# PROJECT SUMMARY

For:

# EPA ENVIRONMENTAL AUTHORISATION
# FRIENDSHIP PORT DEVELOPMENT
## PLANTATION FRIENDSHIP, EAST BANK DEMERARA

**Prepared On:**

September 22, 2022

**Prepared By:**

CASE International

Contact: Mike Smith

msmith@casengr.com

**Developer:**

Diamond Shorebase, Inc.

36 Barima Avenue

Bel Air Park, Georgetown

Contact: Joseph Basil

Phone: +592-683-7923

## 1.0 INTRODUCTION

Diamond Property Management, Inc. (DPM) dba Diamond Shorebase Inc (DSB). has recently purchased ~ 6 acres of land in Plantation Friendship along the east bank of the Demerara River. DSB would like to develop the property as a dock facility to provide both covered berthing and heavy marine loading depot for platform supply vessels that service the oil and gas industry in this region. DSB is working with a civil engineering design firm to develop the plans and specifications for the project team.

The following brief together with attachments is submitted on behalf of DSB in order to request outline planning permission to use the land per the attached proposed site layout including all buildings, boat slips, heavy lift dock, concrete entry drives, utilities, fencing, etc. Also, DSB is simultaneously submitting an application to Guyana EPA seeking environmental authorization for same development along with other agencies listed in the permitting section below. Reference Figure 1 below for 3D graphical rendering of the proposed concept.

**Figure 1: 3D Rendering**

## 2.0 PROJECT SITE DESCRIPTION

### 2.1 PHYSICAL LOCATION

Friendship Port Development will be located approximately 9 miles south of Georgetown and 15 miles north of Cheddi Jagan Airport in Plantation Friendship, East Bank Demerara, bordering Plantation New Hope. The east end of the property is accessed off the East Bank Public Access Road at grid coordinates 06˚ 40’ 22” N, 58˚ 11’ 08’ W). The location of the Project vicinity map is shown in Figure 2.

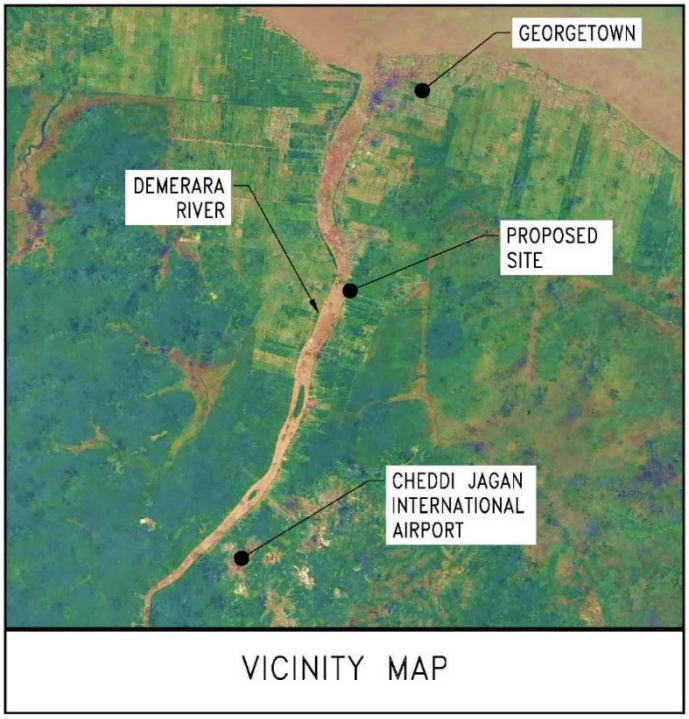



**Figure 2: Vicinity Map**

#### 2.1.1 ADJACENT AREAS AND BOUNDARIES

The undisputed DSB owned property being considered for port development is labeled as “Block O” and Block N” being part of Lots 1 to 5 situated on the west of the public road in Plantation Friendship and can be found in registered survey Plan No. 74314 by Jason O. Allen (SLS) dated February 6, 2020. The property is 5.72 acres in total with nearly 730ft of frontage on the Demerara River along its western edge. The east edge of the property borders a total of 17 residential lots for at total length of 630ft. The lots can be identified on registered Plan No. 9501 by S.S.R. Insanally (S.L.S) dated 20/October/1960.

There is direct access from the public road to the planned development on both the north and south sides of the residential. A nearly 75ft corridor provides access on the southeastern most edge of the property while a 35ft wide reserved right of way serves that same purpose on the northeastern most corner.

The property is currently industrial and has previously been cleared of most large vegetation. Predominant land use in adjacent areas is agricultural with some residential.

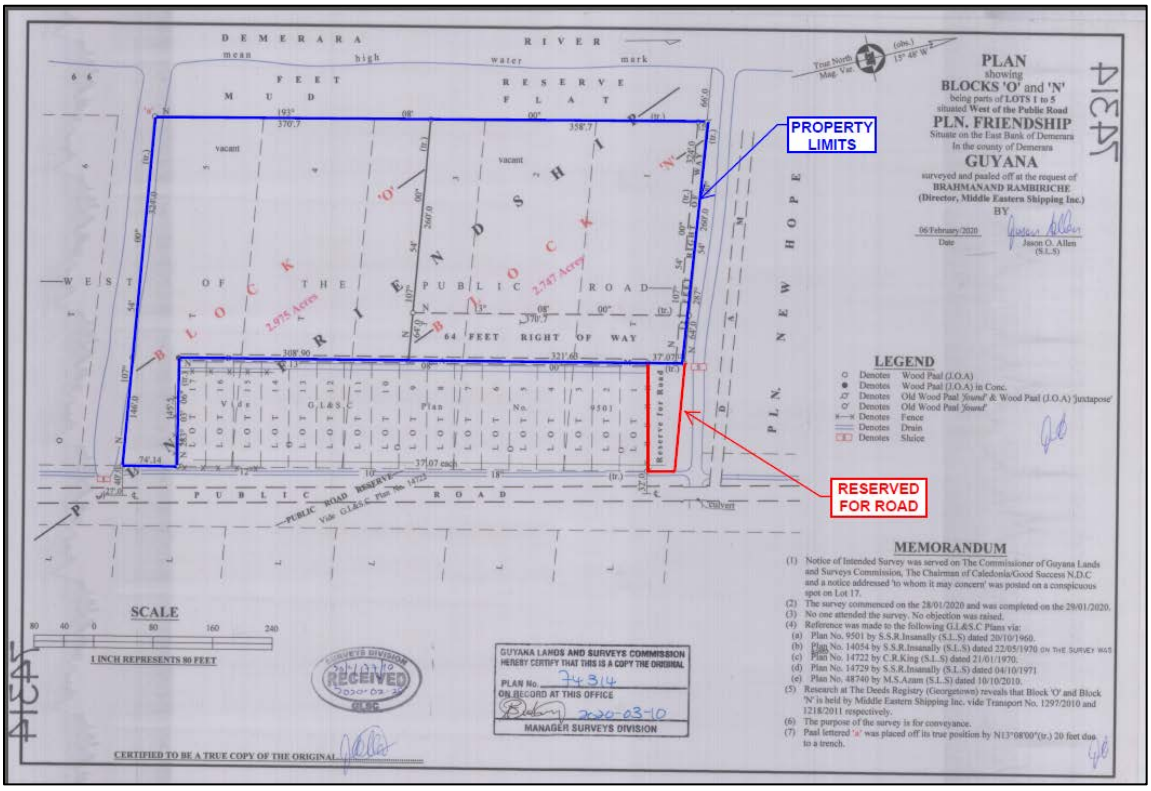



**Figure 3: Property Plat**

## 2.2 ALTERNATE FACILITLY LOCATIONS

The developer does not currently have any feasible or reasonable facility location options other than the site described within this summary.

## 2.3 BASELINE ENVIRONMENTAL CHARACTERISTICS

### 2.3.1 PHYSICAL

The landscape of the site along the eastern bank of the Demera River is relatively flat coastal plain terrain. The subsurface soil conditions on the site are expected to consist of a shallow layer of organics, with sandy & silty clay below. Groundwater is expected to beat approximately 1.5m below grade when not under tidal or flood influences. There are drainage ditches with

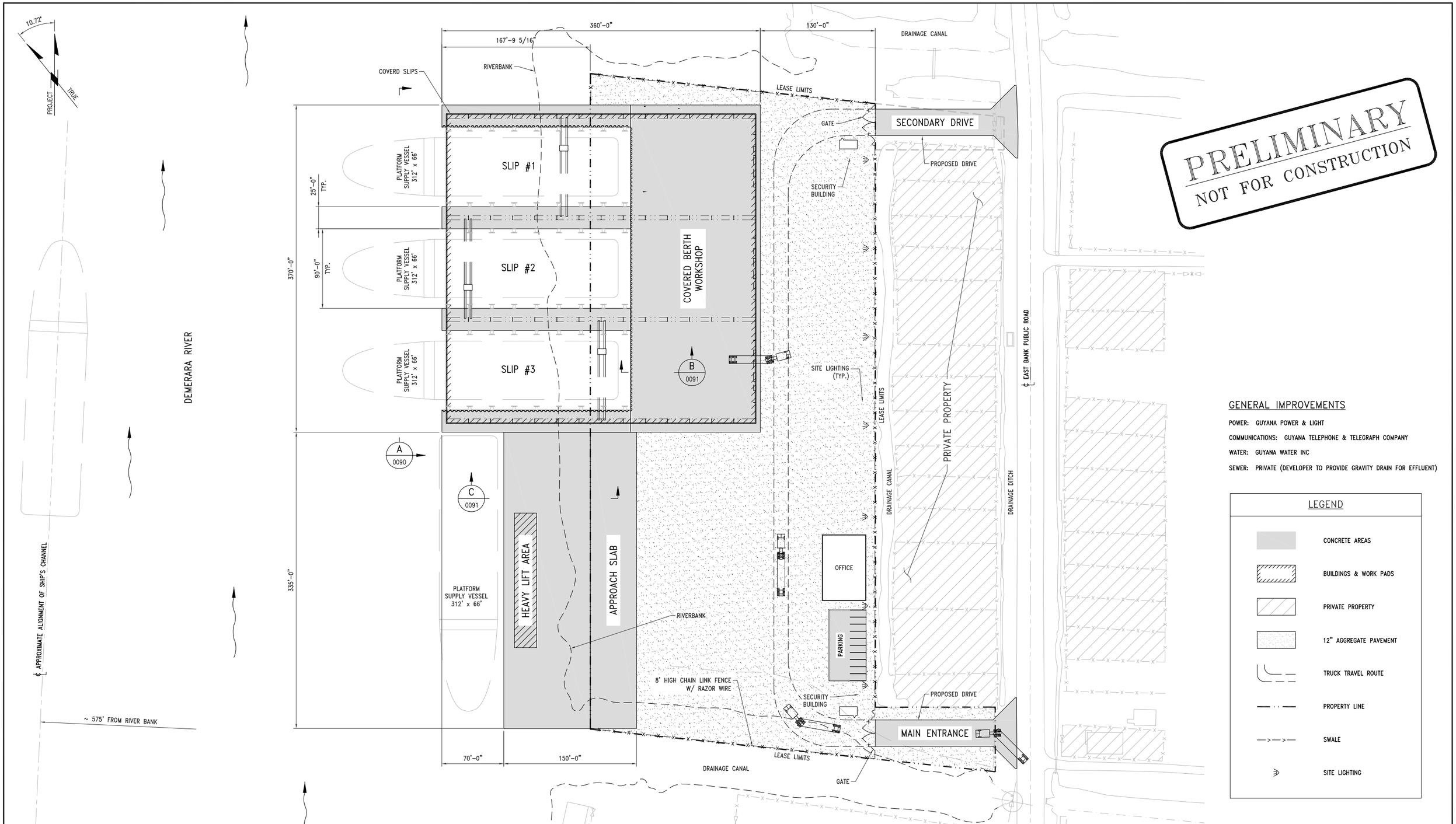
The receiving water for the Friendship Port Development site is the Demerara River. The roof structures for buildings will shed water through gutters and discharge either directly into the river or onto the site and travel via overland sheet flow to drainage canals on north and south side of the property. The high point of the site will be located such that it runs along the south edge of the Covered Berth area and slopes north and south. Reference attached drawing 22160-02-0003 for drainage plan.

### 2.3.2 ECOLOGICAL

The site has been cleared of existing vegetation & organics & therefore does not support much ecological diversity.

### 2.3.3 SOCIOECONOMICS

Like much of Georgetown & Guyana in general, the area near site is one of the fastest growing economies in the world. Due to the recent & extensive crude oil finds and production that have been ongoing since 2015. Nonetheless much of the local surrounding industry is agriculture based although many of the neighboring properties are being transformed to serve industrial needs associated with the growing economy.




PROPOSED SITE PLAN
SCALE: 1" = 100'

SCALE: 1" = 100' ON 11X17 PRINT
0' 10' 25' 50' 100' 200'

PRELIMINARY
NOT FOR CONSTRUCTION

## GENERAL IMPROVEMENTS

POWER: GUYANA POWER & LIGHT

COMMUNICATIONS: GUYANA TELEPHONE & TELEGRAPH COMPANY

WATER: GUYANA WATER INC

SEWER: PRIVATE (DEVELOPER TO PROVIDE GRAVITY DRAIN FOR EFFLUENT)

## LEGEND

- CONCRETE AREAS
- BUILDINGS & WORK PADS
- PRIVATE PROPERTY
- 12" AGGREGATE PAVEMENT
- TRUCK TRAVEL ROUTE
- PROPERTY LINE
- SWALE
- SITE LIGHTING

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| NO. | DATE | REVISION DESCRIPTION | BY | APPR. BY |
|---|---|---|---|---|
| 1 | 8-4-22 | ISSUED FOR CLIENT REVIEW | LB | MMS |

BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

PROPOSED SITE PLAN

| | | | | |
|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: B | DWG. NO. | 22160-02-0002 |
| DESIGNED BY: | MMS | | | REV. 1 |
| JOB NO.: | 22160 | | | |

## 3.0 DESCRIPTION OF PROPOSED DESIGN

### 3.1 DESIGN AND CONSRUCTION DRAWINGS

The proposed site development will consist of the following main elements which will service a growing fleet of platform supply vessels which operate in the area. Figure 3 below offers a general concept layout. Reference 22160-02-0002 Proposed Site Plan and other preliminary construction drawings for more detail, site position, vicinity maps for nearby towns, names or access roads, buildings, etc.

Covered Berth Area A

- 130,000sqft Covered Building Area
- 3 Boat Slips (90ft Width x 220ft Length x 23ft depths)
- 25ton Overhead Cranes in each Slip
- Water, Power, Fuel, and Drilling Fluids Loading Capabilities

Heavy Lift Dock B

- 300ft x 100ft Concrete Dock
- Heavy Crane Capacity
- 23ft Water Depth
- 3 Acres of Laydown Area

Office Building C

- 4000sqft Building
- Parking Lot
- Administrative Office
- Locker Rooms
- Logistic Support
- Private Septic Treatment System

Security Guard Houses D

- Site Access Control Gates
- Security Personnel Station

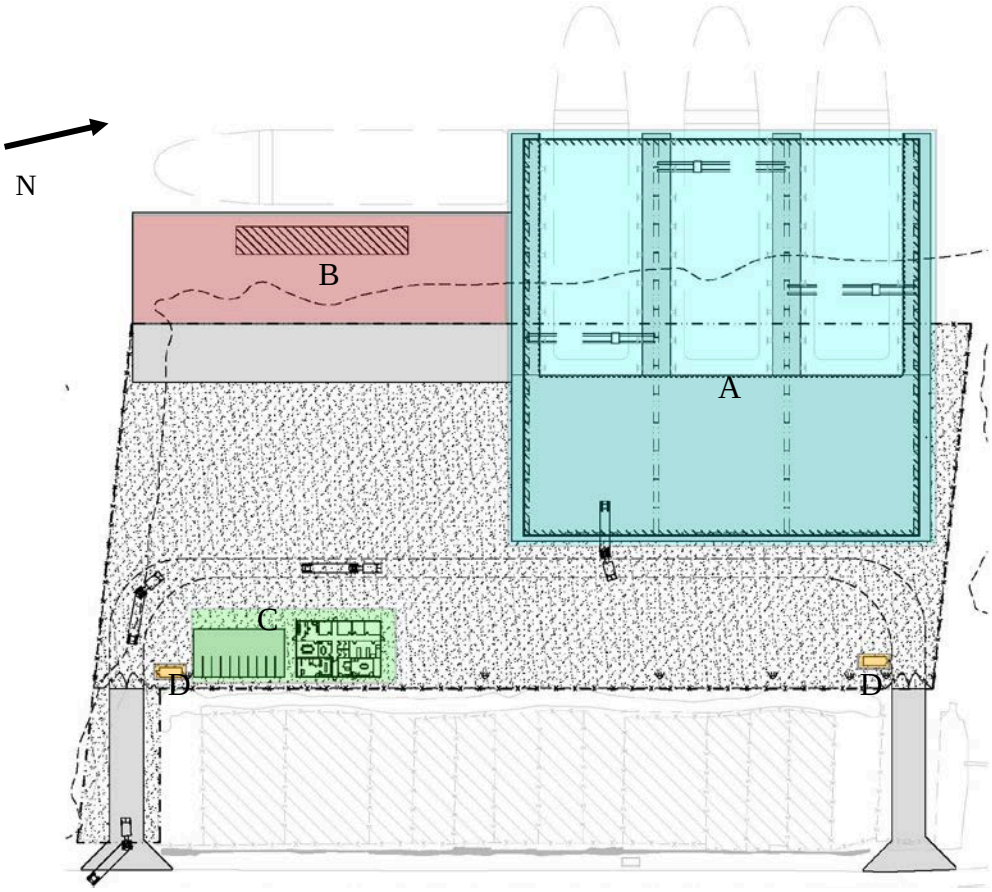


**Figure 4: Conceptual Site Layout**

CONSTRUCTION PLANS FOR:

BLUE WATER GROUP

# BLUEWATER GUYANA
# FRIENDSHIP PORT DEVELOPMENT

FRIENDSHIP, GUYANA

PREPARED BY:

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## CIVIL / SITE :

| DWG. REV DATE | DWG. REV. | DWG. NO. | DWG. TITLE |
|---|---|---|---|
| 8-4-22 | A | 22160-02-0001 | EXISTING SITE PLAN |
| 8-4-22 | A | 22160-02-0002 | PROPOSED SITE LAYOUT |
| 8-4-22 | A | 22160-02-0003 | GRADING PLAN |
| 8-4-22 | A | 22160-02-0004 | UTILITY PLAN |
| 8-4-22 | A | 22160-02-0090 | PROPOSED SITE SECTION |
| 8-4-22 | A | 22160-02-0091 | PROPOSED SITE SECTIONS |

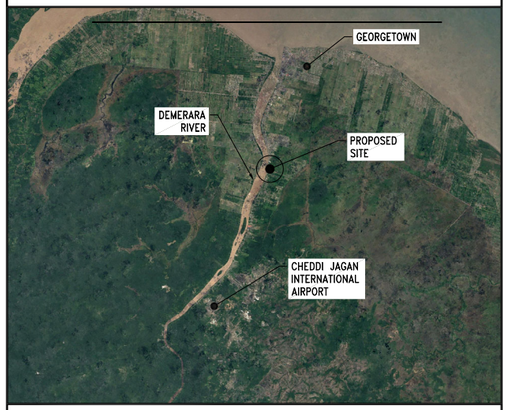
## BUILDINGS:

| DWG. REV DATE | DWG. REV. | DWG. NO. | DWG. TITLE |
|---|---|---|---|
| 8-4-22 | A | 22160-02-0200 | COVERED BERTH WORKSHOP PLAN |
| 8-4-22 | A | 22160-02-0201 | COVERED BERTH WORKSHOP SECTIONS & ELEVATIONS |
| 8-4-22 | A | 22160-02-0202 | COVERED BERTH WORKSHOP SECTIONS & ELEVATIONS |
| 8-4-22 | A | 22160-02-0210 | OFFICE BUILDING FLOOR PLAN |
| 8-4-22 | A | 22160-02-0211 | OFFICE ELEVATIONS |
| 8-4-22 | A | 22160-02-0220 | OFFICE BUILDING ELEVATIONS |

## PROJECT CONTACTS:

ENGINEER OF RECORD:
MIKE SMITH, P.E.
CIVIL AND STRUCTURAL ENGINEERS INC.
EMAIL: MSMITH@CASENGR.COM
PH: 337-232-3336

## VICINITY MAP




## DESIGN DETAILS

STATE: TEXAS

COUNTY: JEFFERSON

DRAINAGE DISTRICT: DISTRICT NO. 6

FEMA FIRM COMMUNITY PANEL NUMBER: 480385 0165 C
(REVISED NOVEMBER 20, 1991)

FLOOD ZONE: ZONE C

DESIGN CODE: IBC 2015 EDITION

BASIC WIND SPEED: 140MPH

RISK CATEGORY: II

WIND EXPOSURE CATEGORY: C

GEOTECHNICAL REPORT: "GEOTECHNICAL ENGINEERING REPORT, PROJECT PEPPER, AIR PRODUCTS AND CHEMICALS, INC., BEAUMONT TEXAS", BY TOLUNAY-WONG ENGINEERS, INC.: REPORT NO 117798; DATED SEPTEMBER 15, 2020.

GENERAL NOTES:

ALL DRAWINGS INDICATED ON THE FOLLOWING DRAWINGS ARE INTENDED FOR 11X17 SHEETS.

WHEN PRINTED ON ANSI D SHEETS (22X34), DRAWINGS ARE 2X THE INDICATED SCALE.

## ACRONYMS & SYMBOLS

AFF = ABOVE FINISHED FLOOR
BLDG = BUILDING
BOS = BOTTOM OF STEEL
CLR= CLEAR
CNTR = CENTER
COL = COLUMN
CONC = CONCRETE
DIM = DIMENSION
DWG = DRAWING
EP = ELECTRIC PANEL
EB = ELECTRIC BOX
EL = ELEVATION
EW = EACH WAY
FH = FIRE HYDRANT
FFE = FINISH FLOOR ELEVATION
HP = HIGH POINT
HB = HOSE BIB
INV = INVERT
LP = LOW POINT
LP = LIGHT POLE
OPP = OPPOSITE
PP = POWER POLE
RCP = REINFORCED CONCRETE PIPE
SL = SEWER LIFT
STL = STEEL
TOC = TOP OF CONCRETE
TOS = TOP OF STEEL
TP = TELEPHONE PEDESTAL
TRANS = TRANSFORMER
WV = WATER VALVE

= BENCHMARK/DATUM

SECTION CALLOUT

A
---
SECTION NO.
DWG. NO.



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BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

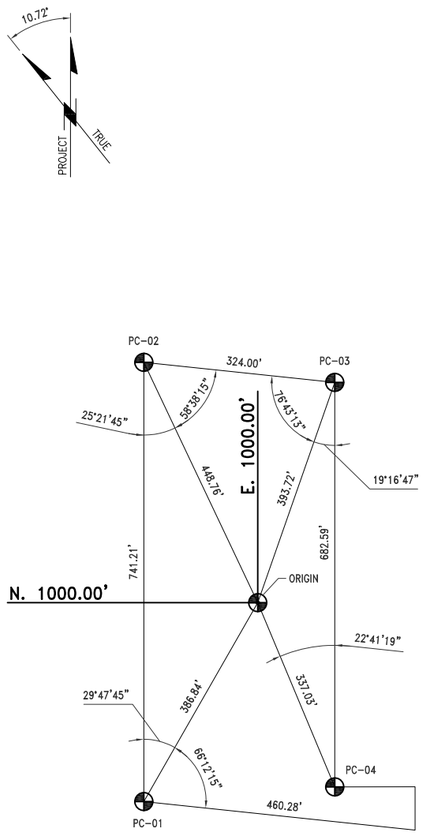
COVER SHEET

| | |
|---|---|
| DRAWN BY: | LB |
| DESIGNED BY: | MMS |
| JOB NO.: | 22160 |

SIZE: B

DWG. NO. 22160-02-0000

REV. A







PROJECT ORIGIN LAYOUT

SCALE: NTS
DIMENSIONS IN FEET U.N.O.

## PROPERTY COORDINATES:

| | | |
|---|---|---|
| PC-01 : | N. 664'-3 5/8" | (PROJECT COORDINATE SYSTEM) |
| | E. 807'-9 5/16" | (PROJECT COORDINATE SYSTEM) |
| PC-02 : | N. 1405'-6 1/8" | (PROJECT COORDINATE SYSTEM) |
| | E. 807'-9 5/16" | (PROJECT COORDINATE SYSTEM) |
| PC-03 : | N. 1371'-7 3/4" | (PROJECT COORDINATE SYSTEM) |
| | E. 1130'-0" | (PROJECT COORDINATE SYSTEM) |
| PC-04 : | N. 689'-0 5/8" | (PROJECT COORDINATE SYSTEM) |
| | E. 1130'-0" | (PROJECT COORDINATE SYSTEM) |

## NOTE:

ALL HORIZONTAL CONTROLS ARE BASED ON A LOCAL COORDINATE SYSTEM DEFINED ON THIS SHEET ASSUMING THE EASTERN & WESTERN PROPERTY BOUNDARIES RUNS PROJECT NORTH/SOUTH.

ALL VERTICAL ELEVATIONS ARE BASED ON GEORGETOWN DATUM (G.D.).

## SYMBOL LEGEND

N: 1000.00
E: 1000.00 — PROJECT NORTHING AND EASTING COORDINATE

PRELIMINARY
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EXISTING SITE PLAN

SCALE: 1" = 100'

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FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

EXISTING SITE PLAN & PROJECT CONTROLS

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: | DWG. NO. | 22160-02-0001 | REV. 1 |
| DESIGNED BY: | MMS | B | | | |
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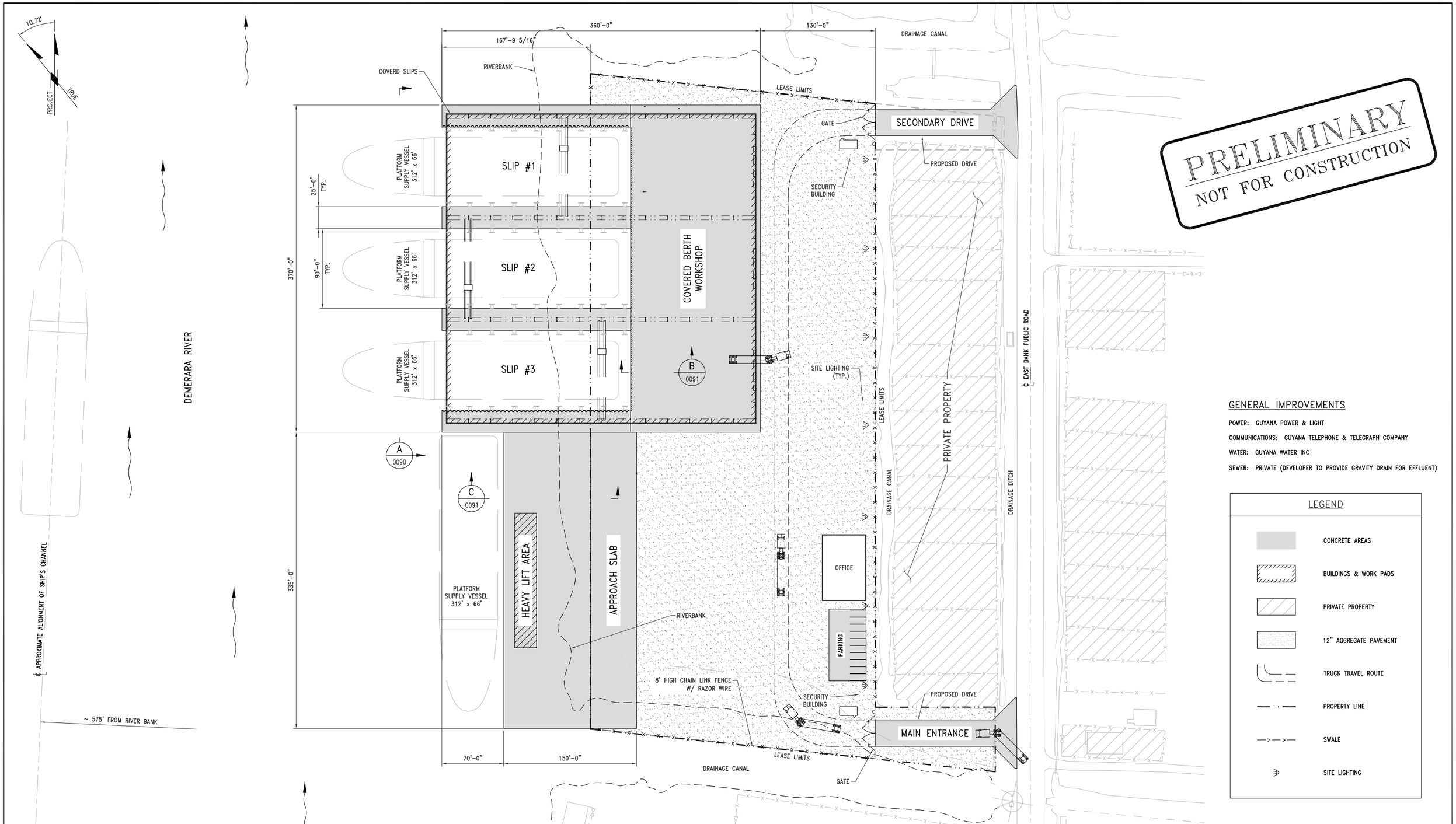


PRELIMINARY
NOT FOR CONSTRUCTION

## GENERAL IMPROVEMENTS

POWER: GUYANA POWER & LIGHT

COMMUNICATIONS: GUYANA TELEPHONE & TELEGRAPH COMPANY

WATER: GUYANA WATER INC

SEWER: PRIVATE (DEVELOPER TO PROVIDE GRAVITY DRAIN FOR EFFLUENT)

## LEGEND

- CONCRETE AREAS
- BUILDINGS & WORK PADS
- PRIVATE PROPERTY
- 12" AGGREGATE PAVEMENT
- TRUCK TRAVEL ROUTE
- PROPERTY LINE
- SWALE
- SITE LIGHTING

## PROPOSED SITE PLAN

SCALE: 1" = 100'

SCALE: 1" = 100' ON 11X17 PRINT

0' 10' 25' 50' 100' 200'

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BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

PROPOSED SITE PLAN

| | | | | |
|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: B | DWG. NO. | 22160-02-0002 |
| DESIGNED BY: | MMS | | | REV. 1 |
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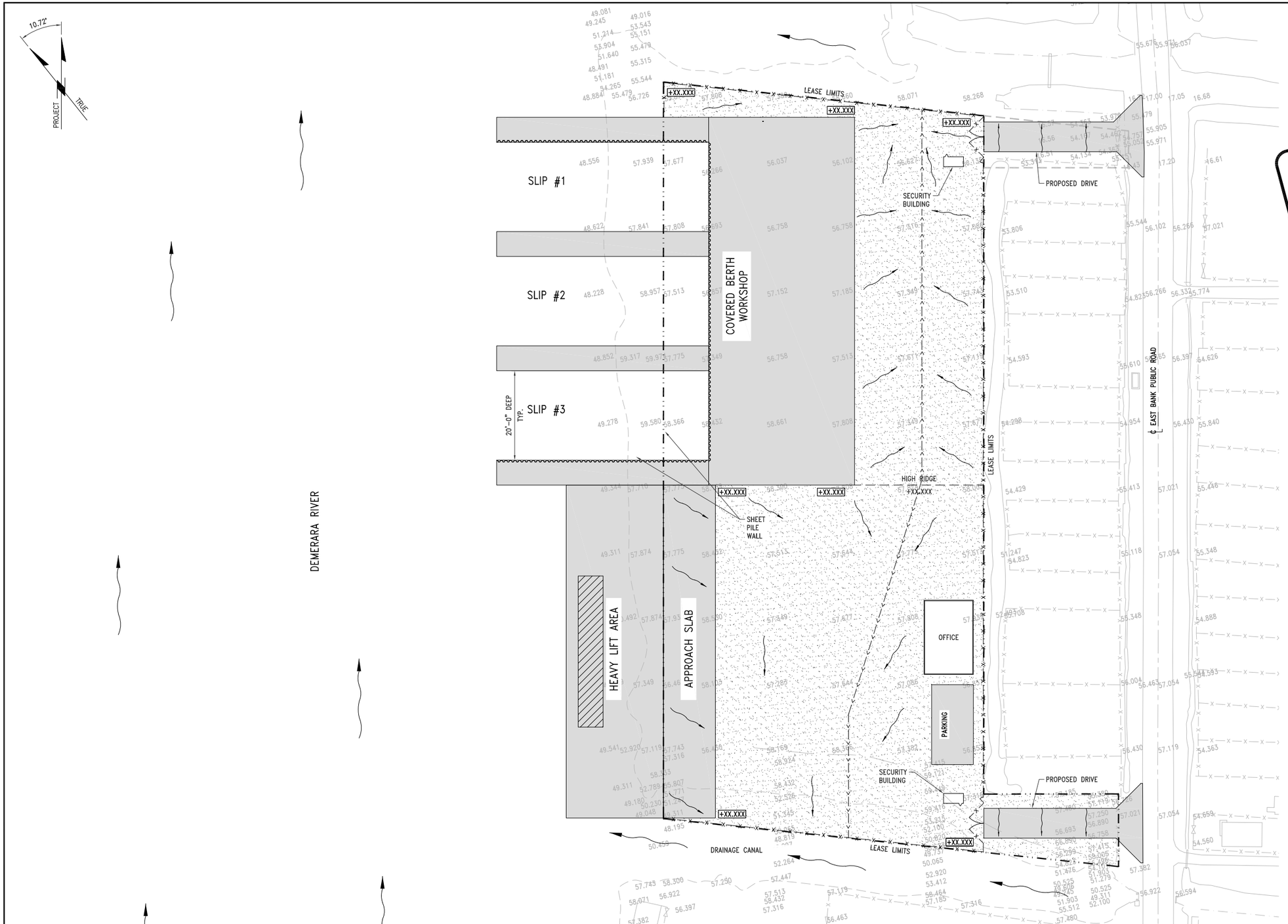


GRADING PLAN
SCALE: 1" = 100'

PRELIMINARY
NOT FOR CONSTRUCTION

NOTE:
ALL VERTICAL ELEVATIONS ARE IN DECIMAL FEET BASED ON GEORGETOWN DATUM.

LEGEND

| | |
|---|---|
| — — — | HIGH RIDGE |
| +53.150 | PROPOSED ELEVATION |
| DRAIN +54.300 | BOTTOM OF DRAIN |
| INVERT +53.150 | INVERT ELEVATION |
| FL +53.150 | FLOWLINE ELEVATION |
| 51.969' | EXISTING ELEVATIONS |

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GRADING PLAN

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| DRAWN BY: | LB | SIZE: | DWG. NO. | 22160-02-0003 | REV. 1 |
| DESIGNED BY: | MMS | B | | | |
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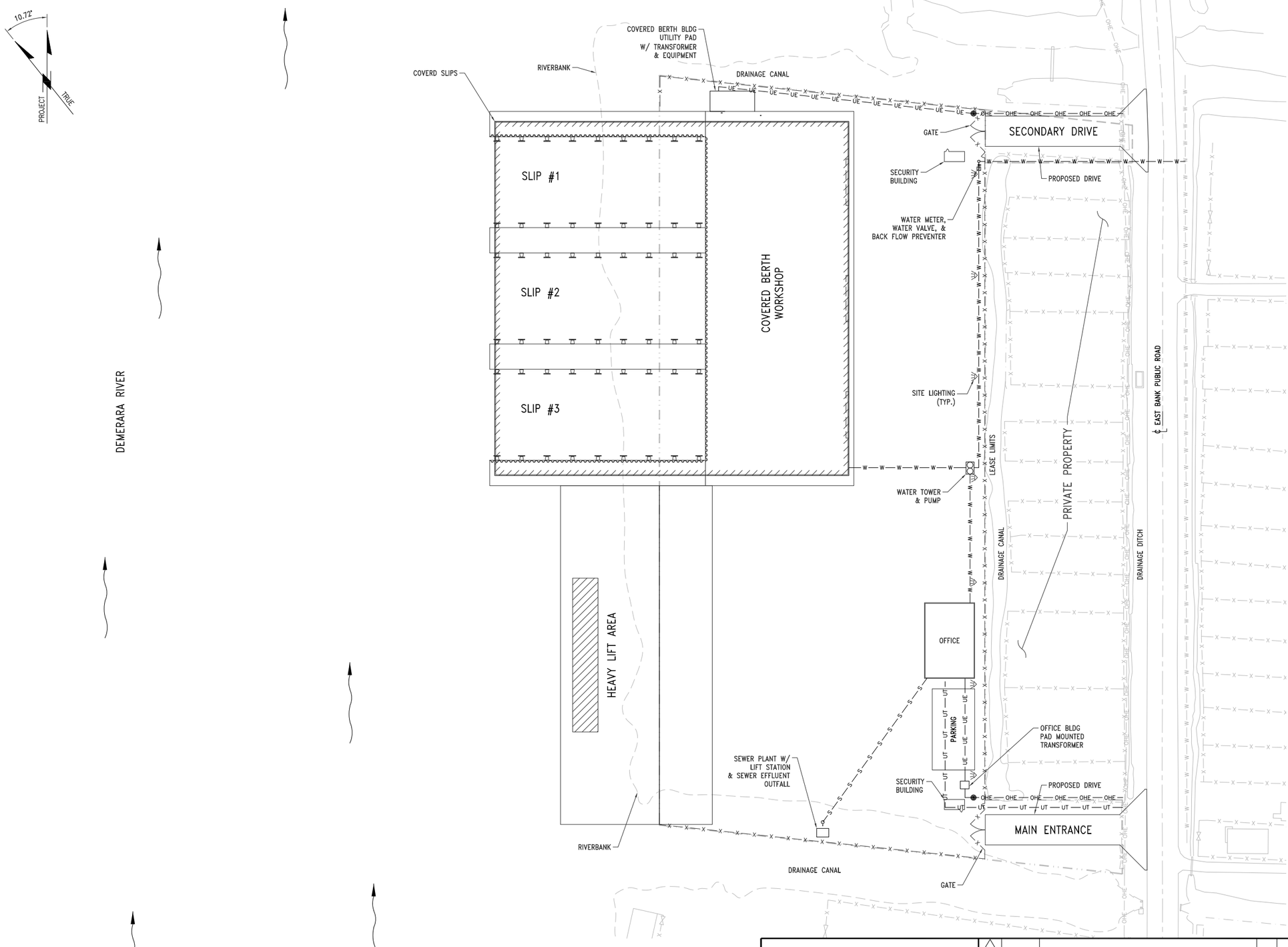


PRELIMINARY
NOT FOR CONSTRUCTION

## GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE ALL UTILITY WORKS & UTILITY CONDUITS WITH THE UTILITY PROVIDERS
2. ALL CONDUITS SHALL BE STUBBED ABOVE GROUND BY 2 FEET AT THE POINTS OF TERMINATION & BE CAPPED.
3. GUYANA WATER INCORPORATED (GWI) TO INSTALL 2"ø WATER MAIN & 2"ø WATER METER AS SHOWN ON THE PLAN.
4. GUYANA POWER & LIGHT (GPL) TO INSTALL UTILITY POLES & THE OVERHEAD ELECTRIC SERVICE.
5. GUYANA TELEPHONE AND TELEGRAPH COMPANY (GTT) TO INSTALL DATA LINES ALONG THE GPL UTILITIES POLES.
6. CONTRACTOR TO SET & MOUNT OWNER PROVIDED PAD MOUNTED TRANSFORMER.
7. GPL TO INSTALL POLE MOUNTED SINGLE PHASE 120/240 VOLT SERVICE.
8. WATER SHALL NOT RUN THROUGH UTILITY PULL BOX BUT ALONGSIDE IT.
9. FOR WATER & AIR LINES REFERENCE P101.1 & P300.1 FOR DETAILS & SPECIFICATIONS

## LEGEND

- UE — UE — UNDERGROUND ELECTRICAL CONDUITS
- UU — UU — UNDERGROUND UTILITIES (QTY. & TYPE PER PLAN.)
- W — W — W — UNDERGRPIMD WATER
- OHE — OHE — OVERHEAD ELECTRICAL
- S — S — S — UNDERGROUND SEWER
- UT — UT — UNDERGROUND DATA
- WM — WATER METER (REF. DETAIL DWG. C-013)
- N — BACKFLOW PREVENTER (REF. DETAIL)
- WATER VALVE
- PB — UTILITY PULL BOX
- ELECTRICAL STUB UP FOR LIGHT POLE (STUB UP 2' ABOVE FINISHED GRADE & CAP)
- STUB UP ALL UTILITIES 2' ABOVE GRADE & CAP.
- LIGHT POLE
- POWER/DATA POLE

UTILITY PLAN
SCALE: 1" = 100'

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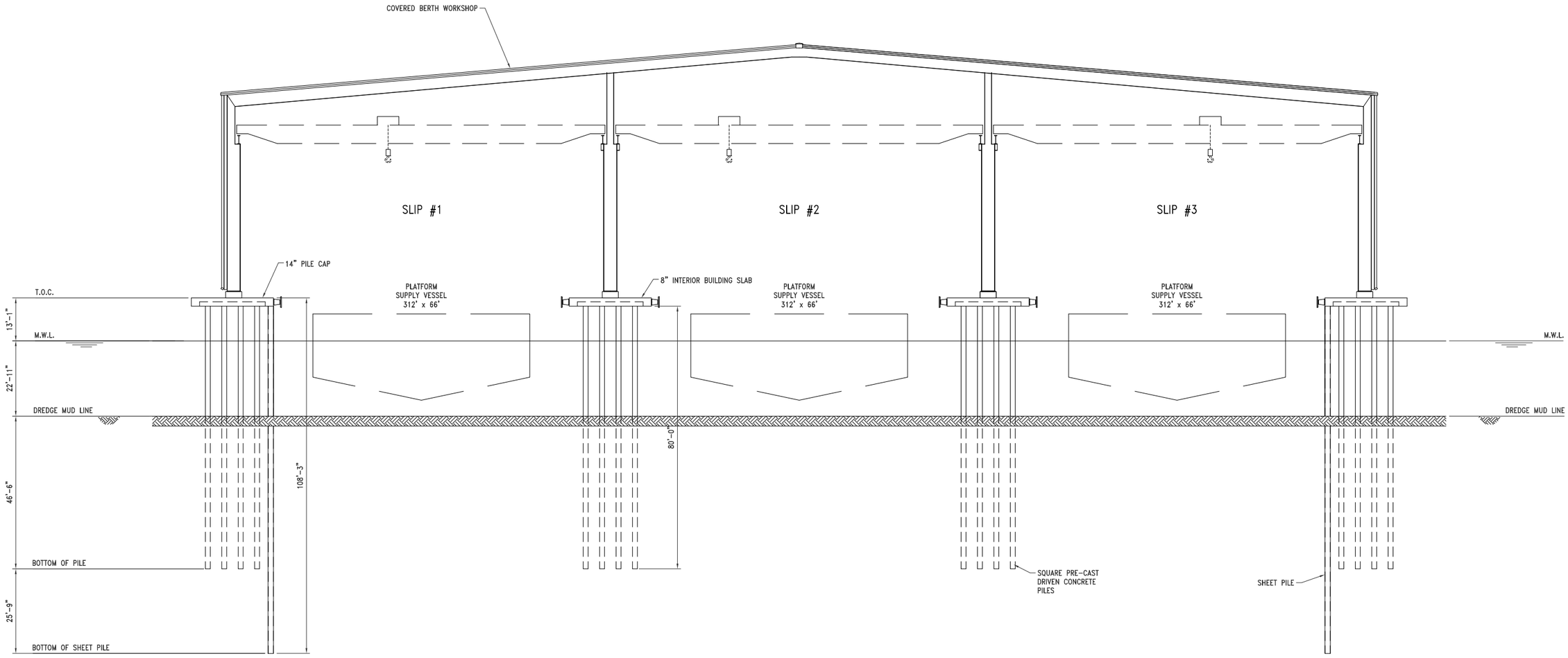
FRIENDSHIP, GUYANA

UTILITY PLAN

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: B | DWG. NO. | 22160-02-0004 | REV. 1 |
| DESIGNED BY: | MMS | | | | |
| JOB NO.: | 22160 | | | | |




SECTION A
1/32"= 1'-0"
0002

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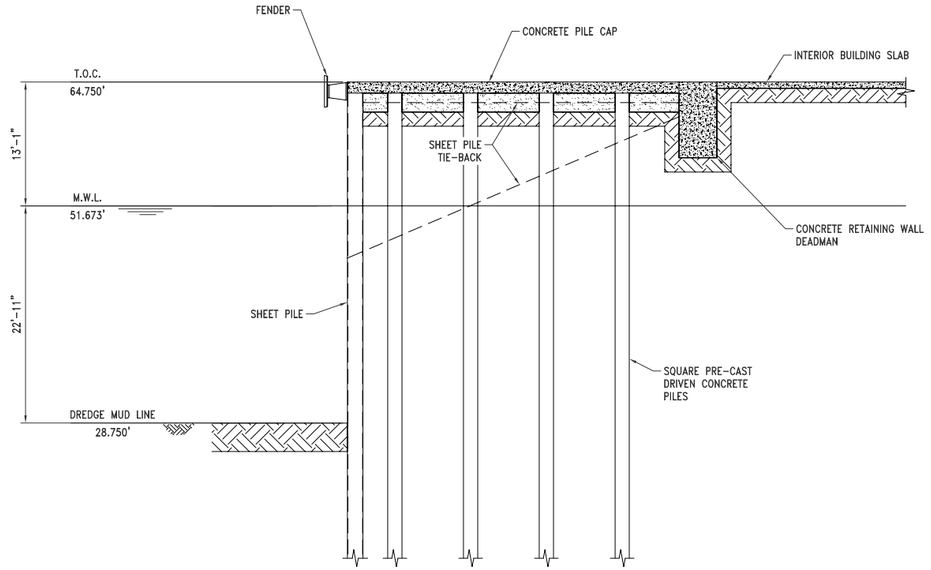
FRIENDSHIP, GUYANA

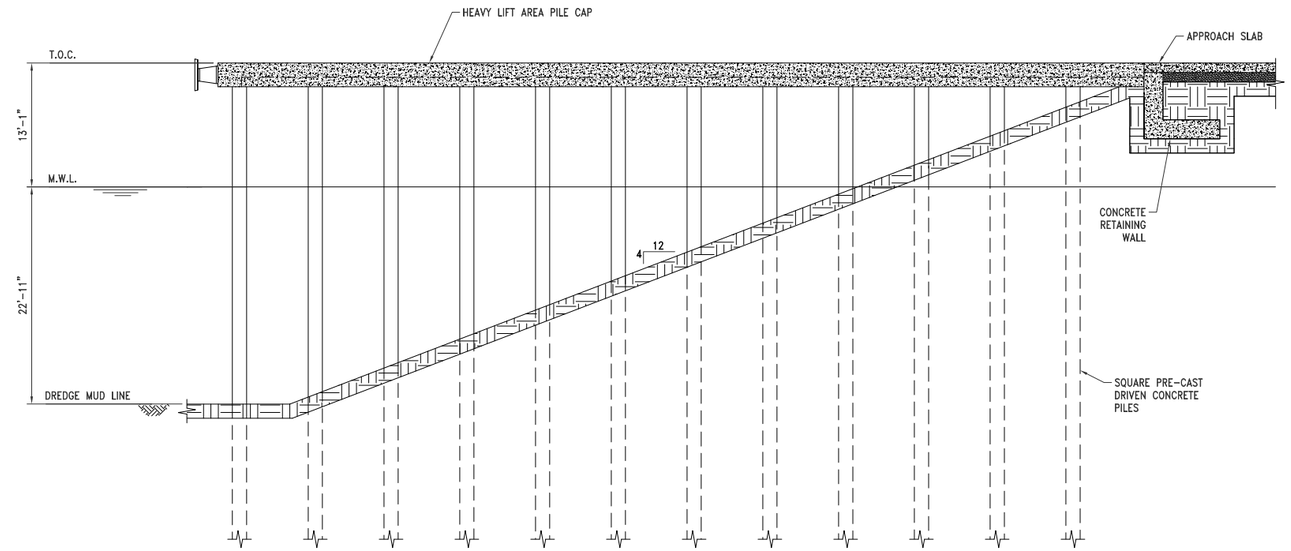
PROPOSED SITE SECTION

| | |
|---|---|
| DRAWN BY: | LB |
| DESIGNED BY: | MMS |
| JOB NO.: | 22160 |

SIZE: B
DWG. NO.: 22160-02-0090
REV.: 1




SECTION B
1/32"= 1'-0"
0002




SECTION C
1/32"= 1'-0"
0002

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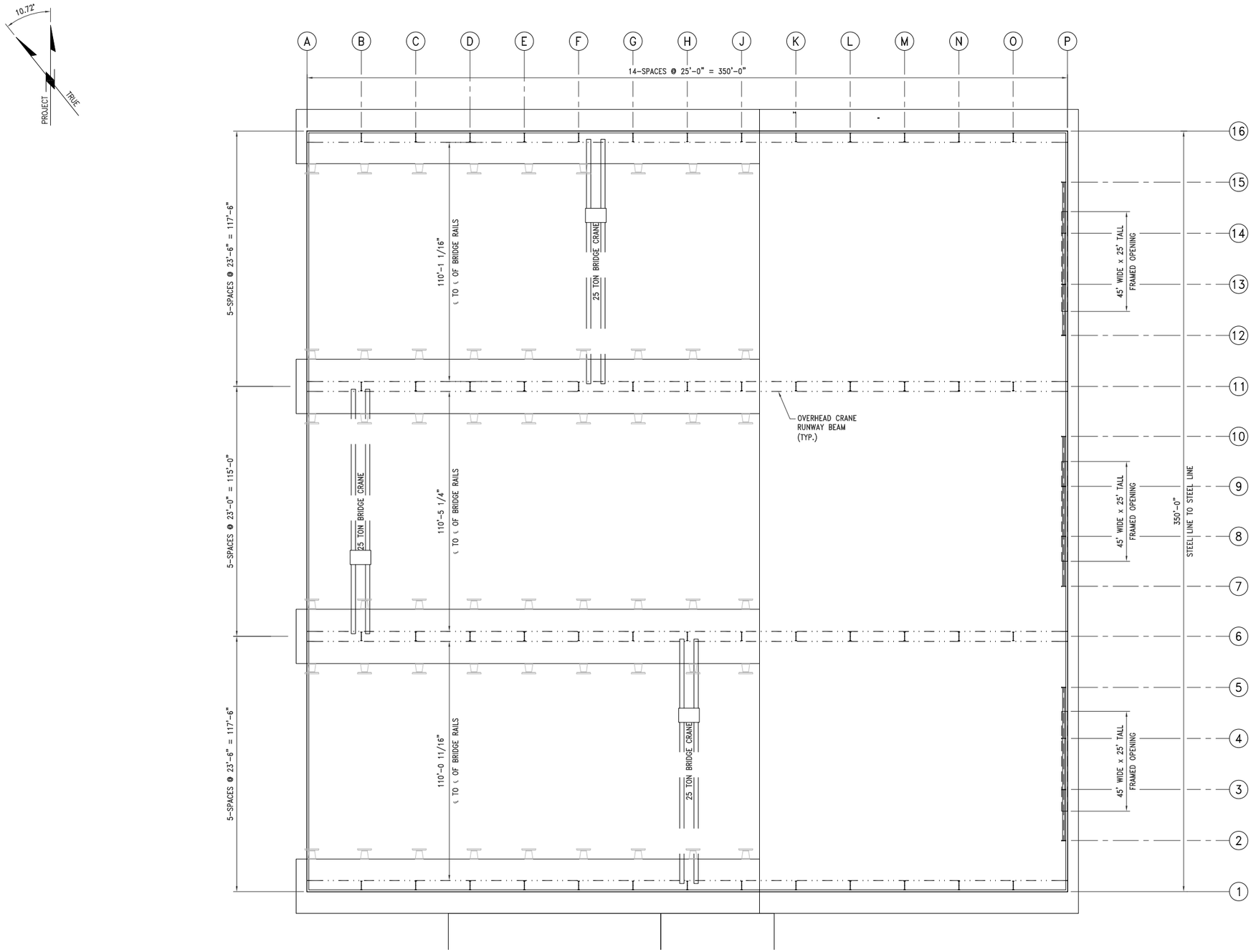
PROPOSED SITE SECTIONS

| | |
|---|---|
| DRAWN BY: | LB |
| DESIGNED BY: | MMS |
| JOB NO.: | 22160 |

SIZE: B

DWG. NO. 22160-02-0091

REV. 1




PLAN VIEW
SCALE: 1" = 50'

## CONSTRUCTION NOTES:

ALL DIMENSIONS ARE PULLED FROM STEEL LINE OF THE METAL BUILDING, UNLESS NOTED OTHERWISE.

STEEL LINE IS CONSIDERED TO BE OUTSIDE FACE OF GIRTS.

ALL BRIDGE CRANES SHALL HAVE A MINIMUM 10m (32'-10") CLEAR HOOK HEIGHT.

## METAL BUILDING STRUCTURE DESIGN NOTES:

THE BUILDING SHALL BE A PRE-ENGINEERED METAL BUILDING DESIGNED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES, AND THESE PLANS. THE CONTRACTOR SHALL SUBMIT 2 SETS OF PLANS TO CASE, INC., STAMPED BY A LICENSED ENGINEER. THE BUILDING SHALL BE DESIGNED FOR A 120 MPH WIND LOAD (EXPOSURE C,) IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2012 EDITION.

THE BUILDING SHALL BE DESIGNED TO SUPPORT A 1 PSF COLLATERAL LOAD OVER THE ENTIRE AREA AND A COLLATERAL MECHANICAL/ELECTRICAL LOAD OF 3 PSF.

THE BUILDING SHALL BE DESIGNED TO SUPPORT CRANES AS SHOWN ON THE DRAWING, THE BUILDING MANUFACTURER SHALL AND SUPPLY ALL BRIDGE RUNWAY BEAMS AND RAILS.

THE METAL BUILDING SUPPLIER SHALL SUPPLY THE WALLS AND ROOF AS PER THE FINISH TABLE ON THIS SHEET. ALL STEEL BEAMS, COLUMNS, AND COLD FORMED SHALL BE PRIMED. ALL HARDWARE SHALL BE BLACK EXCEPT ANCHOR BOLTS WHICH SHALL BE HOT DIPPED GALVANIZED.

THE METAL BUILDING COLUMNS SHALL BE LOCATED AS SHOWN ON THE FLOOR PLANS.

THE METAL BUILDING GIRTS SHALL BYPASS THE COLUMNS ON THE SIDE WALLS AND BE FLUSH WITH THE COLUMNS ON THE END WALLS.

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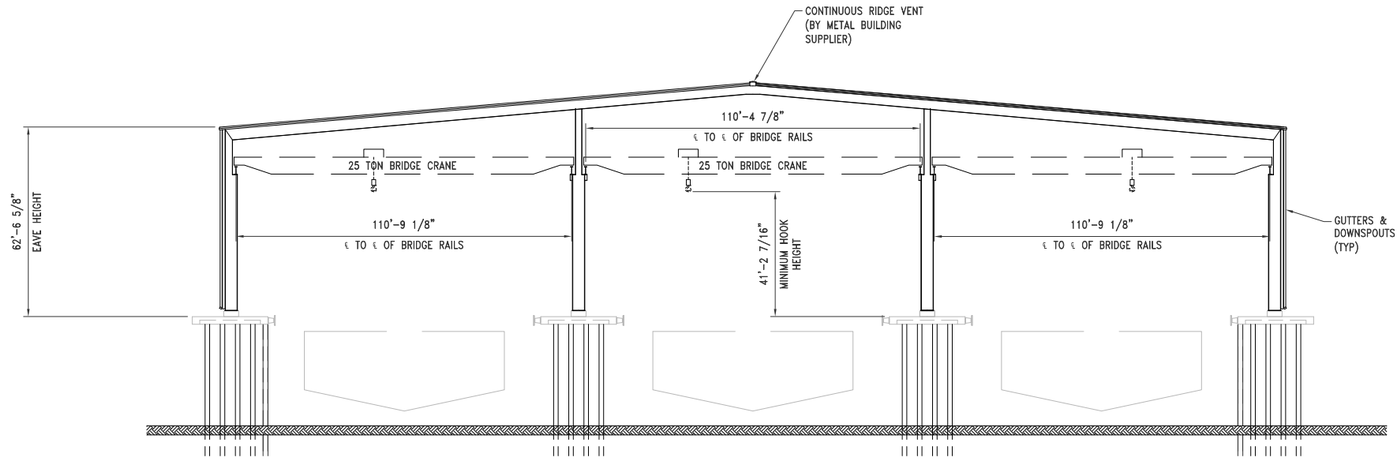
BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

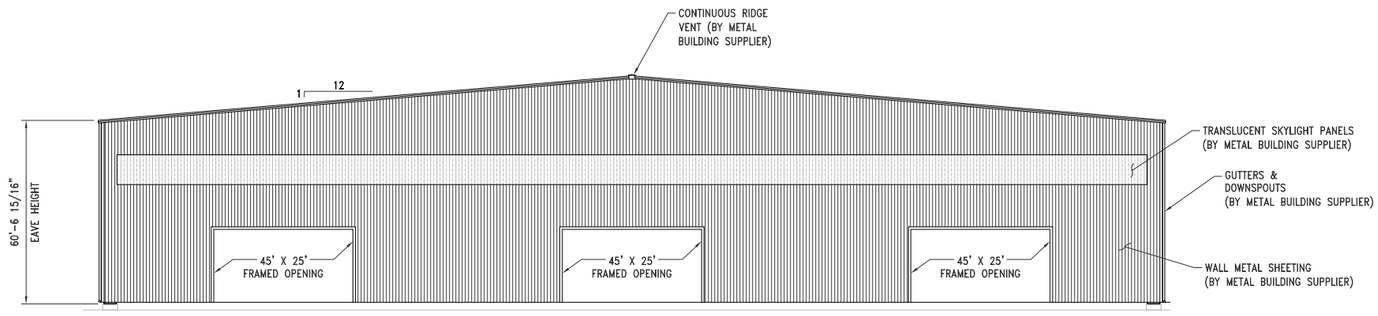
COVERED BERTH WORKSHOP
PLAN VIEW

| | | | | |
|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: B | DWG. NO. | REV. 1 |
| DESIGNED BY: | MMS | | 22160-02-0200 | |
| JOB NO.: | 22160 | | | |




WEST FACE ELEVATION

SCALE: 1" = 50'




EAST FACE ELEVATION

SCALE: 1" = 50'

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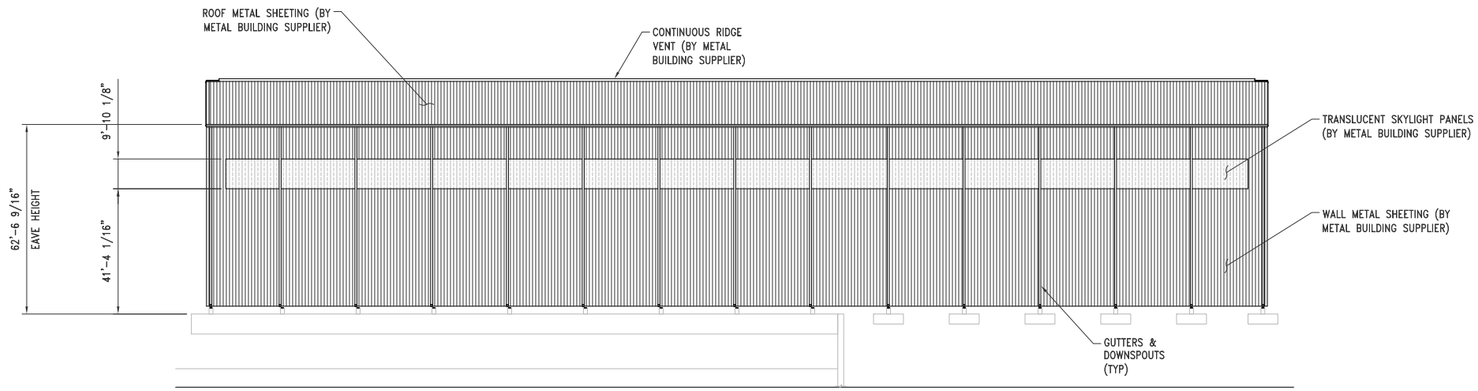
BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

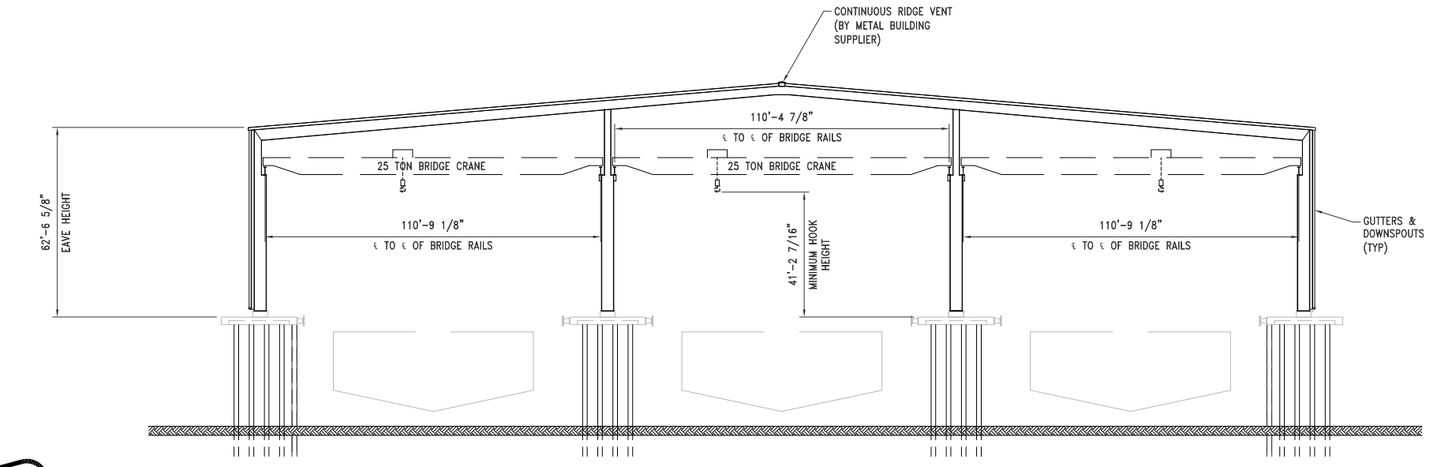
COVERED BERTH WORKSHOP
SECTIONS & ELEVATIONS (SHEET 1 OF 2)

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: B | DWG. NO. | 22160-02-0201 | REV. 1 |
| DESIGNED BY: | MMS | | | | |
| JOB NO.: | 22160 | | | | |




SOUTH FACE ELEVATION (NORTH SIMILAR)

SCALE: 1" = 50'




TYPICAL CROSS SECTION

SCALE: 1" = 50'

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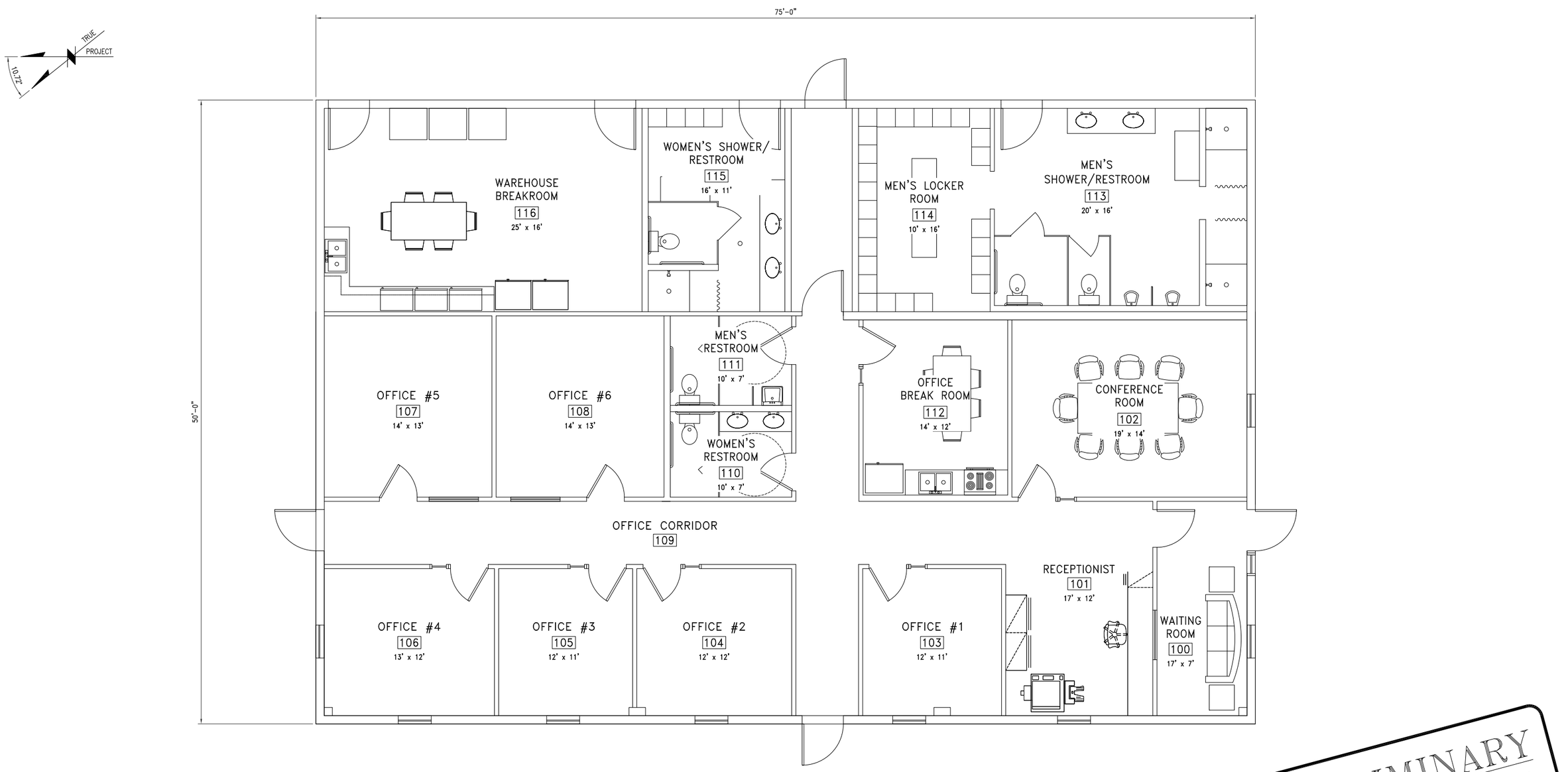
BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

COVERED BERTH WORKSHOP
SECTIONS & ELEVATIONS (SHEET 1 OF 2)

| | |
|---|---|
| DRAWN BY: | LB |
| DESIGNED BY: | MMS |
| JOB NO.: | 22160 |

SIZE: B | DWG. NO. 22160-02-0202 | REV. 1




OFFICE BUILDING FLOOR PLAN
SCALE: 1/8" = 1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

**GENERAL NOTES:**

1. ALL FINISHES REFERENCE PLAN NORTH.
2. USE WATER RESISTANT GYP. BOARD IN ALL WET AREAS. TYPE x GYP. BOARD SHALL BE USED IN ALL OTHER APPLICATIONS.
3. LOWER AND UPPER CABINETS TO BE PAINTED TO MATCH OWNER'S SAMPLE.
4. GRANITE OR MARBLE COUNTER TOPS SHALL BE INSTALLED IN ROOMS 103, 108 & 109.
5. LAMINATE COUNTER TOPS SHALL BE INSTALLED IN ROOMS 112, 115 & 116.
6. ALL BATHROOM PARTIONS SHALL BE LAMINATE UNLESS NOTED OTHERWISE.
7. ALL BLOCK WALLS FOR SHOWERS SHALL BE WATERPROOFED AND PAINTED.
8. ALL EXTERIOR BLOCK WALLS SHALL BE SEALED AND PAINTED PER SPECIFICATIONS.

## FINISH MATERIAL LIST

FLOORS
F-1 450mm X 450 mm CERAMIC TILE
F-2 EXPOSED CONCRETE

BASES
B-1 VINYL (COVE)

WALLS
W-1 PAINTED PLASTER OVER CONCRETE MASONRY UNITS (CMU)
W-2 PAINTED TYPE "X" GYPSUM DRY WALL
W-3 PAINTED "WATER RESISTANT" F.R.P. COVERED GYPSUM DRY WALL
W-4 EXPOSED METAL BUILDING COMPONENTS

CEILINGS
C-1 SUSPENDED ACOUSTICAL TILE
C-2 PAINTED "WATER RESISTANT" F.R.P. COVERED GYPSUM DRY WALL
C-3 PAINTED TYPE "X" GYPSUM DRY WALL
C-4 EXPOSED M.B. COMPONENTS

HARDWARE SET
COORDINATE WITH OWNER

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BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

OFFICE BUILDING FLOOR PLAN

| | |
|---|---|
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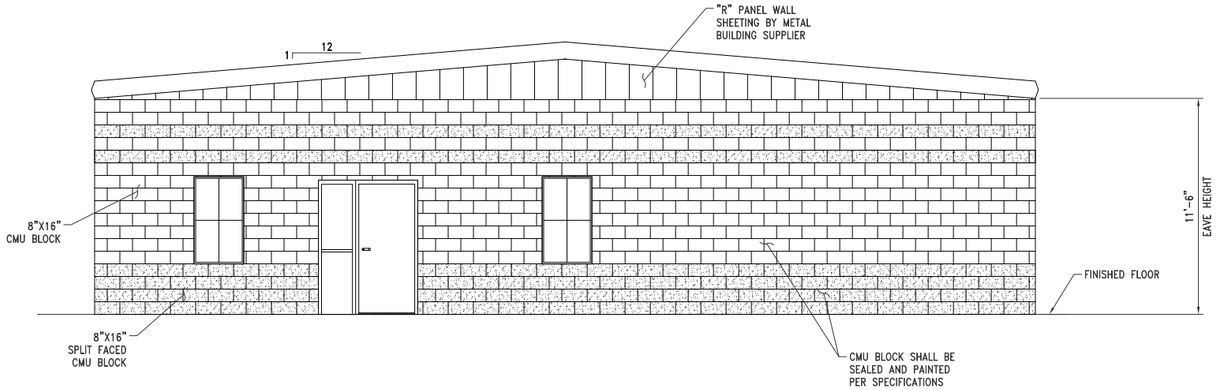
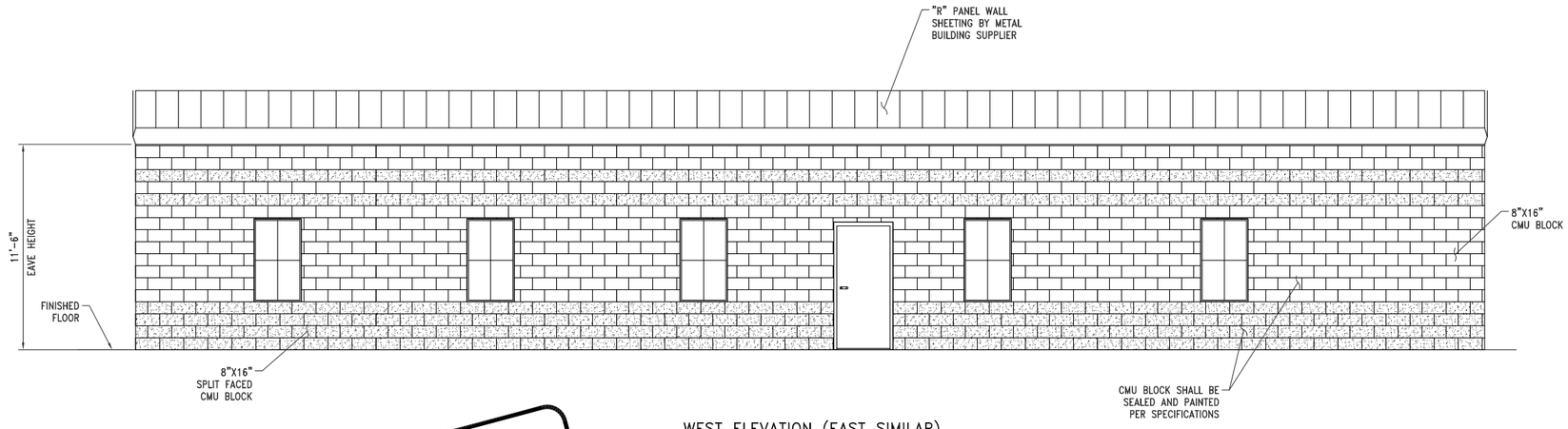
| DESIGNED BY: | MMS |
| JOB NO.: | 22160 |

SIZE: B
DWG. NO.: 22160-02-0210
REV.: 1




SOUTH ELEVATION (NORTH SIMILAR)

SCALE: 1/8" = 1'-0"




WEST ELEVATION (EAST SIMILAR)

SCALE: 1/8" = 1'-0"

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BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

OFFICE BUILDING ELEVATIONS

| | | | | | |
|---|---|---|---|---|---|
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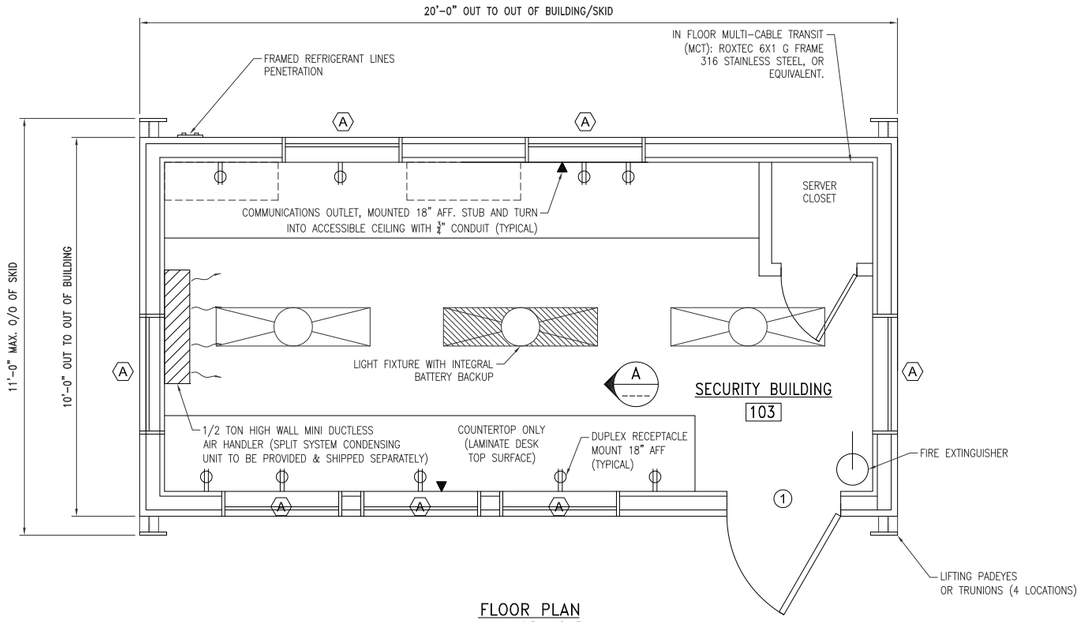
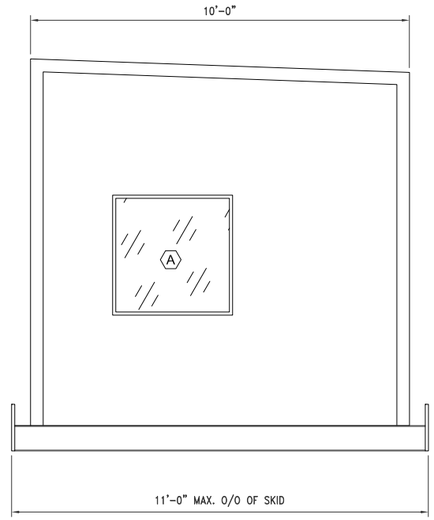
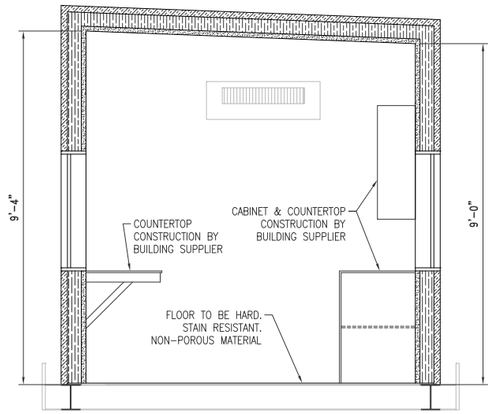
| DESIGNED BY: | MMS | | | | |
| JOB NO.: | 22160 | | | | |



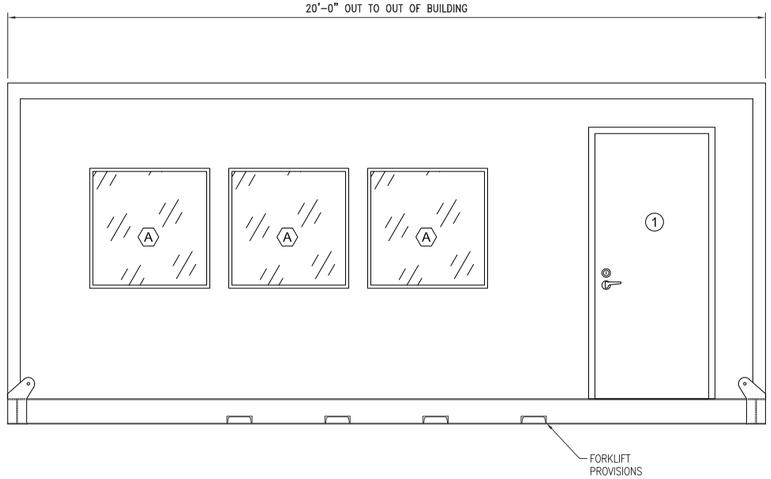

FLOOR PLAN
SCALE: 1/4" = 1'-0"



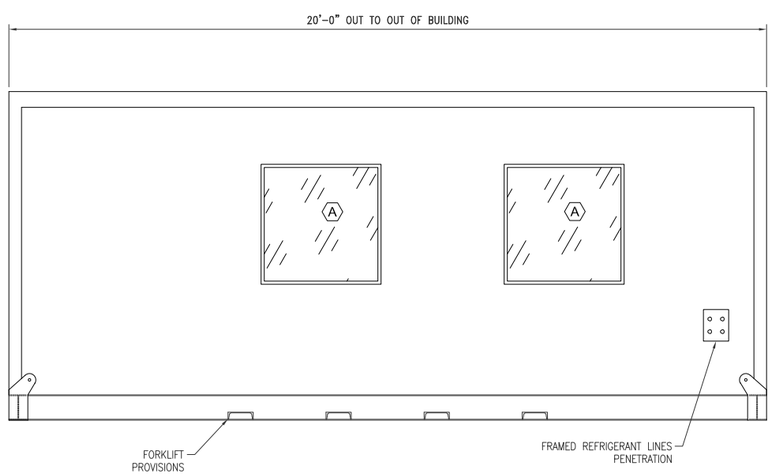

SIDE ELEVATION
SCALE: 1/4" = 1'-0"




SECTION A
SCALE: 1/4" = 1'-0"




FRONT ELEVATION
SCALE: 1/4" = 1'-0"




BACK ELEVATION
SCALE: 1/4" = 1'-0"

## GENERAL NOTES:

THE SECURITY BUILDING SHALL BE A PRE-ENGINEERED SKID SUPPORTED, PACKAGED, DESIGNED, AND FABRICATED BY THE SUPPLIER.

WATER HEATER & PLUMBING SYSTEM TO BE DESIGNED BY FABRICATOR & SUBMITTED TO ENGINEER FOR APPROVAL.

THE BUILDING SHALL BE DESIGNED IN ACCORDANCE WITH 2012 IBC CODE AND ANY APPLICABLE LOCAL DESIGN CODES.

THE SKID MUST HAVE A FOUR POINT LIFTING SYSTEM (PADEYES OR TRUNNIONS AS WELL AS A FORKLIFT LIFT SYSTEM).

IF SPECIALTY SPREADER BAR/LIFTING EQUIPMENT IS REQUIRED, FABRICATOR SHALL SUPPLY AT DELIVERY.

NO GAS DETECTION, FIRE DETECTOR, OR AIR PRESSURIZATION REQUIRED.

## FINISHES

EXTERIOR WALLS TO BE DESIGNED & CONSTRUCTED PER FABRICATOR AND APPROVED BY PROJECT ENGINEER. MATERIALS & CONSTRUCTION SHALL BE SUITABLE FOR MARINE ENVIRONMENT.

EXTERIOR WALLS & ROOF MUST BE INSULATED TO A MINIMUM R VALUE OF R19.

COLOR SAMPLES & COATINGS TO BE SUBMITTED TO PROJECT ENGINEER FOR APPROVAL.

ALL BUILDING PENETRATIONS MUST BE PROPERLY SEALED FOR TRANSPORTATION

FLOORING TO BE A HARD, STAIN RESISTANT, NON POROUS MATERIAL

## EQUIPMENT, CABLING, & TRAYS

FABRICATOR/SUPPLIER TO PROVIDE ALL INTERIOR PANELS, LIGHTING, RECEPTACLES, WIRING AND TRAYS/CONDUITS.

### EXTERIOR DOOR AND WINDOW SCHEDULE

| MARK | QTY | SIZE | DESCRIPTION |
|---|---|---|---|
| ① | 1 | 36"W x 84"H (3070) | INSULATED ALUMINUM OR STAINLESS STEEL DOOR WITH METAL FRAME WITH WEATHER STRIPPING, THRESHOLD, WITH LEVER TYPE HANDLE LATCH ON HANDLE AND DEAD BOLT REQUIRED. |
| Ⓐ | 6 | 36"W x 36"H | ALUMINUM FRAMED DOUBLE PANED INSULATED GLASS TYPICAL |

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BLUE WATER GROUP

BLUEWATER GUYANA
FRIENDSHIP PORT DEVELOPMENT
FRIENDSHIP, GUYANA

SECURITY BUILDING

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: | LB | SIZE: B | DWG. NO. | 22160-02-0220 | REV. A |
| DESIGNED BY: | MMS | | | | |
| JOB NO.: | 22160 | | | | |

## 3.2 PROJECT SIZE

The overall capital investment for this project is estimated at $25,000,000 USD. There is expected to be approximately 10 workers required to operate & maintain the facility during its operation.

### 3.2.1 MATERIAL PRODUCT TRANSPORTATION

Products and material transported to the facility will be done by both trucks and also offloading vessels at the facility. The vast majority of products outgoing form the facility will be via platform supply vessels (PSV) bound for production or drilling rigs.

## 3.3 DEVELOPMENT ACTIVITIES

The Friendship Port Development will mainly serve a loading and offloading depot with services provided to marine vessels operating off of the coast of Guyana. Additionally, products such as fuel, drilling fluid, and water may be available to vessels within the covered ship berthing area.

- Loading and unloading of objects such as; drill pipe, skid units, downhole tools, service equipment, etc. associated with drilling and production rigs.
- Lift on / lift off operations using overhead or mobile cranes.
- Roll on / roll off operations using ramps and forklift equipment.
- Drilling fluid batching and supply from on-base facility via piping system to vessels.
- Storage and supply of bulk products such as barite, bentonite, or cement to vessels via pneumatic conveyance.
- Provision of diesel fuel for vessels.
- Provision of non-potable water to vessels.

### 3.3.1 CONSTRUCTION ACTIVITIES

Construction of the new marine dock facility will be performed in accordance with applicable building codes and requirements & through coordination with permitting authorities with a well-documented scope and engineered plans / specifications. The construction methods adopted shall ensure that works are undertaken in a safe and well-planned manner so as to achieve our set objectives. It is anticipated that the construction will not be phased, but rather executed as one continuous scope with initial site works commencing prior to January 2023.

### 3.3.2 DEVELOPMENT RESPONSIBILITIES

- Site Superintendent (Contractor) – Responsible for all construction operations
- Surveyor (Contractor) – Responsible for all land surveying works to provide the grades shown on the final construction drawings
- HSE Officer (Contractor) – Responsible for safety, security, and environmental aspects
- Site Inspector / Construction Manager (CASE) – Responsible for overseeing the construction project as a whole and inspecting the work according to the defined quality required
- Diamond Shorebase HSE Manager – Responsible for implementing the environmental health and safety program for DSB.

### 3.3.3 SITE ACCESS

Access to the construction site will be via the main entry gate location shown on the south side of the facility. Reference the proposed site layout drawing 22160-02-0002 for location. Security fencing will be installed as 8-foot-tall chain link fencing with 2' diameter razor wire roll installed on top. The posts will be at 10 foot maximum spacing and will be placed in the ground with concrete. All chain link materials will be hot dipped galvanized. Final security protocols on site will be in accordance with local and MARAD regulations.

### 3.3.4 TEMPORARY SERVICES

- Electricity – This will be facilitated by use of a generator supplied and maintained by the contractor
- Internet Access – Contractor will provide internet access for construction office
- Water – Contractor will use storage tanks as needed
- Security – Contractor will provide security for project specific construction materials & property

### 3.3.5 MOBILIZATION

Mobilization will begin with set up of temporary facilities, including the Contractor's construction site office and portable restroom facilities. The temporary facilities will be located on the west side of the property along the proposed fence. The contractor will then mobilize equipment needed to perform the work. There will be ample available storage space on site where equipment will be mobilized and stored needed during the construction sequence and will be demobilized once the specific equipment is no longer needed.

### 3.3.6 SURVEY & CONSTRUCTION LAYOUT

Prior to construction, the surveyor will work with the Project Engineer to establish a project benchmark and lay out the overall project. The Surveyor will work with the civil works contractor to establish and verify cut grades for any required soil removal. During backfilling to reach final subgrade elevation, the Surveyor will set grade stakes and verify elevations for each compaction layer. Daily surveying and layout will be done to allow for accurate excavation, shaping of fill material, and setting top of concrete elevations. The surveyor will verify and record all final layers and verify top of concrete elevation once the concrete foundation is poured.

### 3.3.7 CLEARING OF LAND

Much of the site has previously been cleared and is mostly free of any debris. Nonetheless, due to the rural nature of the project, the entire property will have to be cleared a small brush and trees. The biodegradable materials (such as trees and brush) will be burned on site or deposed of in a suitable landfill. Any non-biodegradable materials (such as metals and plastics) will be disposed of in a suitable landfill. Finally, the organic topsoil will be scrapped removed from the site and relocated in accordance with any environmental and local ordinance requirements.

### 3.3.8 SITE FILL

The cleared site will then be proof rolled using a fully loaded dump truck to identify any weak areas for removal prior to fill. A well graded approved structural backfill material will be brought in by trucks and dumped in the required areas. It is estimated that approximately 24" of material will be required. The material will be spread by a front-end loader or bulldozers in lifts of no more than 9" thickness prior to compaction. The surveyor will confirm all lift depths. Sand material will also be soaked with the use of a water bowser to assist compaction. Once compaction is complete, the Contractor will engage a qualified geotechnical engineering testing agency to perform compaction tests and inspections. Failed areas will be cut, re-filled, and/or recompacted until the compaction criteria is met. Once compaction is verified, the next lift may be placed. Upon completion of the structural backfill, final shaping will be done by a motor grader. The surveyor will confirm all final subgrade elevations per the construction drawings. At that point a 12" layer of compacted limestone will be installed as needed to support construction activities for effective traffic flow around the site. Once all other construction works are completed, the remaining site will have compacted limestone installed as needed.

### 3.3.9 EXCAVATIONS

Soil excavation will be performed for all foundations & other site infrastructure as needed. Excavation will begin using large bucket excavators to perform the main digging and small buckets or skid steers will be used to obtain final depths. All excavated material will either be salvaged and reused by the contractor or disposed of by the contractor at an approved landfill. A small generator driven sump pump shall be used to keep excavated pits free from standing water after rains. The surveyor will confirm all excavation depths.

### 3.3.10 DREDGING

Dredging activities will be required in marine dock areas along the east bank of the Demerara River in order to achieve required berth depths for the Platform Supply Vessels. Prior to the commencement of pile driving and dock installation, this work will be performed via cutter head dredge which will then transport the spoil material to locations only indicated by the Maritime Administration Department (MARAD). Dredging activities will be continuously monitored via survey vessels which will measure bathometry to verify necessary elevations are met.

### 3.3.11 PILE DRIVING

Pile driving activities will be performed from both land and barge mounted cranes. Hydraulic hammers will drive pre-cast concrete piles to required depths and in arrangements determined by engineering design. All pile driving will be logged and recorded as it is performed by a third party testing agency.

### 3.3.12 CONCRETE FOUNDATIONS

Once pile driving is completed, concrete foundations will be installed. Prior to the concrete pour, the Contractor shall submit a mix design to the Project Engineer for review and approval. The Project Engineer will ensure the mix design meets all project technical specifications. The contractor will build and install formworks for the footings, slabs, grade beam, pile caps, etc. Formwork will be constructed out of both steel and timber as appropriate for each foundation condition. While forms are being built and installed,

the Contractor will also build all steel reinforcing cages and mats as specified on the construction drawings and within technical specifications. Before installing the rebar, the contractor will install a thin concrete blind at the base of the slab and footings to avoid the rebar chairs sinking into the soil and keep the rebar mats at the specified elevations within the foundation.

Once the rebar and building precast anchor bolts are installed, the concrete foundation will be poured. The concrete will be placed evenly in layers and layers will be compacted using concrete vibrators. Concrete will be slump tested per the technical specification and trucks with failed slump tests will be rejected. Concrete samples will be taken every 76 cubic meters and tested per ASTM C 39/C 31M and the project specifications. Concrete slab will be finished using vibration screeds, roller screeds, and bull floats. Saw-cut control joints will be cut within 10 hours of concrete pour. The foundation will be moisture cured and joints will be prepared, cleaned, and filled with an approved joint filler. Forms will be stripped and the concrete foundation works will be complete

### 3.3.13 METAL BUILDING ERECTION (COVERED BERTH AREA)

Once concrete foundation is in place, the building erection will commence. The contractor will use a crane and manlifts to safely erect the metal building. The contractor will begin by erecting all columns, main beams, and x-bracing rods to ensure the structure is stable and prevent the columns from rocking. After the primary steel is installed and square, crane beams and rafters will be installed. Three 25ton overhead traveling bridge cranes will be installed before the roof purlins are installed. Next the girts, purlins, and framed openings for doors and subsequently the sheeting will then be erected. Finally, the contractor will install the finishing trim to complete the building installation. Reference drawing 22160-02-0200 for basic preliminary floor plans.

### 3.3.14 OFFICE BUILDING CONSTRUCTION

The office walls will be constructed of standard 8” CMU blocks. The ceilings will be constructed of 3.5” metal studs and 5/8” thick gypsum board. After the block walls are installed, the office windows and doors will be installed. The Owner will bring in office desks and miscellaneous furniture to complete the offices. The office will have a private sewer treatment plant installed adjacent to it which will discharge treated effluent to the outfall/receiving water body location described in previous section. Also, a parking lot will be constructed adjacent to the building which will provide parking spots per applicable design codes/ordinances and in cooperation with owner needs. Reference drawing 22160-02-0210 for basic preliminary floor plan.

### 3.3.15 SECURITY BUILDING

Two security buildings will be placed on site. One at the main entry on the south side of the facility and one at the auxiliary entry/exit located on the north side. These will each be relatively small modular buildings to provide security guards / and logistics personnel to verify incoming and outgoing actives. Reference drawing 22160-02-0220 for basic preliminary plans.

## 3.4 USE OF NATURAL RESOURCES

Natural resources required for the construction will include fill material (approximately 2 to 3ft of sand fill over the entire site). Manufactured resources such as concrete and steel will also be required for construction. During the operation of the facility the only resources that will be required for operation will be water and diesel for both feed to vessels and also batching of drilling fluids. Exact volumes have not been determined at this time; however, it is not expected that there will be over 50,000bbl of drilling fluid stored on the site at any given time. This product requires diesel, bentonite, and barite for its production.

## 3.5 SOURCE OF UTILITY SERVICES

DSB will work with GWI (water), GTT (data/communications), and GPL (power) to have the proper utilities brought in along the main road and down each cross street. A private sewer system will be installed to service the main office building which will discharge treated effluent through underground 8" drain line to drainage on south side of the facility and ultimately outfall to Demerara River.

## 3.6 WASTE PRODUCTION

The operation of this facility may produce waste in a few of ways; general domestic waste, hazardous waste stored in offloaded vessel containers, hazardous waste produced within drilling fluid facility containment areas.

General domestic waste such as plastic bags, paper wraps, wood, food waste products, etc. will be placed in dumpsters and taken to the Guyana Landfill.

Any hazardous waste taken on from supply vessels or originated within drilling fluid batching areas will in all cases be disposed of in recorded transfer to third party processing facilities such as SES.

## 3.7 PROJECT DURATION

The following basic construction phases and durations have been provided as a preliminary estimate:

| | |
|---|---|
| Phase 1 (Civil / Site Works & Utilities) | 3 months |
| Phase 2 (Dredging / Marine Works) | 3 months |
| Phase 2 (Bulkheads & Foundations) | 4 months |
| Phase 3 (Building Construction) | 4 months |
| Phase 4 (Final Commissioning) | 2 month |
| Total Construction Duration | 16 months |

## 3.8 DECOMMISSIONING PLAN

Upon completion of all construction related activities all equipment, spoil, & other excess construction materials will be removed from the site by the contractor responsible for construction. Additionally all temporary utility installations that were required for construction will be disassembled in a safe and practical manner.

## 4.0 POTENTIAL IMPACTS & THEIR SIGNIFICANCE

Environmental impacts associated with the construction and operation are important aspects to be considered and are of the upmost important for the owner, the pubic, the environment itself. All necessary measures will be taken to ensure compliance with regulations and that best practices are implemented.

### 4.1 AREA OF INFLUENCE

The receiving waterbodies downstream of the facility (Demerara River) are the main modes through which this facility could pose any impact to the environment. Waste, pollutants, and sediment transport are all items that will need to be considered. All along this river aquatic life, plants, and human residences must be protected from unnecessary pollutants.

Considering that the land has already been cleared for agriculture in the past and subsequently further cleared for this industrial use, it is not expected that there would be any significant impact to any existing land-based flora / fauna.

### 4.2 TRANSFRONTIER IMPACTS

The Demerara River discharges ultimately into the Atlantic Ocean does not cross any international boundaries directly. It is only along the coastline that the ocean itself would transition from Guyanese waters to international or adjacent country territory (Venezuela approximately 200 miles northwest & Suriname approximately 100miles southeast)

### 4.3 IMPACT MAGNITUDE AND COMPLEXITY

During the construction of the facility sediment transport / erosion serve as potential impact to the adjacent water bodies. This is a common concern during construction; however, the impact is considered to be minimal and not a complex issue to resolve.

Release of hydrocarbons to the immediate land area and receiving water bodies serve as the most major impacts to environment during facility operations. This sort of hazard is one that is not uncommon along the banks of the Demerara. Drilling fluid facilities and diesel depots are common and do not necessarily bring about any unprecedented challenges.

### 4.4 PROBIBILITY OF IMPACTS

During early phases of construction, it is highly likely that erosion will occur due to the nature of the loose disturbed soil. However, through mitigation measures such as berming, drainage control, and silt fencing, the probability of these impacts can be reduced.

Hydrocarbon spills from areas with secondary containment are not very probable due to the passive mitigation measures that these system present. Smaller hose spills can be common but also mitigated with more active measures such as emergency shut downs and mobile drip pans.

## 4.5 DURATION, FREQUENCY & REVERSIBILITY OF IMPACTS

Erosion and sediment transport is possible during all phases of construction; however, this is especially the case during the early civil & marine works which are expected to be ongoing for approximately 6 months. Any movements of soils offsite are most likely to happen during heavy rain events which can be frequent. The reversibility of erosion is fairly reversable as soils could be excavated and relocated on site.

Any potential hydrocarbon releases on the site would likely have a limited duration due to the nature of the operations on site and the activities performed on a daily basis. Any releases of significant volumes would be expected to be infrequent with smaller hose drips more common. The reversibility of impacts associated with hydrocarbon releases is possible with cleanup measures that could be implements within waterways, however mitigation will be an important component of the facility and it's operations.

## 4.6 CUMULATIVE IMPACTS

Any cumulative impacts associated with other projects are not considered at this time for this standalone project and are not within the scope of this summary

## 5.0 ENVIRONMENTAL MANAGEMENT & MITIGATION MEASURES

Mitigation measures providing protection for the environment both during construction and for the life of the facility are important. This is true from physical, ecological, and social perspectives. In order to meet these needs the following minimum mitigation measures will be implemented:

### 5.1 PHYSICAL MITIGATION MEASURES

Sediment transport and erosion will be controlled during construction though practicing excavation at predetermined maximum slopes such that sluffing and bank failure does not occur. Also silt fencing, berming, and drainage control measures will be put in place to mitigate issues associated with this.

### 5.2 ECOLOGICAL IMPACT MITIGATION MEASURES

Hydrocarbon releases during operations will be controlled through the development of secondary containment structures that are designed the meet Guyanese EPA standards with the U.S. EPA SPCC serving as a minimum guideline. This will mean that 110% of the largest tank volume within any containment area will be contained along with adequate freeboard. The industry standard for this freeboard is to be considered a statistically probable rainfall event lasting 24hours that would occur once every 25years. Also ESD shutdown measures would be provided at any offloading areas which could allow operators to shut in any flow in the event of hose failure.

### 5.3 SOCIAL IMPACT MITIGATION MEASURES

During construction activities social considerations will need to be made. Examples of this would be mitigating noise by keeping loud construction activities from being performed during night time hours. Also transportation of materials to and from the site will be handled in a manner that does not impact local traffic, businesses, and residences.

## 6.0 APPROVALS & PERMITS

In keeping with the City of Georgetown Building Regulations, permits are required for the execution of this Project. DSB is to working with the following local authorities on permitting:

- Neighborhood Democratic Council (NDC)
- Central Housing & Planning Authority
- Maritime Administration Department (MARAD)
- Sea Defence Board
- Environmental Protection Agency (EPA)

At this time there are no meeting minutes available considering that permitting from these local authorities is being requested simultaneously with the EPA approval.

## 7.0 ASSUMPTIONS, UNCERTAINTIES, AND GAPS IN KNOWLEDGE

Approval for the construction of this marine terminal / depot is being sought out under the assumptions that all permitting authorities will be keen with allowing additional economic growth in the region to occur in an environmentally safe and responsible manner.

Uncertainties and gaps in knowledge at this point are minimal, whoever, a geotechnical investigation has been commissioned and is currently underway which will provide more site-specific data needed for the design and construction of this facility. Furthermore, exact specifics on site features such as driven pile length, sheet pile depths, etc. Also quantities of fluids stored and offloaded to vessels are to be determined during detail design phases and based on market needs.

## 8.0 NON-TECHNICAL SUMMARY OF THE PROJECT

Diamond Property Management, Inc. (DPM) dba Diamond Shorebase Inc (DSB). has recently purchased ~ 6 acres of land in Plantation Friendship along the east bank of the Demerara River. DSB would like to develop the property as a dock facility to provide both covered berthing and heavy marine loading depot for platform supply vessels that service the oil and gas industry in this region. DSB is working with a civil engineering design firm to develop the plans and specifications for the project team.

The Friendship Port Development will mainly serve a loading and offloading depot with services provided to marine vessels operating off of the coast of Guyana. Additionally, products such as fuel, drilling fluid, and water may be available to vessels within the covered ship berthing area.

- Loading and unloading of objects such as; drill pipe, skid units, downhole tools, service equipment, etc. associated with drilling and production rigs.
- Lift on / lift off operations using overhead or mobile cranes.
- Roll on / roll off operations using ramps and forklift equipment.
- Drilling fluid batching and supply from on-base facility via piping system to vessels.
- Storage and supply of bulk products such as barite, bentonite, or cement to vessels via pneumatic conveyance.
- Provision of diesel fuel for vessels.
- Provision of non-potable water to vessels.