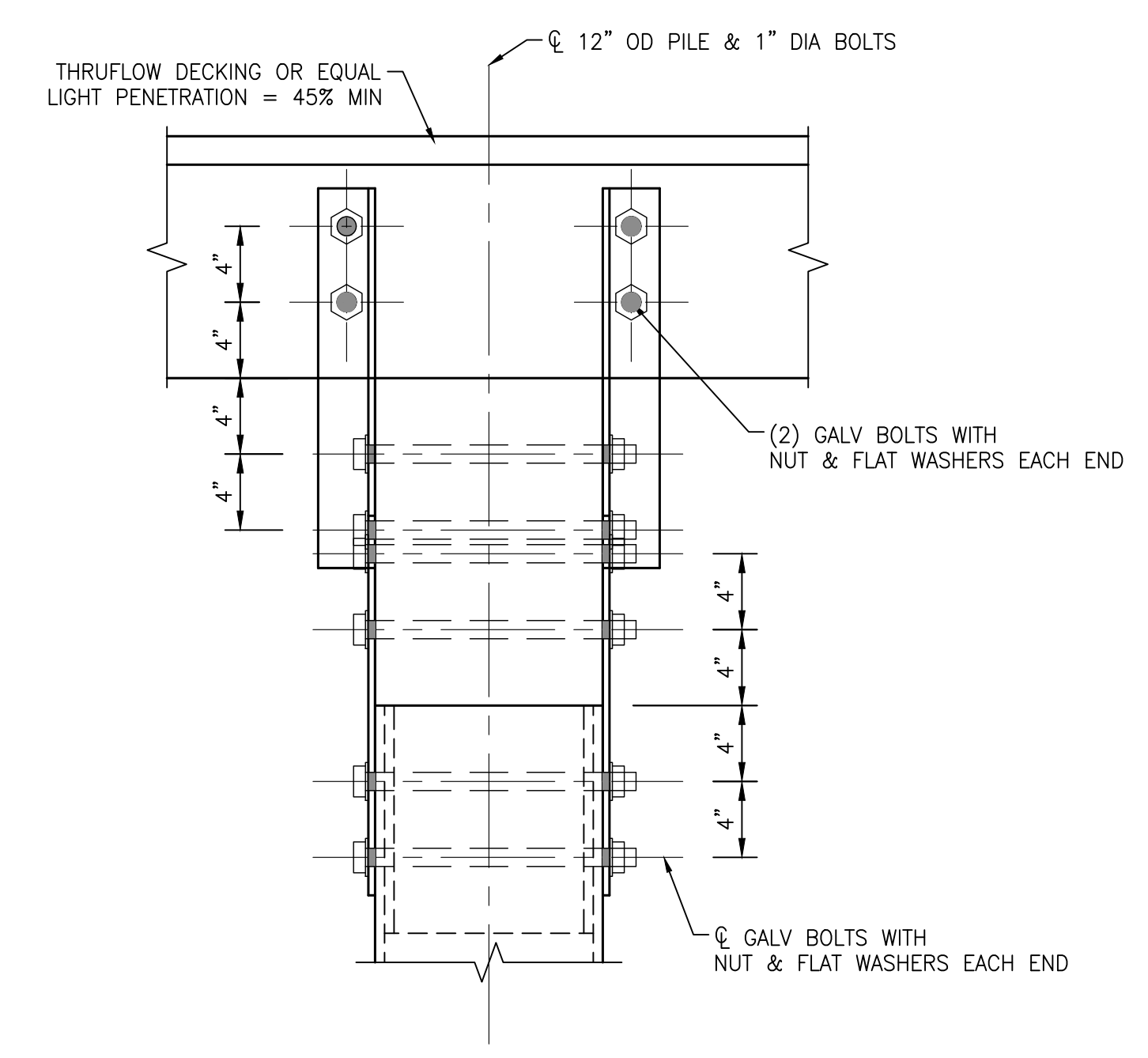
DRAWN BY	DATE	SCALE	CHKD	RW
BZ	3/1/24	AS NOTED	APPVD	BZ

ISSUED ON: MAR 01 2024
 DRAWING NO. B-1036-1002-C-2007
 ISSUE NO. E

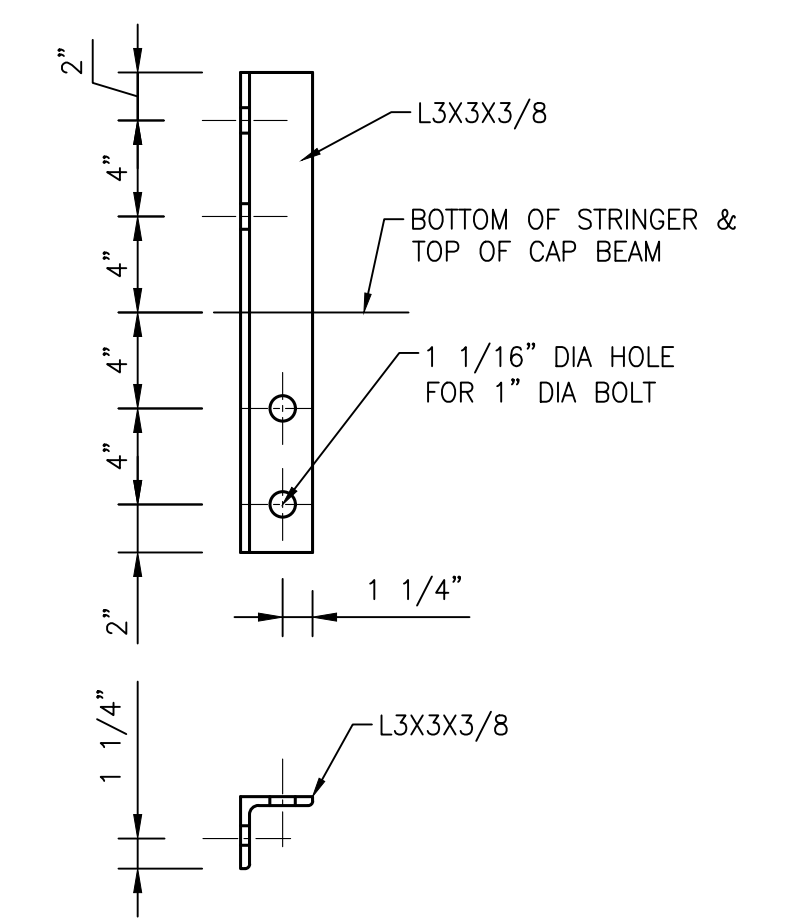
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 ISSUED ON: MAR 01 2024



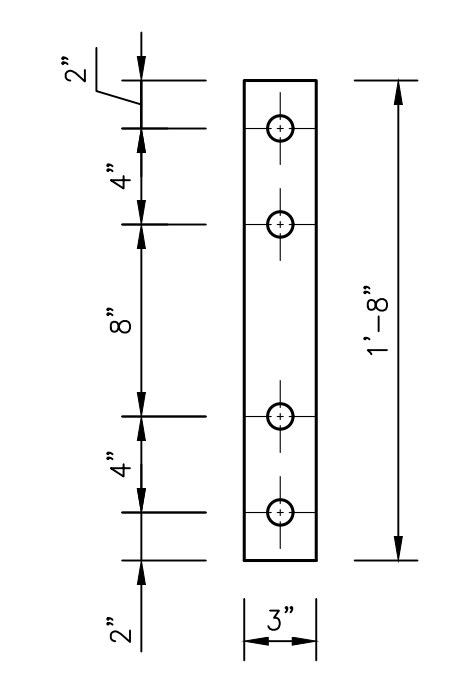
1 CONNECTION DETAILS
 1 1/2" = 1'-0"



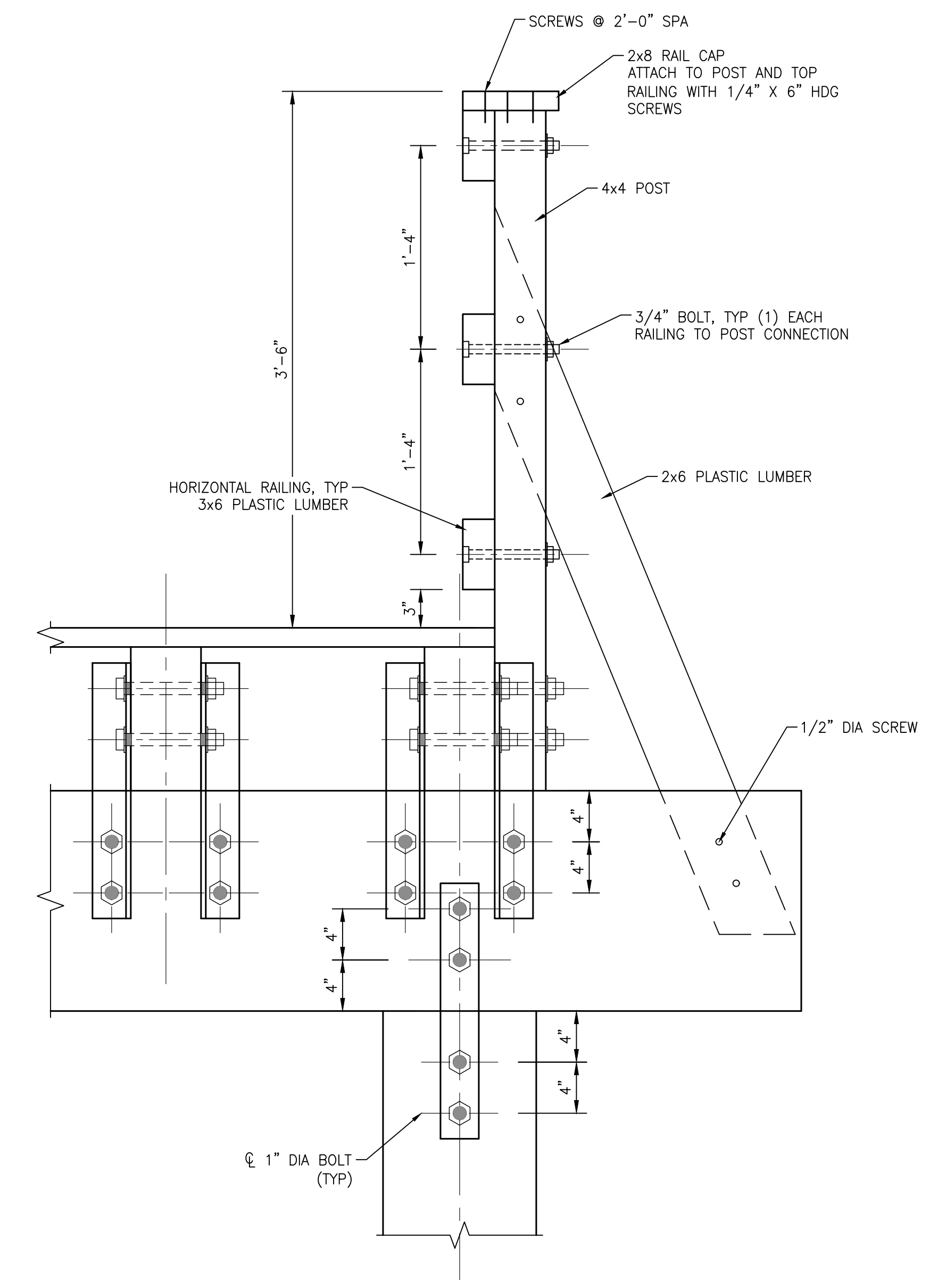
2 CONNECTION DETAILS
 1 1/2" = 1'-0"



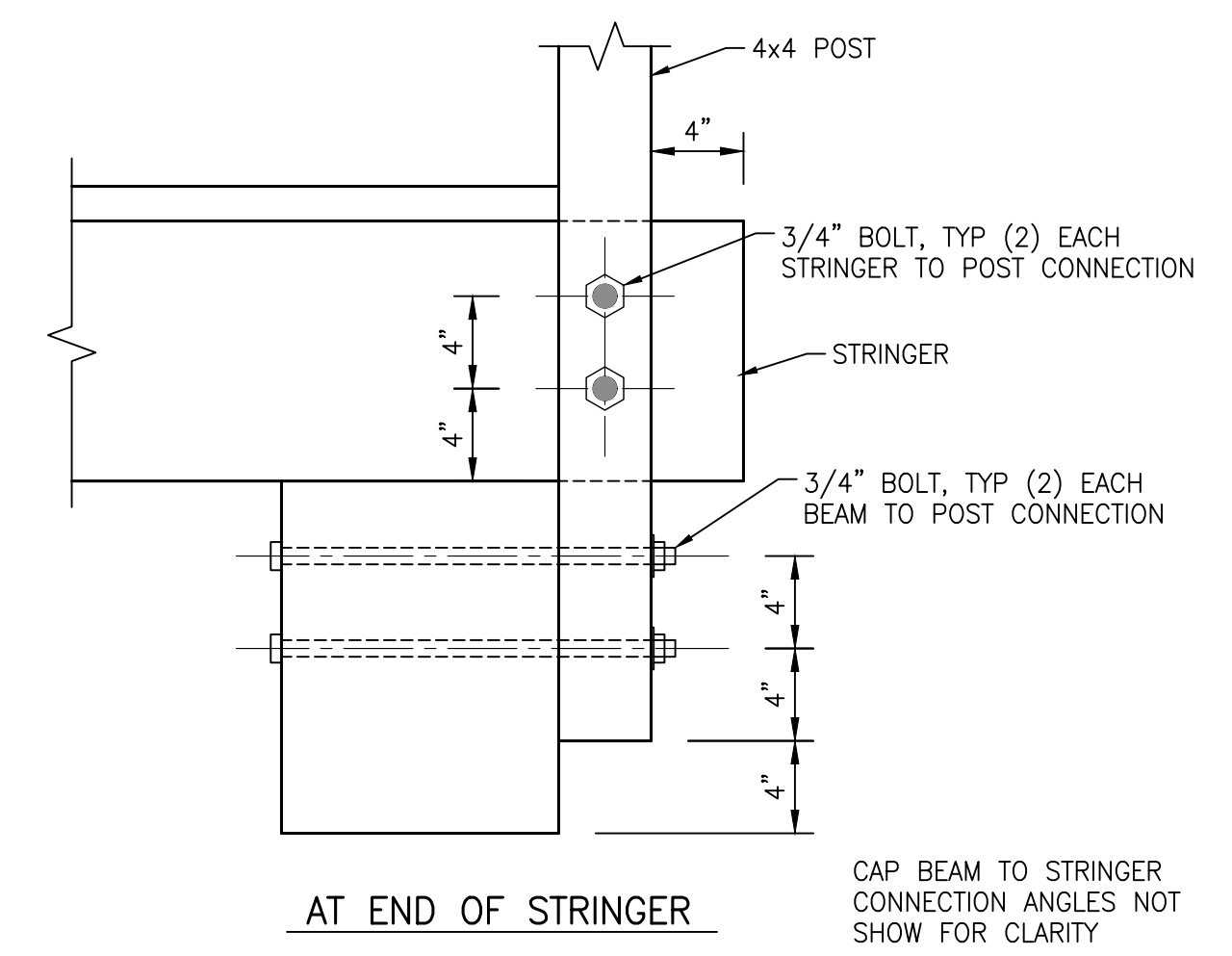
4 CONNECTION ANGLE
 1 1/2" = 1'-0"



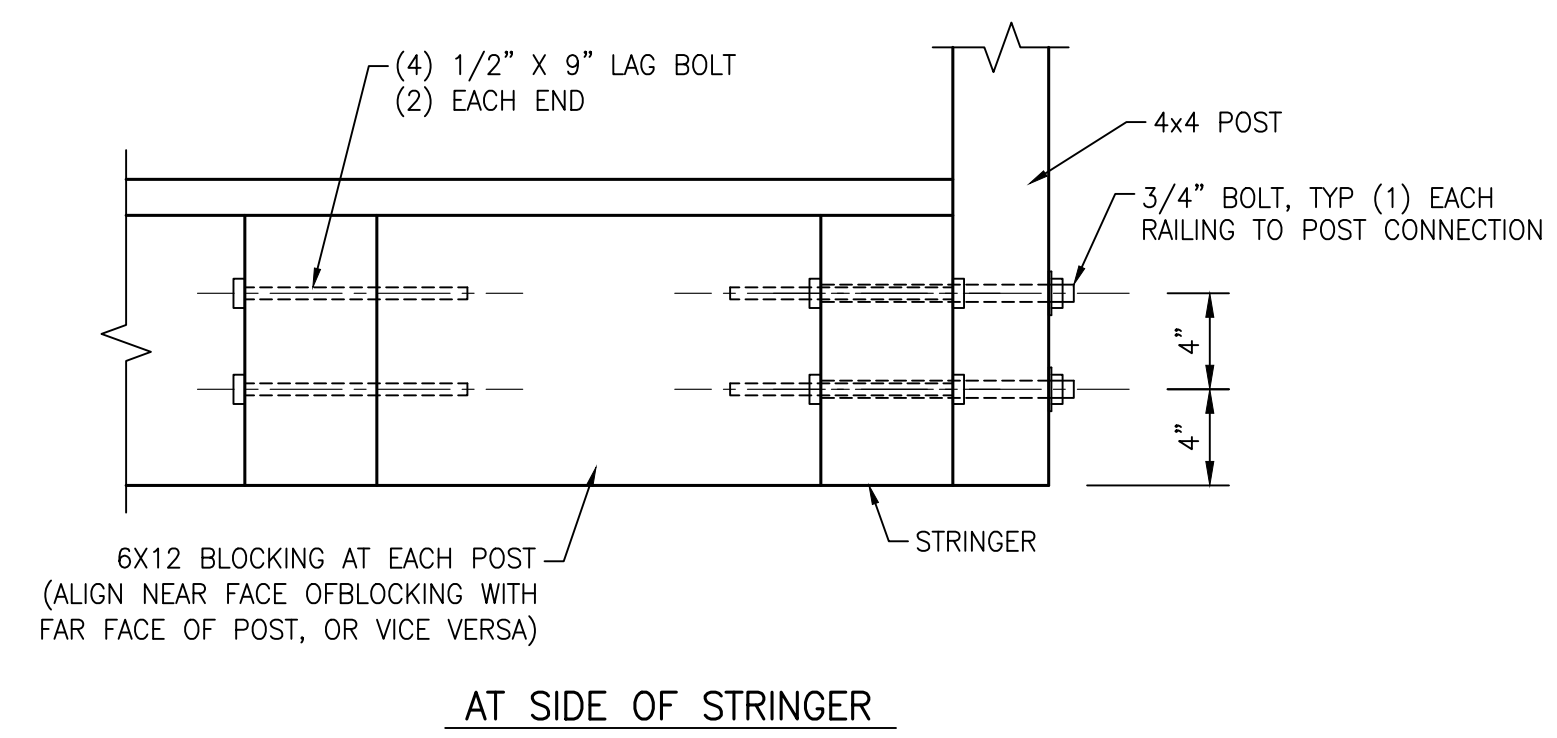
5 CONNECTION PLATE
 1 1/2" = 1'-0"



3 RAILING & CONNECTION DETAILS
 1 1/2" = 1'-0"



7 RAILING POST CONNECTION DETAILS
 1 1/2" = 1'-0"



6 RAILING POST CONNECTION DETAILS
 1 1/2" = 1'-0"

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 Houston, Texas 777042 FRN - F-1386

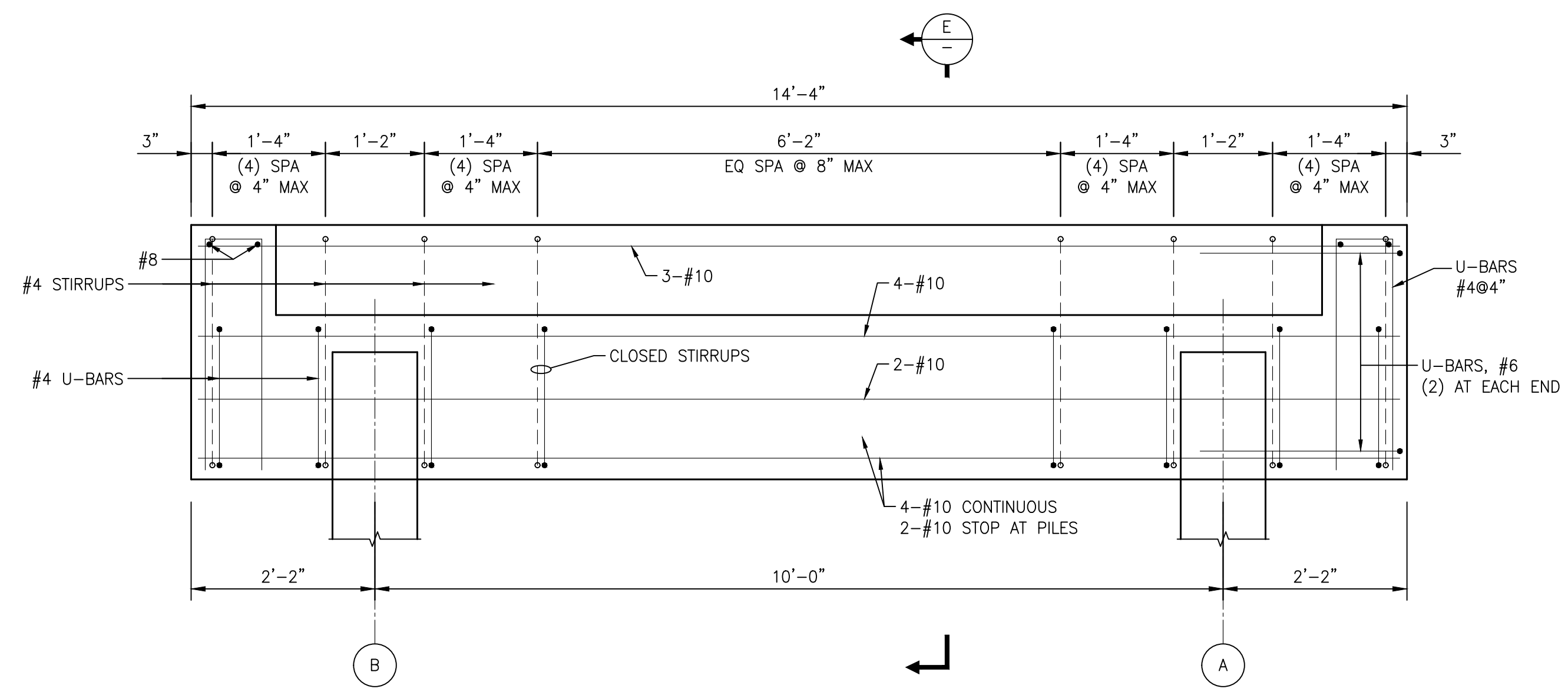
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

WALKWAY DETAILS, SHEET 3 OF 5

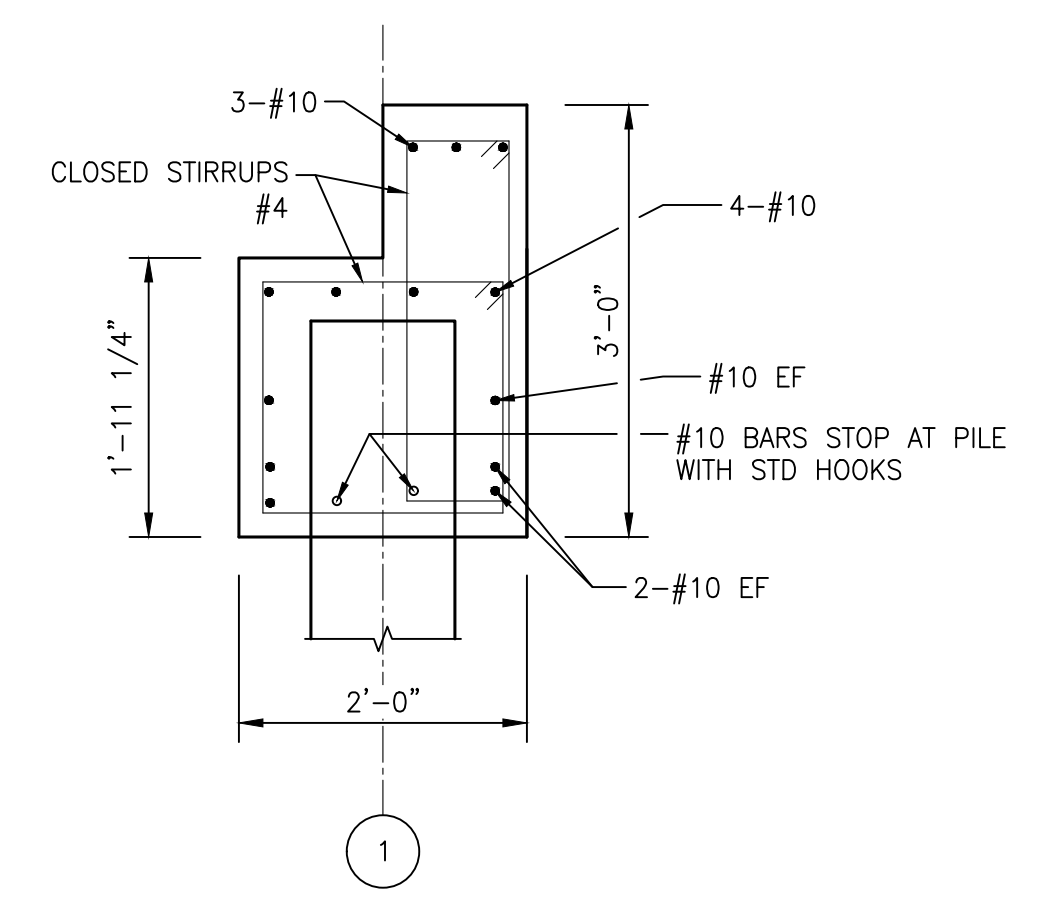
KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	DATE	SCALE	CHKD	RW
BZ	3/1/24	AS NOTED	APPVD	BZ
DRAWING NO.	ISSUE NO.			
B-1036-1002-C-2008	E			

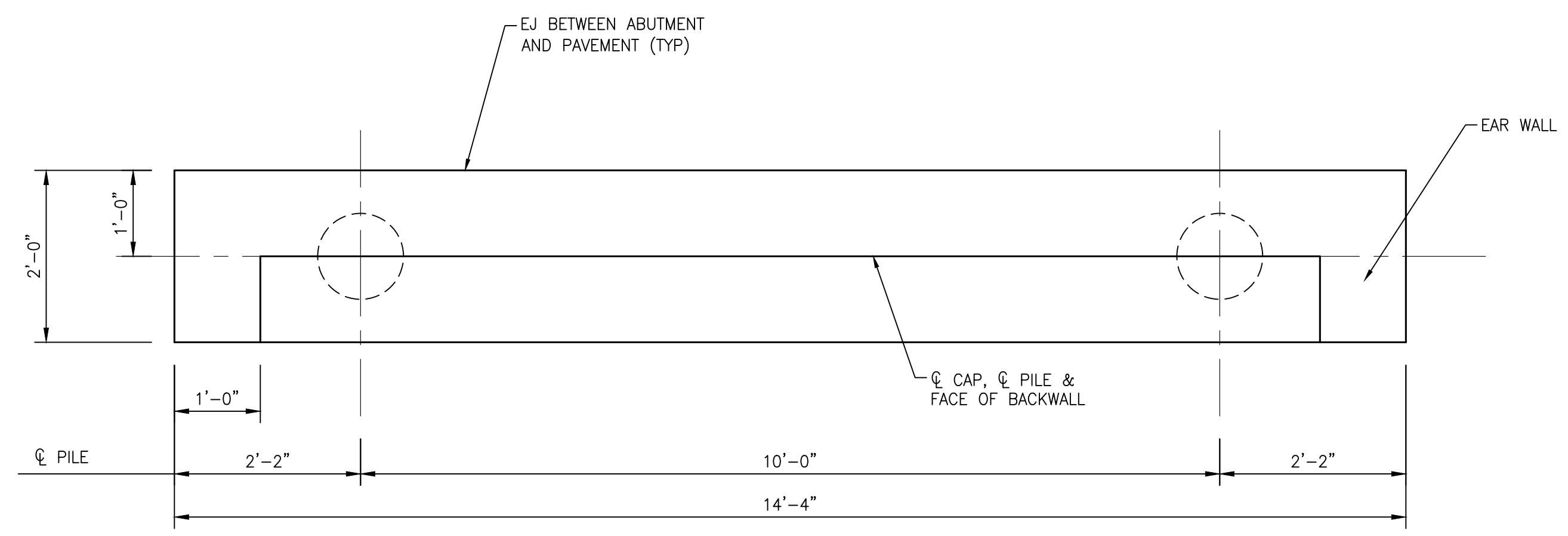
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 TEXAS P.E. #110956
 ISSUED ON:
 MAR 01 2024



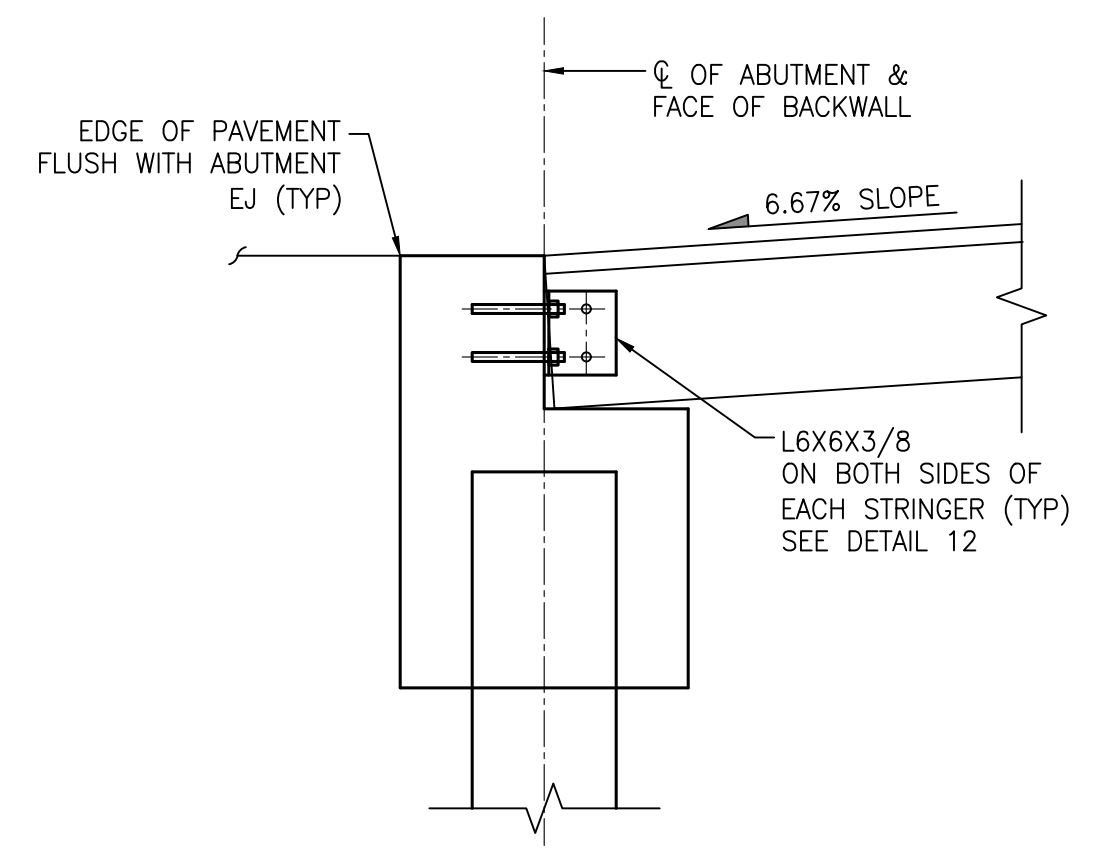
6 LANDSIDE ABUTMENT REINFORCEMENT
 3/4" = 1'-0"



E LANDSIDE ABUTMENT
 3/4" = 1'-0"



7 LANDSIDE ABUTMENT PLAN
 3/4" = 1'-0"



8 DETAIL
 3/4" = 1'-0"

LJA Engineering, Inc.
 Marine 3600 W. Sam Houston Pkwy S., Suite 600 Houston, Texas 777042
 Phone 713.953.5200 Fax 512.439.4716 FRN - F-1386

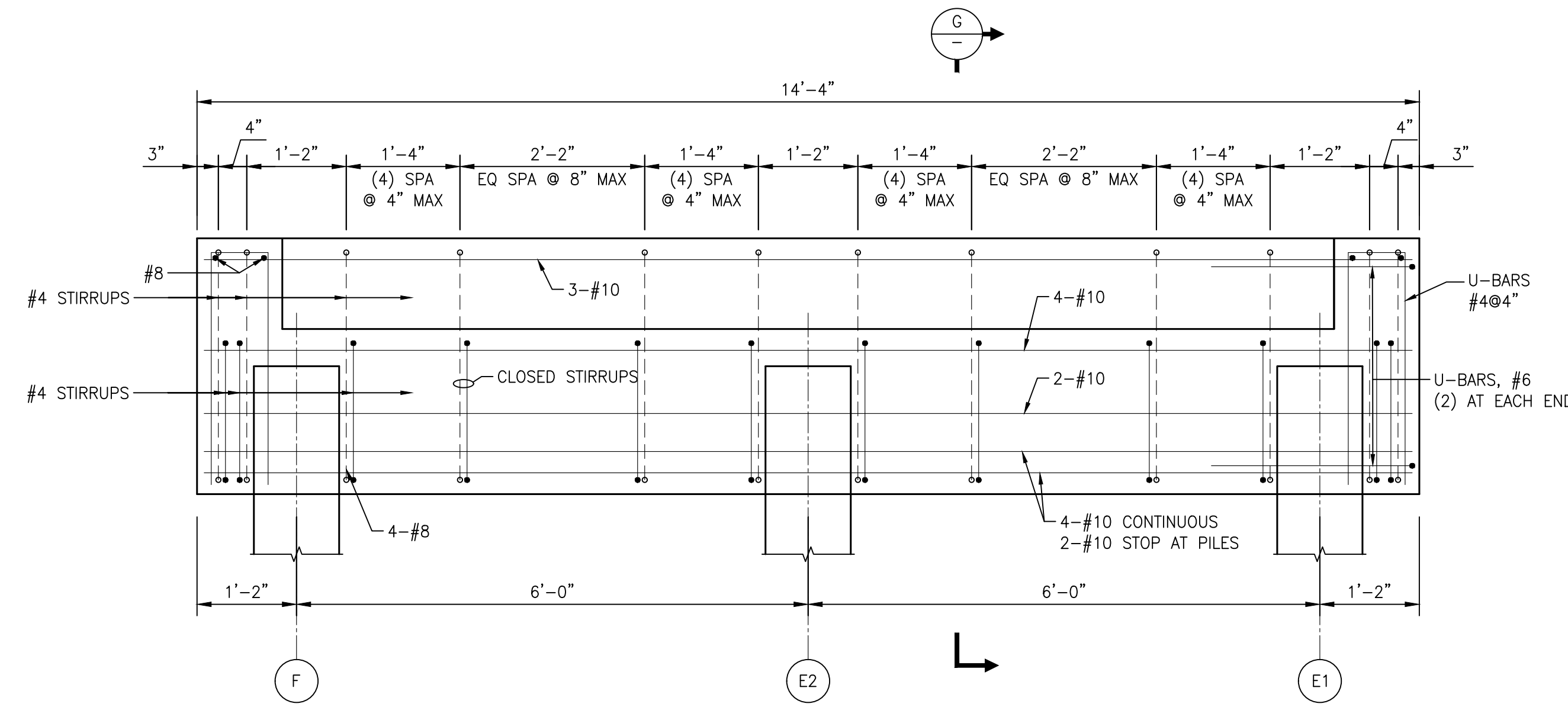
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

WALKWAY DETAILS, SHEET 4 OF 5

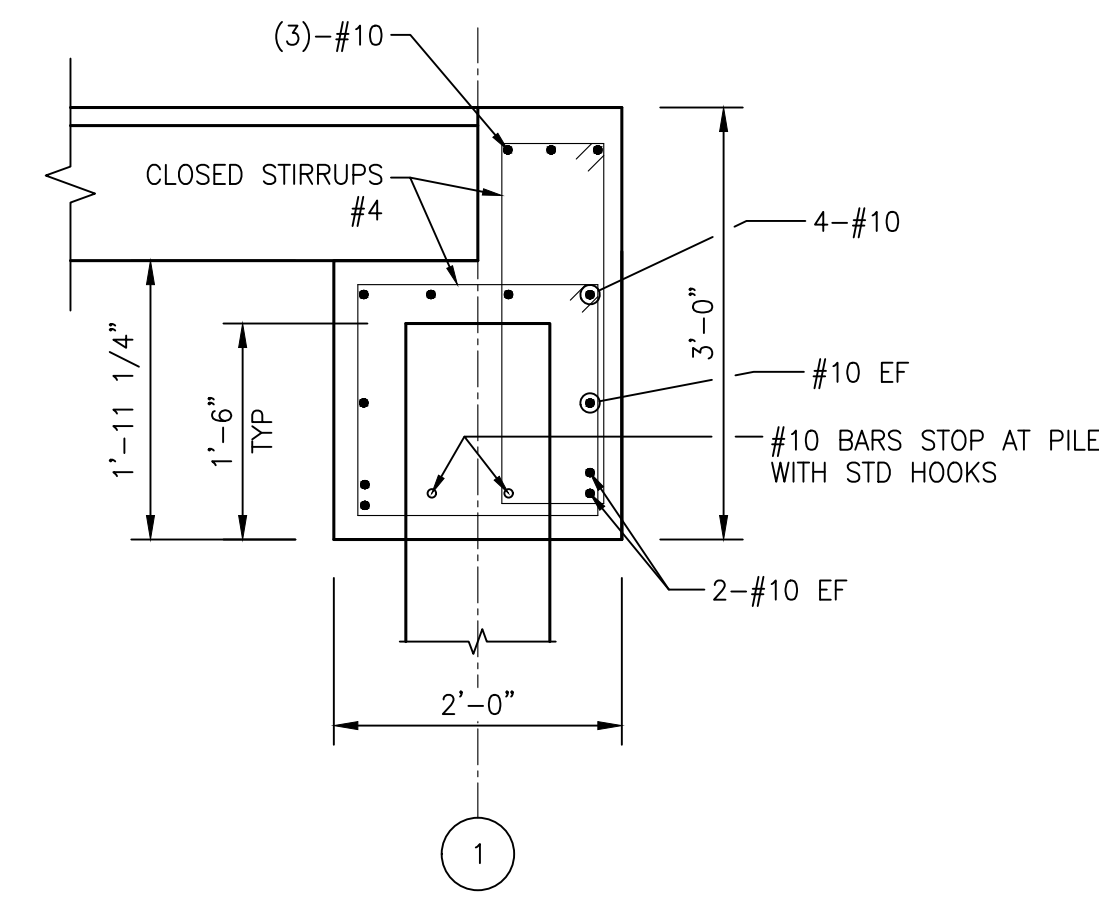
KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	BZ	DATE	3/1/24	SCALE	AS NOTED	CHKD	RW	APPD	BZ
DRAWING NO.	B-1036-1002-C-2009							ISSUE NO.	E

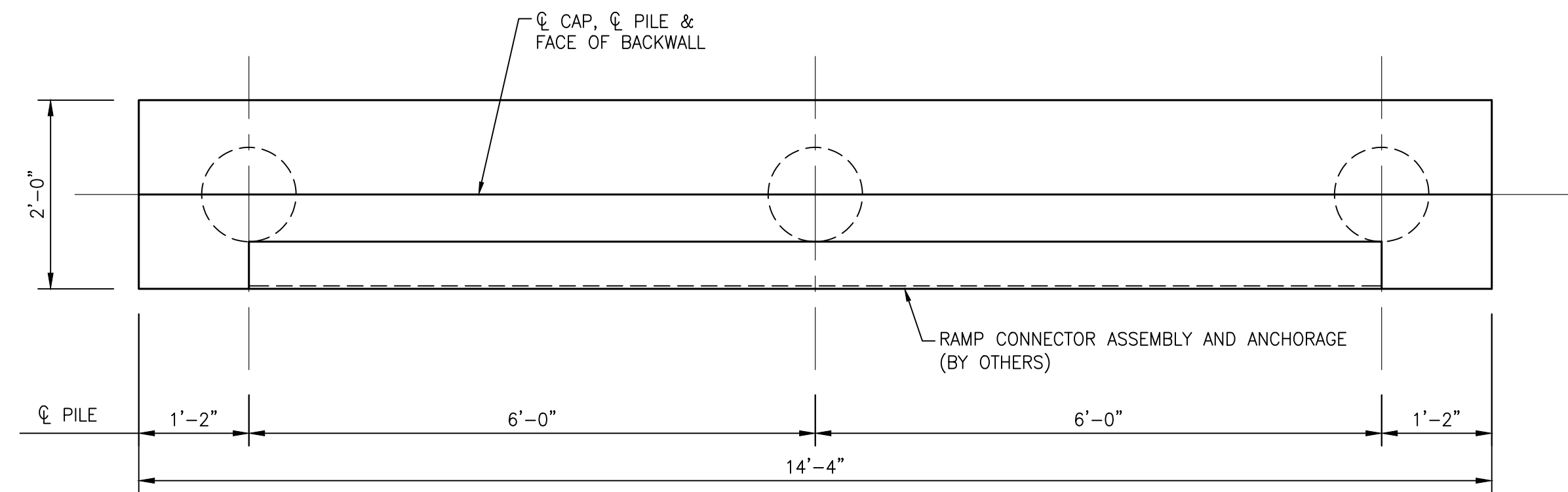
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 ISSUED ON:
 MAR 01 2024



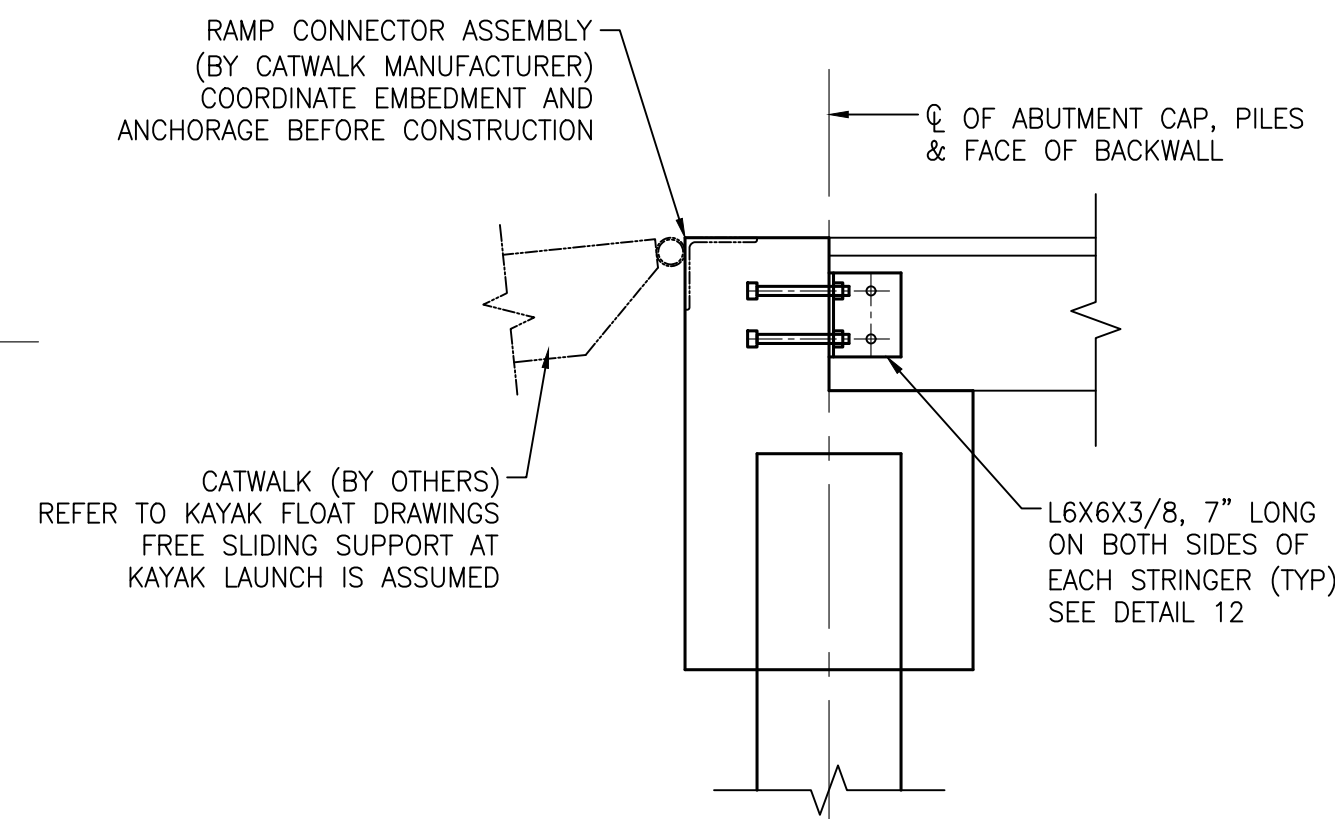
9 WATERSIDE ABUTMENT REINFORCEMENT
 3/4" = 1'-0"



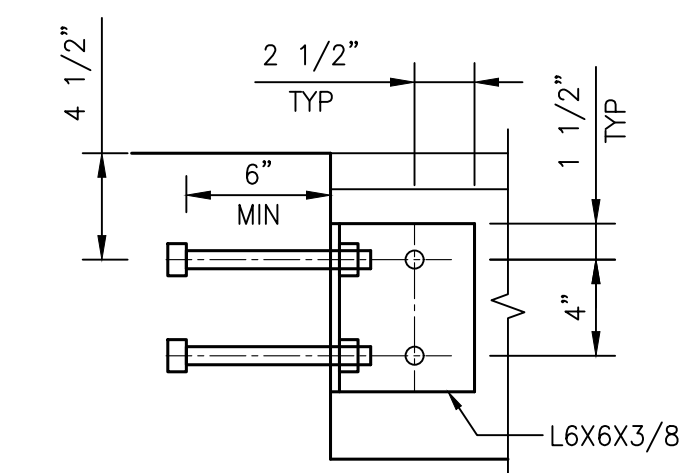
G LANDSIDE ABUTMENT
 3/4" = 1'-0"



10 WATERSIDE ABUTMENT PLAN
 3/4" = 1'-0"



11 DETAIL
 3/4" = 1'-0"



12 DETAIL
 1 1/2" = 1'-0"

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 Houston, Texas 777042 FRN - F-1386

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
E	3/1/24	BZ	90% REVIEW	RW	BZ
D	12/7/23	BZ	90% REVIEW	RW	BZ
C	6/7/23	BZ	90% REVIEW	RW	BZ
B	4/4/23	BZ	60% REVIEW	RW	BZ
A	12/16/22	BZ	30% REVIEW	RW	BZ

WALKWAY DETAILS, SHEET 5 OF 5

KAYAK LAUNCH WALKWAY STRUCTURE

DRAWN BY	DATE	SCALE	CHKD	RW
BZ	3/1/24	AS NOTED	APPVD	BZ
DRAWING NO.	ISSUE NO.			
B-1036-1002-C-2010	E			

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BING ZHANG, P.E.
 TEXAS P.E. #110956
 ISSUED ON:
 MAR 01 2024



EXHIBIT D CERTIFICATE OF INSURANCE

Agents should complete this form by providing all requested information, then either email, fax, or mail this form as noted at the bottom of page two. Copies of endorsements listed below are not required as attachments to this certificate.

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not confer any rights or obligations other than the rights and obligations conveyed by the policies referenced on this certificate. The terms of the policies referenced in this certificate control over the terms of the certificate.

Insured: League City

Street/Mailing Address: 300 WWalker St

City/State/Zip: League City, TX 77573-3898

Phone Number: (281) 554 - 1013

WORKERS' COMPENSATION INSURANCE COVERAGE:

Endorsed with a Waiver of Subrogation in favor of TxDOT.

Carrier Name: Texas Municipal League Intergovernmental Risk Pool			Carrier Phone #: (800) 537 - 6655	
Address: 1821Rutherford Ln.			City, State, Zip: Austin, TX 78754	
Type of Insurance	Policy Number	Effective Date	Expiration Date	Limits of Liability:
Workers' Compensation	6723	10/01/2023	10/01/2024	Not Less Than: Statutory - Texas

COMMERCIAL GENERAL LIABILITY INSURANCE:

Carrier Name: Texas Municipal League Intergovernmental Risk Pool			Carrier Phone #: (800) 537 - 6655	
Address: 1821Rutherford Ln.			City, State, Zip: Austin, TX 78754	
Type of Insurance:	Policy Number:	Effective Date:	Expiration Date:	Limits of Liability:
Commercial General Liability Insurance	6723	10/01/2023	10/01/2024	Not Less Than: \$ 600,000 each occurrence

BUSINESS AUTOMOBILE POLICY:

Carrier Name: Texas Municipal League Intergovernmental Risk Pool			Carrier Phone #: (800) 537 - 6655	
Address: 1821Rutherford Ln.			City, State, Zip: Austin, TX 78754	
Type of Insurance:	Policy Number:	Effective Date:	Expiration Date:	Limits of Liability:
Business Automobile Policy	6723	10/01/2023	10/01/2024	Not Less Than: \$ 600,000 combined single limit

UMBRELLA POLICY (if applicable):

Carrier Name:			Carrier Phone #: () -	
Address:			City, State, Zip:	
Type of Insurance:	Policy Number:	Effective Date:	Expiration Date:	Limits of Liability:
Umbrella Policy				

Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

THIS IS TO CERTIFY to the Texas Department of Transportation acting on behalf of the State of Texas that the insurance policies named are in full force and effect. *If this form is sent by facsimile machine (fax), the sender adopts the document received by TxDOT as a duplicate original and adopts the signature produced by the receiving fax machine as the sender's original signature.*

Agency Name

TMLIRPProducer

Address

1821RutherfordLn.

City, State, Zip Code

Austin, TX78754

(800) 537 - 6655

Michael Kuykendall

07/21/2023

Authorized Agent's Phone Number

Authorized Agent Original Signature

Date

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that we collect about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

NOTES TO AGENTS:

Agents must provide all requested information then either email, fax, or mail this form as noted below.

Pre-printed limits are the minimum required; if higher limits are provided by the policy, enter the higher limit amount on an Acord Form.

To avoid work suspension, an updated insurance form must reach the address listed below **one business day prior** to the expiration date. **Insurance must be in force in order to perform any work.**

Binder numbers are not acceptable for policy numbers.

The certificate of insurance, once on file with the department, is adequate for subsequent department contracts provided adequate coverage is still in effect. Do not refer to specific projects/contracts on this form.

List the contractor's legal company name, including the DBA (doing business as) name as the insured. If a staff leasing service is providing insurance to the contractor/client company, list the staff leasing service as the insured and show the contractor/client company in parenthesis.

The Texas Department of Insurance (TDI) approved forms are the only acceptable proof of insurance for department contracts. The preferred Certificate of Insurance (COI) is on a 1560 or Acord form.

Over-stamping and/or over-typing entries on the certificate of insurance are not acceptable if such entries change the provisions of the certificate in any manner.

DO NOT COMPLETE THIS FORM UNLESS THE WORKERS' COMPENSATION POLICY IS ENDORSED WITH A WAIVER OF SUBROGATION IN FAVOR OF TXDOT.

The **SIGNATURE** of the agent is required.

CERTIFICATE OF INSURANCE REQUIREMENTS:

WORKERS' COMPENSATION INSURANCE:

The contractor is required to have Workers' Compensation Insurance if the contractor has any employees including relatives.

The word STATUTORY, under limits of liability, means that the insurer would pay benefits allowed under the Texas Workers' Compensation Law.

GROUP HEALTH or ACCIDENT INSURANCE is not an acceptable substitute for Workers' Compensation.

COMMERCIAL GENERAL LIABILITY INSURANCE:

MANUFACTURERS' or CONTRACTOR LIABILITY INSURANCE is not an acceptable substitute for Comprehensive General Liability Insurance or Commercial General Liability Insurance.

BUSINESS AUTOMOBILE POLICY:

If coverages are specified separately, they must be at least these amounts:

Bodily Injury	\$500,000 each occurrence
	\$100,000 each occurrence
Property Damage	\$100,000 for aggregate

PRIVATE AUTOMOBILE LIABILITY INSURANCE is not an acceptable substitute for a Business Automobile Policy.

Completed forms may be submitted by any of the following methods:

Email: CST_Insurance@txdot.gov
Fax: (512) 416-2536
Mail: Texas Department of Transportation
CST – Contract Processing
125 E. 11th Street
Austin, TX 78701-2483

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EXHIBIT E

ATTACHMENT A

Inasmuch as this project is on the Federal-Aid highway system, the following additional requirements as applicable with the Federal Highway Administration's Title 23, Code of Federal Regulations, § 710.105.

1. Any significant revision in the design or construction of the facility shall receive prior approval by the Texas Department of Transportation subject to concurrency by the FHWA.
2. Any change in the authorized use of real property interest shall receive prior approval by the Texas Department of Transportation subject to concurrence by the FHWA.
3. Real property interest shall not be transferred, assigned or conveyed to another party without prior Texas Department of Transportation approval subject to concurrence by the FHWA.
4. This agreement will be revocable in the event that the real property interest facility ceases to be used or is abandoned.