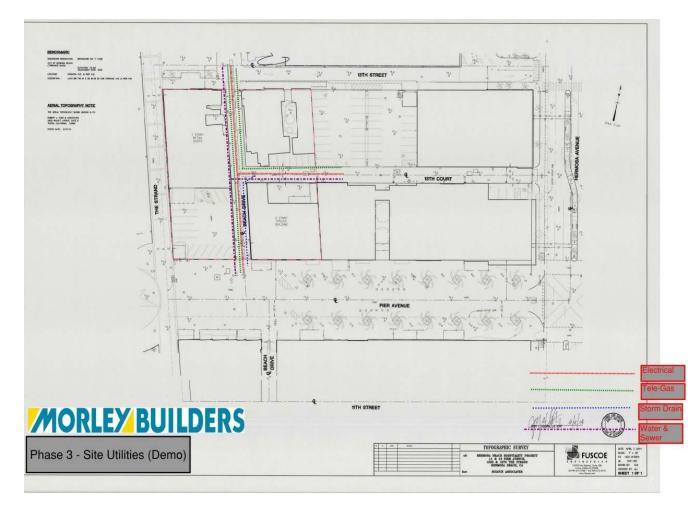
### 2.3 - Utility Relocation – Phase 3



Phase 3 Utility Work consists of the removal of all existing utilities that have been abandoned during the utility relocation.

All capping, abandonment and removal of these existing utilities will be accomplished after the new utility tie ins have been inspected, tested and activated.

SITE SURVEY PLAN

### 2.0 Construction Overview / Methodology

### 2.4.1 Dewatering – Existing Conditions

The proposed site has an existing ground water table at approximately -7 feet from existing grade. The project team has investigated multiple methodologies to assist in dewatering the proposed basement structure during both excavation and construction. One method is to conventionally pump, treat and discharge this found water as excavation and construction continues. After much investigation, the project team has rejected this technique as an option for project-wide dewatering for the following reasons:

- Would require continuous discharge of groundwater into City storm drain system
- Estimated quantity of discharged ground water is approximately 2,000 gpm
- Work on site would require multiple well installations and 1 pump per well
- Pumps would work off floats and are anticipated to continuously pump water 24/7 from excavation till completion of the concrete ground level podium
- Ground water is pump through a filtration system, then discharged into SD system
- Project would require 24 / 7 stand-by emergency power for Pumping Equipment
- Project would require 24 / 7 staffing of storm pipe discharge during high tide and storm events

Please see additional non-preferred options that were investigated for dewatering in the Appendix – Exhibit E. These options include : Deep Soil Mixing, Sheet Piling Installation and Sand Dredging

### 2.0 Construction Overview / Methodology

### 2.4.2 Dewatering – Proposed System

The project team is proposing a combination of Soil Freezing and Press-In Sheet Piling at project's perimeter to stop ground water infiltration into site and reduce continuous discharge of existing ground water to City storm drain system. Soil Freezing may be utilized at bottom of project's excavation if impermeable clay soil layer is not found. Press-In sheet piling will be utilized as both the perimeter walls of the subterranean structure and an integrated secondary groundwater mitigation system.

- Greatly reduces discharge of ground water into City storm drain system
- Eliminates need for shoring designs that require continuous cementitious washout and cleanup operations
- Reduction of noise for mechanical insertion of piles / vibrated sheet piling
- Eliminates need for processing and export of high ph soils
- Nothing is injected or mixed with existing soils
- Upon completion of work, Soil is returned to its pre-construction condition
- We expect to discharge approximately 1,000 gallons per day (or less) into the city storm drain system using this method

# **STRAND & PIER HOTEL**

**Construction Management Plan** 

3.0 Construction Activities

5/11/2017

### 3.1 Construction Sequence and Planning

Project Duration is anticipated to be approximately 29 months from Notice to Proceed to Project Completion

### Major Project Task Phases include:

- Phase 1 Site Clearing, Demolition & Utility Relocation 3 Months
- Phase 2 Shoring, Excavation and Dewatering Systems 6 Months
- Phase 3 Foundation Tie-Down & Mat Foundation Insertion 5 Months
- Phase 4 Concrete Superstructure From P-2 to Roof 5 Months
- Phase 5 Exterior Skin / Interior Build-Out / Site Work 10 Months

### <u>3.1 Construction Impacts – Phase 1</u>

Phase One Activities include the placement of all construction fencing and barricades required for public safety and access continuity from the adjacent public parking structure. Additionally, multiple existing wood frame and CMU masonry structures will be required to demolished and removed from the site. Utility relocation will commence concurrently during site and building demolition and will be completed once all structures have been removed.

Construction Impacts include:

#### Site Clearing:

- 20 (high side) dump trucks per day
- Continuous 2 week export period

#### **Demolition:**

- 25 (high side) dump trucks per day
- Continuous 4 week loading and hauling period

#### **Utility Relocation:**

- Continuous excavation and plating of streets
- Intermittent reduction of access to existing utilities



60' long high-side truck



Demolition

### <u>3.1 Construction Impacts – Phase 2</u>

Following building demolition and utility relocation and in parallel to the sheet pile shoring operation, Mass Excavation efforts will commence. In total, approximately 42,000 cubic yards of soil will be loaded and removed from the site. This amount of removal will require precise and orchestrated equipment sequencing and a trucking logistics plan be put in place.

Access for all trucking activities will take place from 13<sup>th</sup> Street and all traffic impacts will be mitigated by the use of a combination of traffic and pedestrian signage and strategically placed flagmen that will be located at all affected intersections. The proposed trucking haul route proposes that trucks will enter the site utilizing Hermosa Avenue heading south-bound and turning west onto 13th Street. Exiting the site, trucks will travel eastbound on 13<sup>th</sup> Street and then turn south-bound onto Hermosa Avenue and then sequence onto the proposed haul route.

#### **Excavation:**

- 42,700 cy to be removed
- 60 Belly Dump Truck & Trailers per Day
- Continuous 10 week period



70' Long Belly Dump Truck



Loading with Excavator

5/11/2017

### <u>3.1 Construction Impacts – Phase 3</u>

During Phase 3, the major impact will be from the placement of structural concrete during multiple pours. The project will require two ready-mix delivery and pump staging locations. These stations will be used either independently or simultaneously, as the project's schedule and/or the area of work dictates.

One pump location will be at 13th Street, just to the west of Beach Drive, which will allow for sufficient turning radius of mix trucks when backing into position. The second pump location falls at the westernmost portion of Lot B, which again, will allow for boom pump coverage to the most extreme corners of the site. Trucks will arrive and depart via the same route utilized for the mass excavation process.

#### **MAT FOUNDATION IMPACTS :**

- 3 separate pour dates within a 2-week period
- 2 pump locations for each pour (13<sup>th</sup> St. and Lot B)
- 2,000 c.y. of concrete placed for each mat pour.
- Concrete trucks will arrive to the site every 3 minutes

   approximately 200 cy poured per hour



66,000 lbs. loaded - 40' long





Concrete Pumping Truck 77,000 lbs. loaded - 43' long

### <u>3.1 Construction Impacts – Phase 4</u>

**PHASE 4** : Phase 4 impacts will consist of daily rebar, lumber, and forming equipment deliveries. Delivery trucks will routinely be unloaded by tower crane or forklift. Concrete Ready-mix delivery will be a continuous operation for each pour. Each pour requires the delivery of 70 to 200 trucks per event. These trucks arrive at the site and are discharged every 3 to 5 minutes. One truck is always unloading at the pump while the empty truck leaves its position at the pump and the truck 'on deck' then takes its place.

Concrete Structure – All Concrete is proposed to be placed from 7pm to 3am

Suspended Concrete Slab Pours:

- **B-1 Level : 3** Pours (Night Hours Requested)
- Level 1 : 3 pours (Night Hours Requested)
- Level 2 : 3 pours (Night Hours Requested)
- Level 3 : 3 pours (Night Hours Requested)
- Roof level : 3 pours (Night Hours Requested)

### <u>3.1 Construction Impacts – Phase 5</u>

**PHASE 5**: Phase 5 impacts will consist of daily metal stud, drywall, piping deliveries on a daily basis. These deliveries will routinely be offloaded by forklift, then distributed within the building for installation. Exterior systems will be installed around the building perimeter from scaffolding. When exterior systems have been water tested, scaffolding will be removed, and site concrete will begin, followed by landscaping. Commissioning of mechanical, electrical, and plumbing systems will be conducted during this time, along with fire sprinkler and fire alarm testing.

Interior Buildou	t and Finishes	10 Months	
•	Continuous deliveries a Continuous trash remov		
Exterior skin		8 Months	
•	Perimeter scaffold full h Continuous deliveries	eight of building to be installed	
Site work		6 Months	
• •	Concrete and equipmer Crew mobilizations arou Perimeter fence to be ro for new work		

## 3.2 Project Milestones / Schedule

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### 3.3 Construction Employee Population

#### **3.3 Construction Population**

Proposed construction worker population stipulated below is an estimate, but the presented numbers can be considered the maximum amount expected for each defined phase of work.

#### **Construction Worker Population\* per Phase:**

PHASE 1 : Site Clearing and Demolition – 3 Months, 30 Employees

PHASE 2 : Shoring, Excavation and Dewatering – 6 Months, 40 Employees

PHASE 3 : Foundation Tie-Down & Mat Foundation - 5 Months, 80 Employees

PHASE 4 : Concrete Superstructure – From P-2 to Roof – 5 Months, 95 Employees

PHASE 5 : Exterior Skin / Interior Build-Out / Site Work – 10 Months, 120 Employees

\*Number indicated is maximum number of employees at any given time.

### 3.4.1 Construction Activities – Construction Hours

#### **3.4.1 Construction Hours**

Proposed construction hours that are being requested, are in deviation to provisions of Section 8.24.050 of the City of Hermosa Beach Municipal Code. In order to ensure timely completion of the Project while minimizing impacts on the surrounding community, proposed exterior construction hours shall be limited to Monday through Friday from 6:00 a.m. to 7:00 p.m., from 6:00 a.m. to 2:00 p.m. on Saturday and 6am to 2pm on Sundays, except when extended hours are required or specifically permitted by the City Management. If construction activities are allowed to commence early, the majority of the work force will arrive and leave the site early. Proposed construction start time of 6 am would require workers to travel between the hours of 4:30am and 5:30am and then leaving the site between 2:30pm and 3pm. Employees / Workers prefer earlier hours due to the reduction in traffic at these times. Moreover these times would avoid commuter and school start and let out timing.

In Contrast, the required project start time of 8am would require workers to travel in peak periods between 4:30am and 7:30am due to traffic congestion, and then leaving the site between 4:30 and 5pm. Some employees will request to remain in the area until 7pm to avoid traffic returning home. Regardless, management, supervisory, administrative, and inspection activities shall take place within the designated construction hours to the extent feasible, however, such activities may take place outside of the designated construction hours.

#### **Proposed / Requested Extended Work Hours:**

- 6am to 7pm Monday through Friday (6am to 3pm all major trades are onsite, mobilized and working )
- 6am to 2pm Saturday (No hauling, deliveries or worker parking within Public Lots or Structures)
- 6am to 2pm Sunday (During Project Close Out and other negotiated limited time periods)
- MAT FOUNDATION HOURS: All Concrete to placed 7pm to 3am
- ELEVATED SLAB POUR HOURS : All Concrete to placed 7pm to 3am

### <u>3.4.2 Construction Hours – Phase 3 : Mat Foundation Night Pour Plan</u>

### 3.4.2 Night Pour Concrete Process and Schedule:

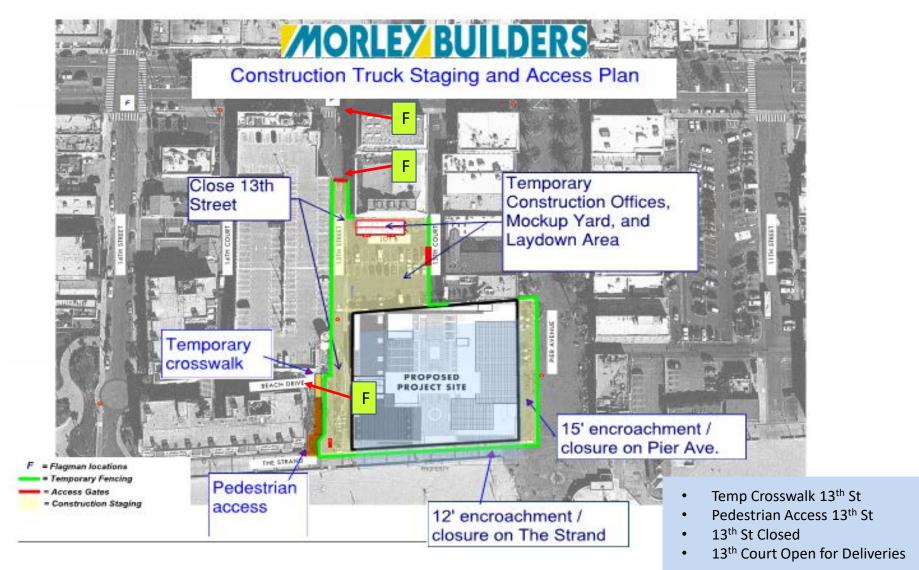
Due to the size, scale of major concrete pours during the project and their impact on traffic, congestion and staging requirements, we are proposing to utilize night-time concrete pours to mitigate these issues. By utilizing night-time pours, impact on traffic and access to neighboring retail and commercial uses can be reduced and allow a more predictable and expedited completion of this task. Moreover, it would reduce conflict with beach access, school activities and emergency services throughout the affected access route that the trucks would be utilizing.

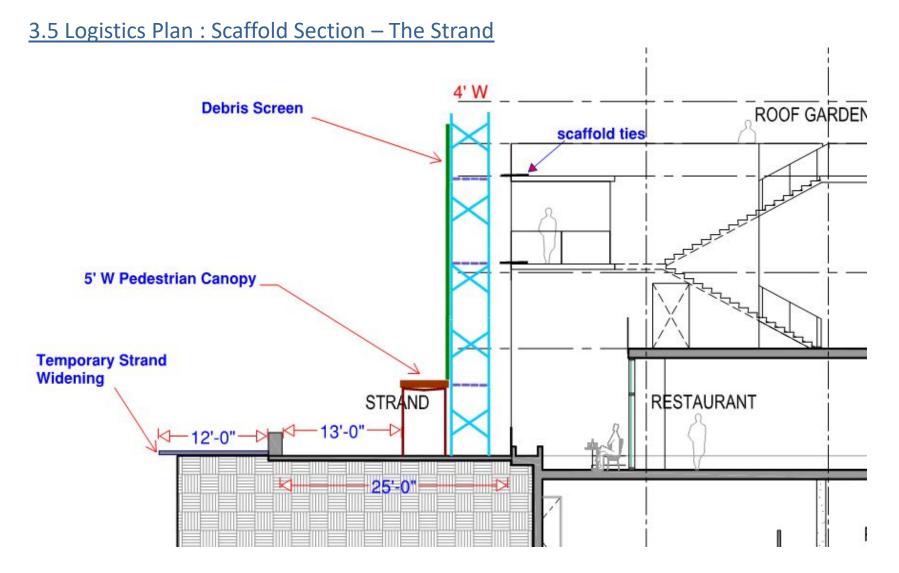
Logistics demand that concrete ready-mix delivery will be a continuous operation for each pour. Each pour requires the delivery of 70 to 200 trucks per event. These trucks arrive at the site and are discharged every 3 to 5 minutes. One truck is always unloading at the pump while the empty truck leaves its position at the pump and the subsequent truck 'on deck' then takes its place.

#### Night Time Concrete Pour Logistics include:

- 63M truck mounted concrete boom pump at Lot B
- 47M truck mounted concrete boom pump at 13<sup>th</sup> street
- Continuous placement of concrete 7pm to 7am
- Concrete mixer trucks every 3 minutes
- Staging 8-10 trucks at metered spaces (divider lane) at Hermosa Ave.
- Flagman at every intersection to control traffic
- Continuous cleaning of exit path with street sweeper.

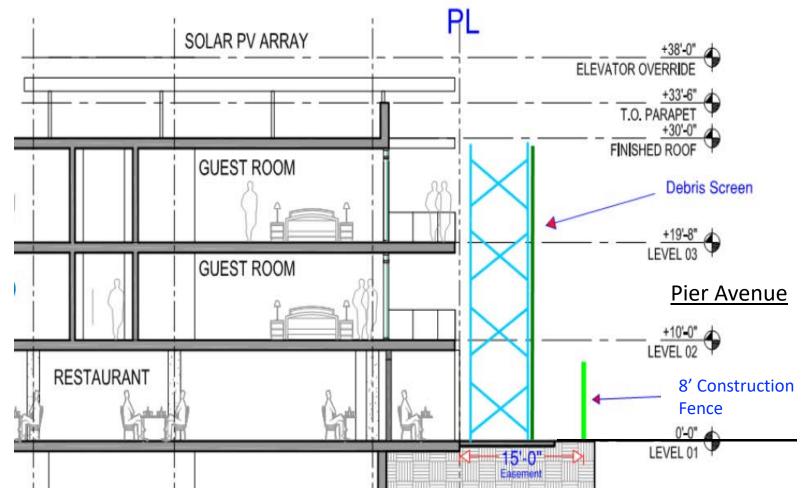
### 3.5 Proposed Logistics Plan





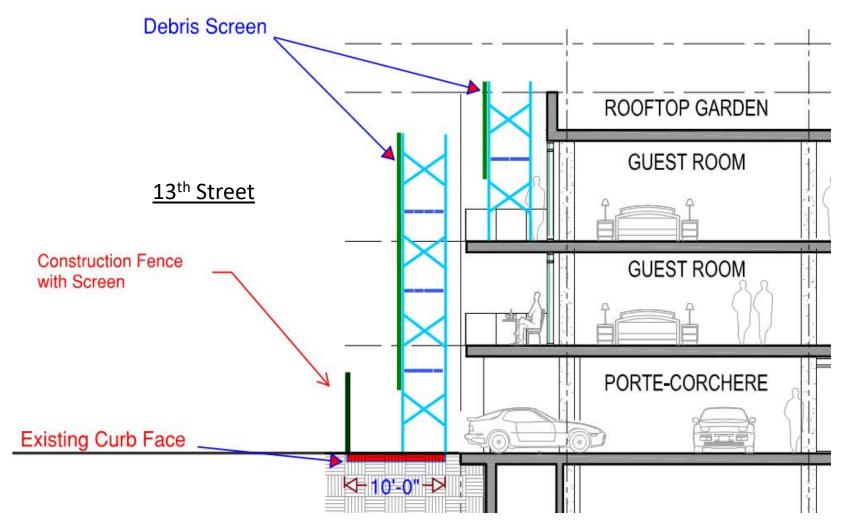
# MORLEY BUILDERS

### <u>3.5 Logistics Plan : Scaffold Section – Pier Avenue</u>



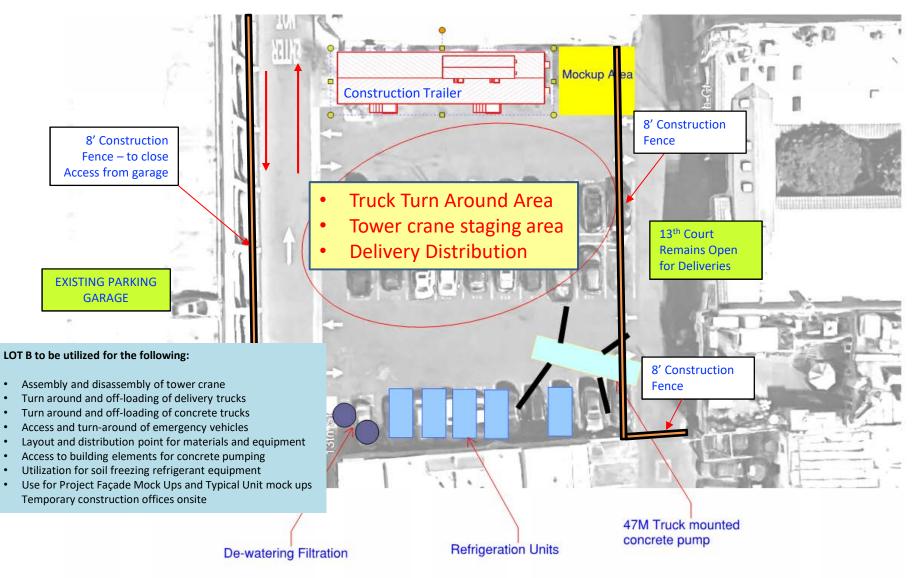
MORLEY BUILDERS

<u>3.5 Logistics Plan : Scaffold Section – 13<sup>th</sup> Street</u>

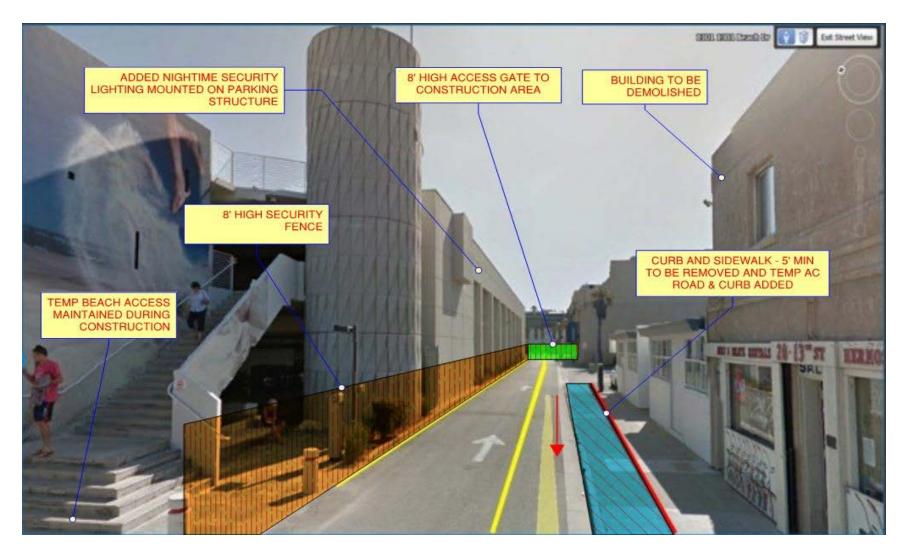


MORLEY BUILDERS

### 3.5 Logistics Plan : Lot B Utilization



### 3.5 Logistics Plan : 13<sup>th</sup> St. Modifications (West)



## 3.5 - Logistics Plan : 13<sup>th</sup> St. Modifications (East)



### <u>3.5 – Logistics Plan : 13<sup>th</sup> St. Modifications (East)</u>



### 3.6 Site Office

Prior to beginning construction activity and until construction of the Project is complete, the General Contractor will maintain a site office located at the eastern edge of Lot B. The site office will be open at all times when construction activity is underway. A representative of the General Contractor may be reached at the site office by phone via posted numbers that will be located on a placard sign located adjacent the construction site entrance.

#### 3.7 Community Liaison Officer

The Developer shall appoint a Community Liaison Officer ("CLO") to respond to inquiries or concerns of surrounding residents and businesses, as well as the general public. The CLO may be an employee or representative of the Developer. The CLO will be located on the site during construction hours and may be contacted via a "Project Hot-Line". The name of the CLO and the Hot-Line phone numbers shall be conspicuously posted at the construction site. The CLO shall notify the Developer if the CLO is notified of any construction activities that potentially violate this Plan or any of the construction-related mitigation measures.

#### 3.8.1 Phasing and Staging : General

The project will be constructed in a single sequential phase utilizing five (5) distinct task phases per Section 3.1 Preferred project staging area will be the utilization of Lot B parking lot (east and adjacent to the site). This staging area will include the staging and repositioning of concrete truck mounted and trailer mounted pump equipment, ready-mix truck staging, material & equipment truck staging for loading and unloading, mobile crane staging for hoisting materials and equipment into building. The staging area will include the project trailer offices and mockup of the building exterior and model rooms. Temporary electrical distribution will be located here. Employees will assemble in the staging area for daily stretch / flex , receive direction, and safety meeting prior to start of work each day.

### 3.8.2 Use of Lot B for Onsite Staging

#### Lot B is essential to the successful execution of the proposed project for the following reasons:

- Utilization of Lot B (and the closure of 13<sup>th</sup> Street) will allow for most concrete staging and pumping activities to occur in the lot, in lieu of using locations at the terminus of 13th St. and Pier Avenue
- Utilization of Lot B will provide construction employee parking during phases 1 through 3 of construction.
- Dimensionally, Lot B provides the required turnaround distances for concrete / construction deliveries, and excavation export trucking.
- Lot B provides a staging area for erection of heavy equipment, office trailers and dewatering / soil freezing equipment. Without Lot B, office trailers would have to be located either within 13<sup>th</sup> Street Plaza, Pier Avenue or adjacent to the Strand. Moreover, beach access from Parking Structure C to the Strand would be compromised due the spatial requirements of trailers and equipment placed in 13<sup>th</sup> Plaza.
- Utilizing Lot B would move most of the sound producing equipment away from the adjacent Beach House Hotel
- Staging area must be adjacent to site to keep as many construction activities as possible contained within the site, thus minimizing impacts to adjacent businesses & local traffic
- Without the use of Lot B, access to the site would require equipment and vehicles to utilize 14th St. to Beach Drive to 13<sup>th</sup> Street. 13th St. to Hermosa would be remain the outbound route

### 3.8.3 Alternative On-Site Staging Areas

Alternatives to using Lot B for staging include the following:

- Staging and Construction Offices that utilizes all of 13<sup>th</sup> Street Plaza
- Staging at 13<sup>th</sup> Street Plaza and Construction Offices at either Pier Plaza or along the western edge of the Strand

Both of these staging locations would still require concrete pumps to set up on 13<sup>th</sup> St and along the edge of lot B. Both of these alternatives would require increased use of cueing arriving trucks on Hermosa Ave. All site deliveries would require approach to site via 14<sup>th</sup> St., past Beach House, Left on 13<sup>th</sup> St for unloading, then exit 13<sup>th</sup> Street to merge back onto Hermosa Avenue. Both locations would disrupt retail and adjacent hotel uses

### 3.8.4 Preferred Off Site Staging during Construction

Proposed Off-Site Staging of concrete and export trucks would be located on Hermosa Blvd – South Bound utilizing the metered spaces between 14th Street and 16th Street adjacent to center median. All other mass staging of trucks would be made outside of the City's boundaries.

- Utilized spaces are not removing required parking for adjacent retail uses
- Allows for easier insertion into traffic pattern
- Close proximity to site reduces gaps in delivery
- Easier for 2-way communication and coordination with (outside city) staging area

# 3.8.4 Preferred Truck Staging Location - Offsite Staging and Queuing Plan



#### 3.9 Barricades

The General Contractor will construct a solid 8' construction barrier fence around the entire exposed perimeter of the site, from Pier Avenue to the Strand to 13<sup>th</sup> Street, prior to the start of construction. Additionally K Rail barriers will be places at specific locations to protect pedestrians from construction and automotive adjacencies. All construction barriers will be maintained in accordance with City regulations, and their appearance will be maintained in a visually attractive manner throughout the construction period.

Signs will be posted along the fencing stating that no unauthorized materials are permitted to be posted. The General Contractor will ensure through daily morning walks by designated personnel that no unauthorized materials are posted on any temporary barricades or any temporary pedestrian walkways. Graffiti on barricades will be removed or covered over at the earliest possible time after the General Contractor is aware of its existence.

#### 3.10 Construction Site Security

The Developer will utilize all appropriate security measures, including but not limited to: security guards, lighting of trailer areas and the construction site, fencing of trailer areas and the construction site, and locks at all entrances to the trailer areas and construction site.

The site will be secured using appropriate fences with access gates manned with qualified security guards/traffic control officers. The site will be secured during all hours and patrolled by qualified security guards before and after construction hours.

All visitors to the site will be required to report to the site office, and will be appropriately inducted and registered in a visitors log book.

### 3.11 Fire Safety

Prior to commencement of construction work, the Developer shall have submitted plans to the Hermosa Beach Fire Department ("HBFD") that satisfy the requirements for obtaining the necessary building permits.

#### 3.12 Emergency Access

Emergency access to the Project site and adjacent areas shall be kept clear and unobstructed during all phases of demolition and construction work. Fire and Police Department will have access to the site via fence mounted "knox" boxes that will provide keys or combinations necessary to access locks at gates securing the project perimeter.

#### 3.13 HBUSD Notification

The Developer shall provide the Hermosa Beach City School District ("HBCSD") with a construction schedule and shall notify it of the commencement of Project construction. The HBUSD shall also be notified of any planned lane closures in the vicinity of the Project during construction. All construction crews shall be notified of school locations and will be instructed to stop when school bus red lights are flashing.

#### 3.14 Project And Known Special Events In The Vicinity

The General Contractor, as a part of his overall project schedule, will identify and integrate the dates for City of Hermosa Beach special events within the overall project calendar. The General Contractor will attempt to coordinate specialized construction events like major pours and deliveries so as to not coincide with these identified events. If there is a conflict where work cannot be rescheduled, the developer, general contractor will coordinate and collaborate with the City to develop a mitigating process to allow both events to occur simultaneously.

# **STRAND & PIER HOTEL**

**Construction Management Plan** 

4.0 Site Access and Circulation

5/11/2017

### 4.0 Circulation

#### 4.1 Traffic

#### 4.1.1 Construction Access

Access onto the project site will utilize 13<sup>th</sup> Street for both inbound and outbound circulation of material deliveries, excavation export and onsite worker parking. Project has chosen 13<sup>th</sup> Street as the primary means of access to preclude any construction traffic from running directly in front of the adjacent Beach House Hotel (utilizing 14<sup>th</sup> Street and Beach Drive as their means of ingress and egress) and allow merchant delivery to continue on 13<sup>th</sup> Court for all retail and commercial uses that utilize this alley for deliveries and trash removal. 13<sup>th</sup> Street will be gated just west of the entry to Parking Structure "C" and will be manned during construction hours to coordinate the automotive access into the adjacent parking structure and vehicular traffic entering and exiting the construction site.

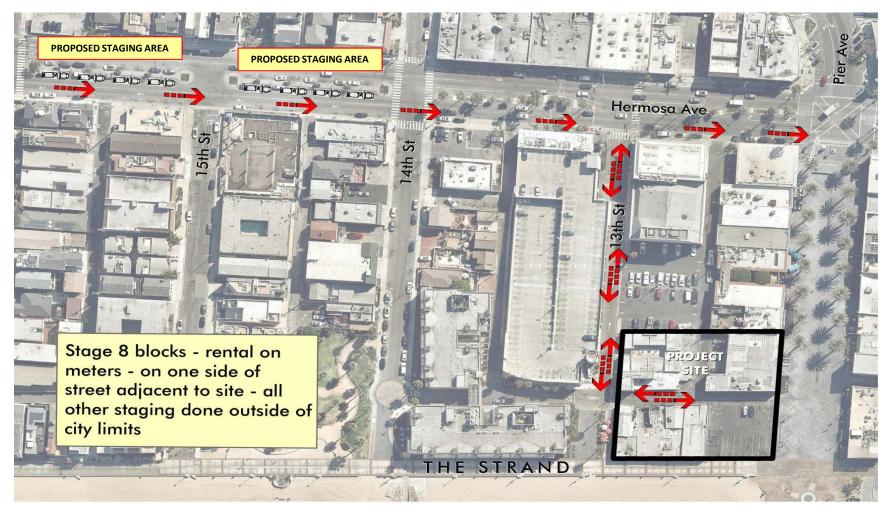
#### 4.1.2 Construction Traffic Control Plan

A Project construction traffic control plan shall be developed, to the satisfaction of City of Hermosa Beach and the L.A. County-DOT, including a designated haul route and staging area, traffic control procedures, emergency access provisions, and construction crew parking, to mitigate traffic impacts during construction.

#### 4.1.3 Traffic Control Procedures

The Developer shall obtain approval from the City of Hermosa Beach and L.A. County - DOT for any lane closures, detours, on-street staging areas or other temporary changes in traffic control. Temporary traffic control procedures will be employed as appropriate to address particular circulation requirements. These procedures include, but are not limited to: traffic cones, temporary signs, changeable message signs, and flagmen. All traffic control procedures shall be undertaken in accordance with the standards in the L.A. County - DOT Work Area Traffic Control Handbook.

### 4.1 - Construction Access Planned Use of 13th St



STRAND AND PIER HOTEL CONSTRUCTION TRUCK STAGING AND ACCESS PLAN EXHIBIT



BOLOUR ASSOCIATES 8383 WILSHIRE BLVD, STE. 290 BEVERLY HILLS, CA 90211

### 4.0 Circulation

#### 4.2 Haul Routes

The proposed Haul Route (and proposed alternatives) will be established in coordination with the City of Hermosa Beach to minimize congestion to public streets and highways. Haul routes for construction materials shall, to the extent feasible, be restricted to truck routes approved by the City of Hermosa Beach. Hauling trucks shall be directed to use commercial streets and highways, and, to the extent feasible, shall minimize the use of residential streets. The haul routes and staging areas for the Project will be established, to the extent feasible, to minimize the impact of construction traffic on nearby residential neighborhoods and schools.

#### **Preferred Haul Route requirements:**

- Minimal interface with Residential Uses during inboard travel
- Allows coordinated use of Hermosa Ave north of Pier where street dead ends Lack of traffic
- Closeness of queuing opportunities. Queing area is not directly in front of residences
- Allows right turn in and out of 13th Street / Hermosa Ave. intersection
- Outbound runs utilize Herondo wider multi-lane street with deep left turn lanes at PCH / Herondo intersection

Where necessary, flagmen with communication devices shall be used to coordinate hauling activities, in particular, ingress and egress on public streets. Permits for oversized or overweight loads, if any, on haul routes will be obtained from the proper authority. Such permit loads will be subject to the conditions of the permit at the time of issuance. See 4.1.3A for Preferred In and Out-Bound Haul Route for both excavation export and construction material import to project site.

#### 4.3 Proposed Export Locations

Due to timing and availability of export locations, we anticipate that excavation export may utilize either Manning pit (Irwindale), or Waste Management's Azuza pit. We have also begun investigation with adjacent municipalities regarding utilizing sand export for shoreline replenishment. This negotiation is ongoing and will be readdressed at start of actual construction.

### 4.2 - Proposed Inbound and Outbound Preferred Haul Routes



### 4.0 Circulation

#### 4.4 Construction Traffic Schedule

To the extent feasible, the arrival and departure of construction trucks shall occur outside of and be minimized during peak a.m. and p.m. commute hours.

#### 4.5 Construction-Related Parking

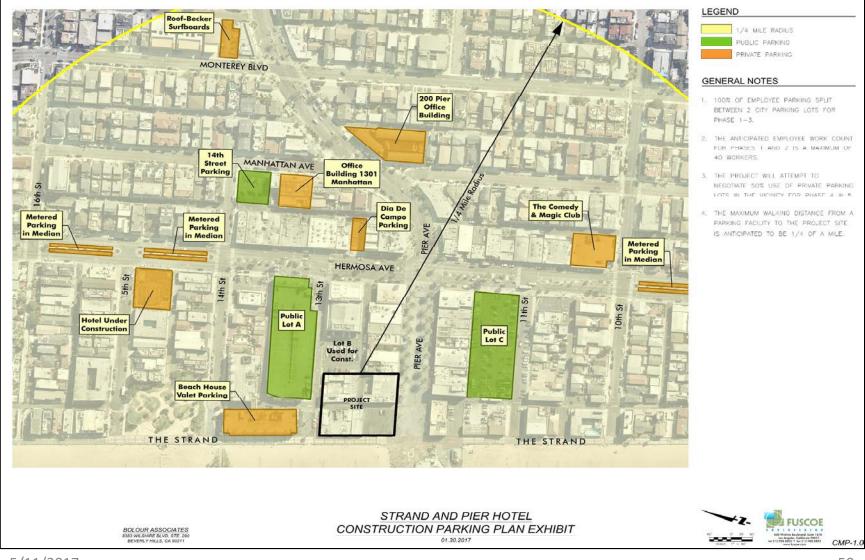
Project is proposing to utilize a combination of adjacent public lots and private parking structures for the worker parking needs. During Phase 1 & 2 and a portion of Phase 3, supervising staff and workers may be able to park within the Lot B staging area and preclude the need to utilize off site parking. For all proposed weekend work, workers will park onsite. Due to subcontractor agreements, required worker parking must be within a ¼ mile distance of the project site. Due to this provision, lots east of Valley Drive are currently not being considered. Shuttle transportation has been reviewed and was found to increase project schedule by approximately 10 percent and adds additional impacts to traffic, air quality and interference with school and municipal activities.

See Exhibit 4.4 for possible locations for both private and public parking solutions. Due to unknown project start timing, it is impossible to secure long term parking utilization agreements with private entities.

#### 4.6 Pedestrian Safety and Access

Project has gone to great lengths to allow continuation of pedestrian access from both Beach Drive and Parking Structure C to the Strand and beach activities.

### 4.5 - Construction Parking @ Public & Private Lots within ¼ Mile of Site



5/11/2017

### 4.7 - Use of New Parking Garage (During Construction)

#### 4.7 INABILITY TO UTILIZE GARAGE FOR WORKER / EMPLOYEE PARKING

Project team has explored the ability to possibly utilize the newly established parking garage for worker and employee parking. Due to multiple impediments, the garage cannot be utilized as a parking solution during the entire duration of the project.

Listed below are issues that impede the use of the parking garage during each phase of construction:

- Phase 1 & 2 Parking will utilize Lot B
- Phase 3 Concrete Superstructure From P-2 to Roof 5 Months
  - a. Re-shoring superimposed construction loads from floors above to supporting slab systems.
  - b. Fire sprinkler piping installation Main and Branches
  - c. Electric Room buildout
- Phase 4 Exterior Skin / Interior Build-Out / Site Work 10 Months
  - a. Ductwork stockpile and installation
  - b. Electrical / Plumbing conduit stockpiling / secure fixture stockpiling
  - c. Electrical Fixture installation
  - d. Elevator staging for buildout
  - e. Stair staging for buildout
  - f. Parking controls / gates installation
- Building Completion
  - a. FFE- stockpile in secure lockers for identification and distribution in finished building

## **STRAND & PIER HOTEL**

**Construction Management Plan** 

## 5.0 Air Quality Controls

## **5.0 AIR QUALITY CONTROLS**

### **5. AIR QUALITY CONTROLS**

### 5.1. Fugitive Dust Control Plan

The General Contractor shall implement a fugitive dust control program during construction pursuant to the provisions of South Coast Air Quality Management District 5 ("SCAQMD") Rule 403, which requires the implementation of Reasonably Available Control Measures ("RACM") for all fugitive dust sources. The General Contractor shall also comply with the Air Quality Management Plan ("AQMP"), which identifies Best Available Control Measures ("BACM") and Best Available Control Technologies ("BACT") for area sources and point sources, respectively.

### **Dust Mitigation Plan**

- Screen installation around perimeter fence
- Dust control measures will be conducted inside site during earth moving activities
- Continuous street sweeping of general vicinity up to Herondo street when hauling
- Maintenance of a clean building site at all times

### 5.2. Dust Fences

The General Contractor will phase and schedule demolition activities in order to reduce dust emissions and will install dust fences at least four feet in height atop all fencing erected at the perimeter of the Project site during demolition activities. Dust fences of between three and five feet in height shall be used elsewhere as appropriate to implement the SCAQMD Rule 403 fugitive dust plan.

### 5.3. Watering

The General Contractor shall keep the construction area sufficiently dampened to control dust caused by grading and hauling, and at all times shall provide reasonable control of dust caused by wind. All loads shall either be sufficiently watered or securely covered to prevent excessive amounts of dust.

## **5.0 AIR QUALITY CONTROLS**

### **5. AIR QUALITY CONTROLS**

### 5.4. Cessation of Grading Activity Due to Smog

The General Contractor will not perform any grading activities during second stage smog alerts.

### 5.5. Equipment Operation and Maintenance

The General Contractor shall maintain and operate construction equipment so as to minimize exhaust emissions. All construction equipment shall be properly tuned and maintained in accordance with manufacturers' specifications. During construction, trucks and vehicles in loading and unloading queues will turn their engines off when not in use to reduce vehicle emissions. Construction emissions should be phased and scheduled to avoid emissions peaks and discontinued during second-stage smog alerts.

### 5.6. Idling

All construction vehicles shall be prohibited from idling in excess of ten minutes, both on-site and off-site.

### 5.7. Use of Generators

Electricity from power poles rather than temporary diesel- or gasoline-powered generators shall be used to the extent feasible.

### 5.8. Coatings and Solvents

The General Contractor shall use coatings and solvents that are consistent with applicable SCAQMD rules and regulations.

## **STRAND & PIER HOTEL**

**Construction Management Plan** 

6.0 Noise Quality Controls

## **6.0 NOISE CONTROLS**

### 6. NOISE CONTROLS

#### **6.1. Construction Hours**

All on-site construction activities that generate noise in excess of 75 dBA at a distance of 50 feet shall be limited to between 7:00 a.m. and 6:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday, unless extension of such hours is approved by the City.

#### 6.2. Noise Barriers

Natural and artificial barriers such as ground elevation changes and existing buildings can shield construction noise. During the initial stage of construction, including site demolition and site preparation/excavation, and when construction activities are within 200 feet of the southwestern boundary of the site, an eight-foot temporary sound barrier (e.g., wood fence), with at least one-half inch thickness, shall be erected at the southwest corner of the Project site extending 200 feet along Constellation Boulevard and Avenue of the Stars.

### **6.3. Equipment Controls**

#### 6.3.1 Noise Control

The General Contractor and its subcontractors will inspect construction equipment to ensure that such equipment is in proper operating condition and fitted with standard factory silencing features. Construction equipment shall use available noise control devices, such as equipment mufflers, enclosures, and barriers. Additionally, pile drivers shall be equipped with noise control having a minimum quieting factor of 10 dBA.

### 6.3.2 Limited Idling

Engine idling from construction equipment, such as bulldozers and haul trucks, shall be limited to the extent feasible.

## **STRAND & PIER HOTEL**

**Construction Management Plan** 

7.0 Hazardous Materials Controls

## 7.0 HAZARDOUS MATERIALS CONTROLS

### 7. HAZARDOUS MATERIALS CONTROLS

### 7.1. In General

Construction contracts shall include provisions requiring continuous compliance with all applicable federal, state, and local government regulations and conditions related to hazardous materials and waste management.

Applicable Reports that are not contained in this Construction Management Plan but have been submitted to the City include the following:

- Phase 1 Environmental Site Assessment by Environmental Solutions dated 12/24/2015
- Methane Gas Testing Memorandum by CPI Geologic and Environmental Services dated 4/27/2016

### 7.2. Soil and Groundwater Contamination

Any contaminated soil, groundwater, and/or toxic materials encountered during excavation and grading shall be evaluated and excavated/disposed of, treated in-situ, or otherwise managed in accordance with applicable regulatory requirements. If contamination is discovered during grading activities, grading within such area shall be temporarily halted and redirected around the area until the appropriate health and safety measures are implemented and any required investigation and/or remediation is conducted pursuant to all applicable laws and regulations so as to render the area suitable for grading activities to resume.

### 7.3. Asbestos

In accordance with SCAQMD Rule 1403, pre-demolition building surveys will be performed to identify regulated asbestos-containing building materials that would be removed by a certified asbestos containment contractor prior to demolition. In the event that asbestos removal is necessary, all asbestos-containing materials will be removed prior to any activity that potentially may disturb the materials, and prescribed procedures, such as the use of leak-tight containers or wrapping, will be used. Any asbestos-containing material required to be removed will be disposed of as required by applicable regulations for the disposal of hazardous waste.

The General Contractor will provide advance notice of asbestos removal and related building demolition activities to the necessary regulatory oversight agencies in compliance with applicable legal requirements.

## 7.0 HAZARDOUS MATERIALS CONTROLS

### 7. HAZARDOUS MATERIALS CONTROLS

### 7.4. Lead-Based Paint

A licensed Lead-Based Paint Inspector shall be retained to confirm whether any lead-based paint or lead-based paint containing materials ("LBPCM") are present within the structures to be demolished on the Project site. In accordance with applicable legal requirements, the removal of any lead-based paint and LBPCM will be conducted in compliance with the comprehensive set of California regulatory requirements designed to ensure the safe handling and disposal of these materials.

#### 7.5. Routine Maintenance

Hazardous materials generated as a result of routine maintenance of construction-related equipment will be disposed of in accordance with legal disposal procedures.

## **STRAND & PIER HOTEL**

**Construction Management Plan** 

8.0 Water Quality Controls

## 8.0 WATER QUALITY CONTROLS / SOLID WASTE MANAGEMENT

### 8. WATER QUALITY CONTROLS / SOLID WASTE MANAGEMENT

### 8.1. In General

The General Contractor will control water quality in order to ensure compliance with all applicable federal, state, and local government requirements. To the extent feasible, Best Management Practices ("BMPs") will be incorporated in the water quality control plan to control construction run-off quality.

### 8.2. Site Drainage

During construction, drainage of the Project site shall be disposed of in a manner satisfactory to the City Engineer and the Regional Water Quality Control Board.

### 8.3. Surface Water Quality

The General Contractor will comply with the National Pollutant Discharge Elimination System ("NPDES") Construction General Permit requirements, which include, in relevant part, the preparation of a Stormwater Pollution Prevention Plan ("SWPPP"). The General Contractor will file a Notice of Intent with the State Water Resources Control. The SWPPP will specify BMPs that would be implemented to reduce the level of pollutants that could be present in stormwater discharges from the site during construction.

### 8.4. Subsurface Water Quality

If, during excavation and construction of the subterranean parking structure, groundwater is encountered, the groundwater would be tested in accordance with NPDES Permit requirements.

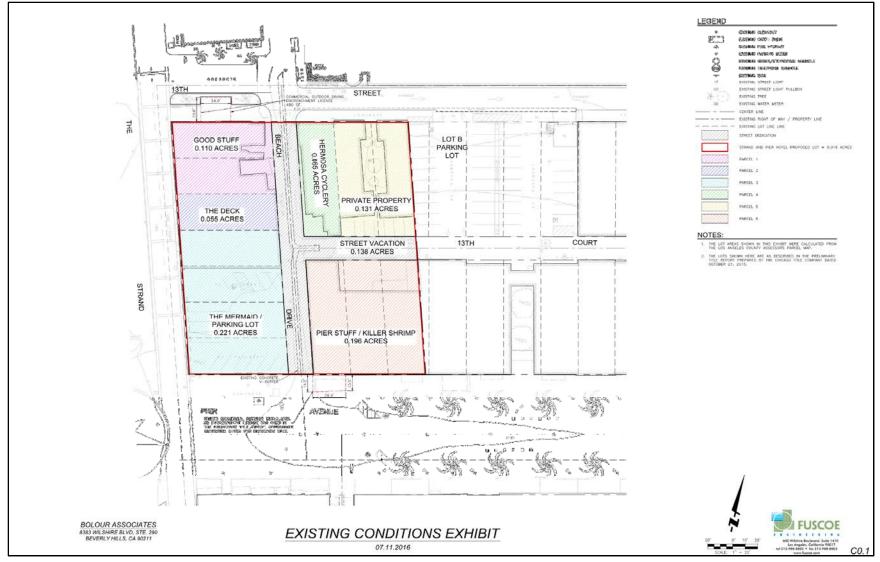
### **8.5 SOLID WASTE MANAGEMENT**

The General Contractor shall salvage and recycle construction and demolition materials to the extent feasible. The General Contractor shall prepare a recycling plan for demolition and construction waste, and documentation of the recycling plan will be provided to the City of Hermosa Beach Department of Public Works. The General Contractor and its subcontractors shall implement measures for the recycling of demolition and construction debris, including utilization of subcontractors specializing in demolition and construction waste management, to reduce the volume of solid waste going to landfills to the extent feasible in furtherance of the City's goal of 65% percent of non-hazardous construction and demolition debris be diverted from Landfill disposal.

## **STRAND & PIER HOTEL**

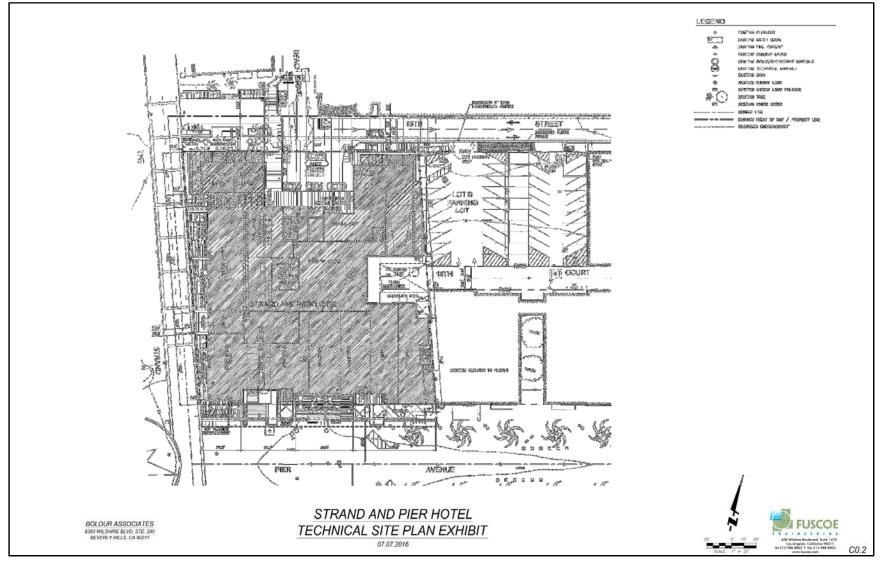
**Construction Management Plan** 



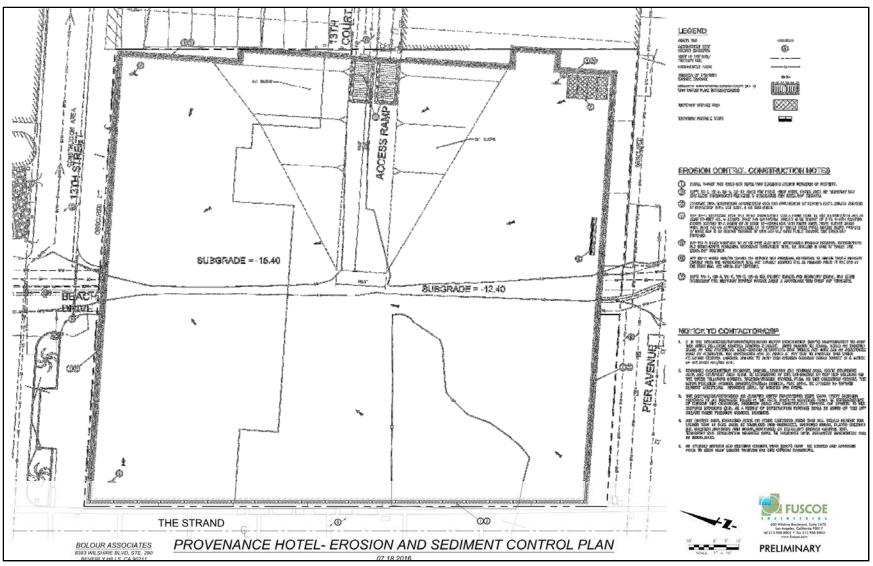


### <u>Appendix – Exhibit A : Existing Conditions Exhibit</u>

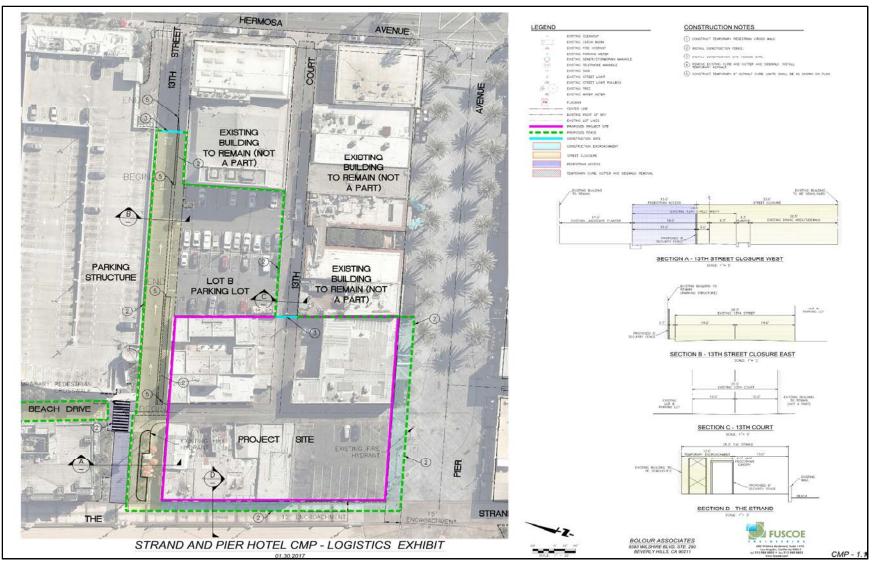
## <u>Appendix – Exhibit B : Technical Site Plan</u>



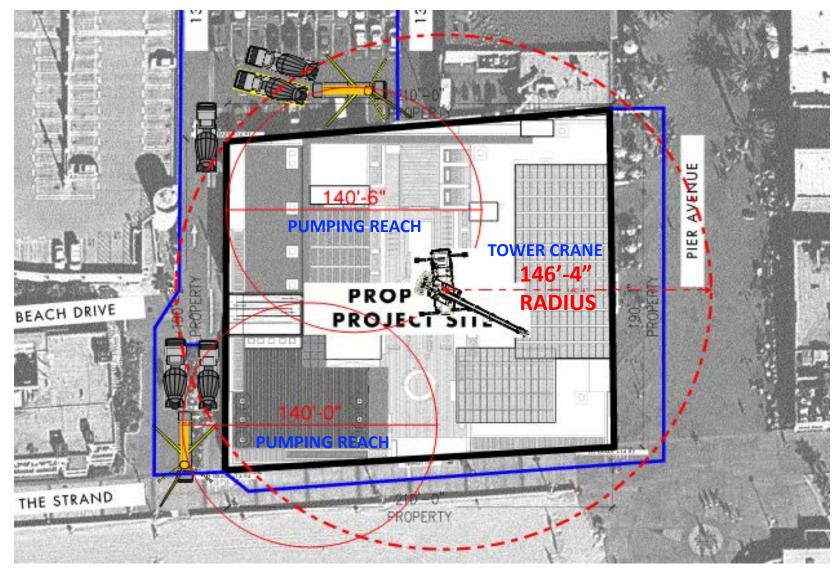
## Appendix – Exhibit C : Erosion and Sediment Control Plan



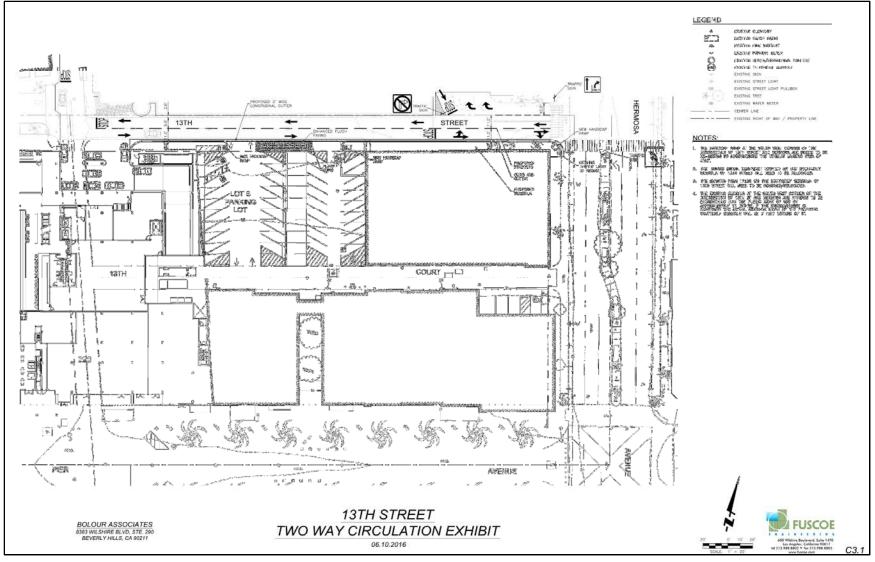
## Appendix – Exhibit D : Site Logistics Plan



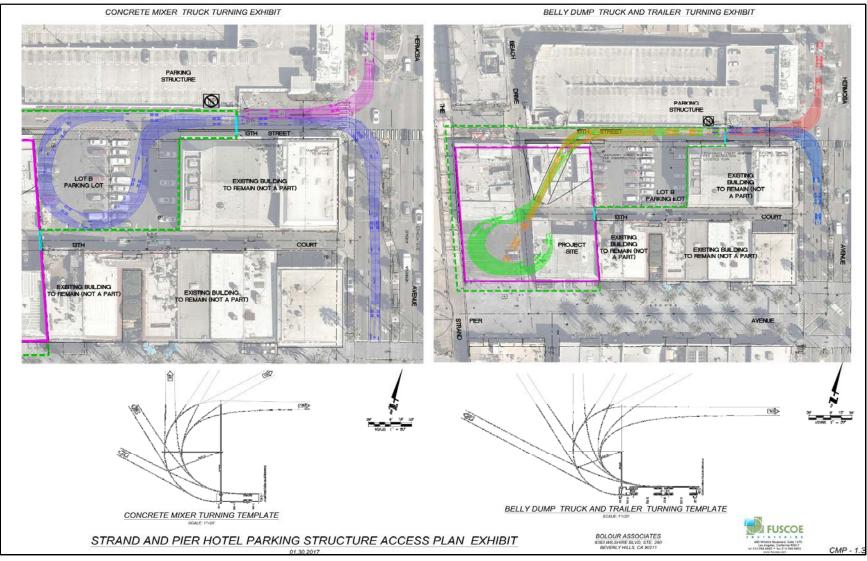
## Appendix – Exhibit E : Tower Crane / Swing Radius



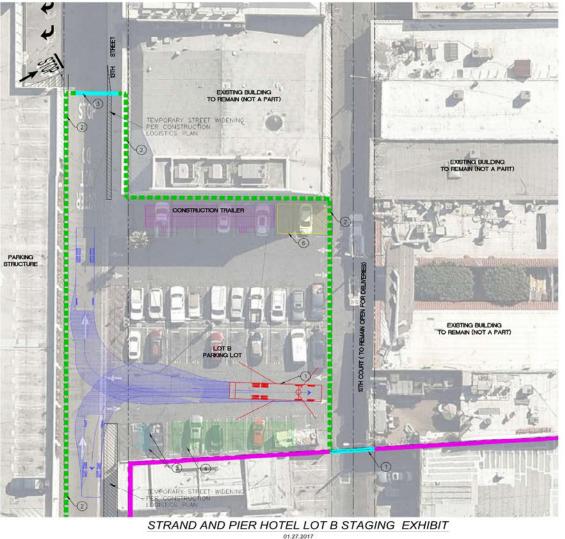
## Appendix – Exhibit F: 13<sup>th</sup> Street – 2 Way Circulation Plan

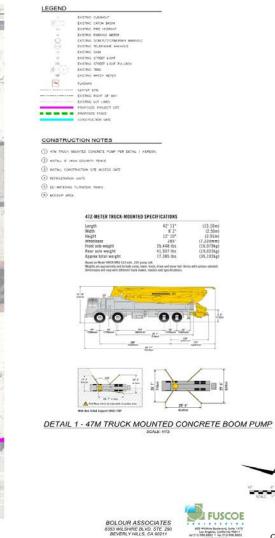


## Appendix – Exhibit G : Truck Access and Radius Plans

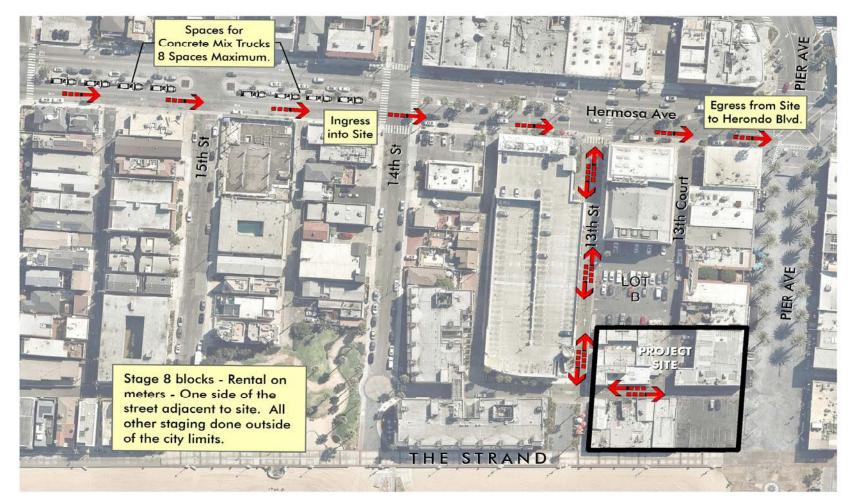


## Appendix – Exhibit H : Lot B Layout and Circulation Plan





## Appendix – Exhibit I : Construction Access & Off Site Staging Plan

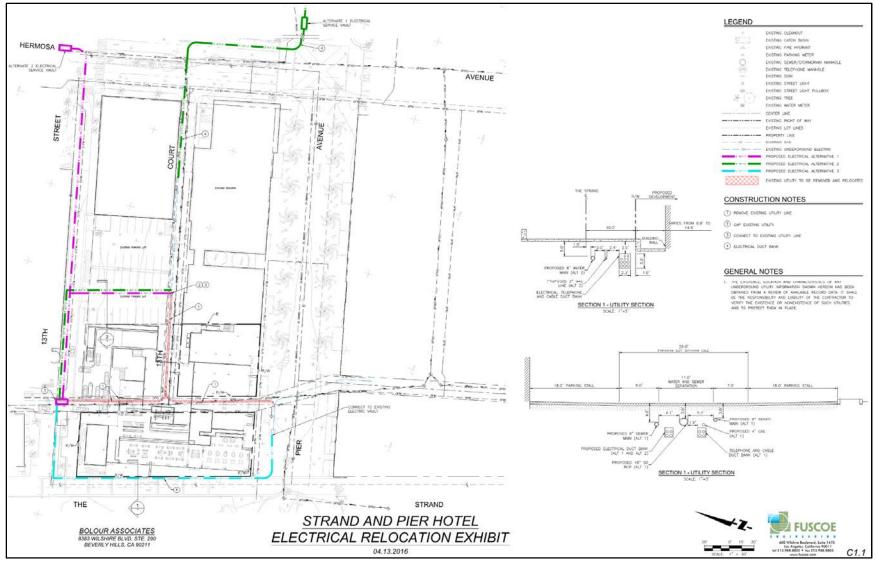


BOLOUR ASSOCIATES 4343 WILSHIRE BLVD, STE. 290 BEVERLY HILLS, CA 90211 STRAND AND PIER HOTEL CONSTRUCTION TRUCK STAGING AND ACCESS PLAN EXHIBIT

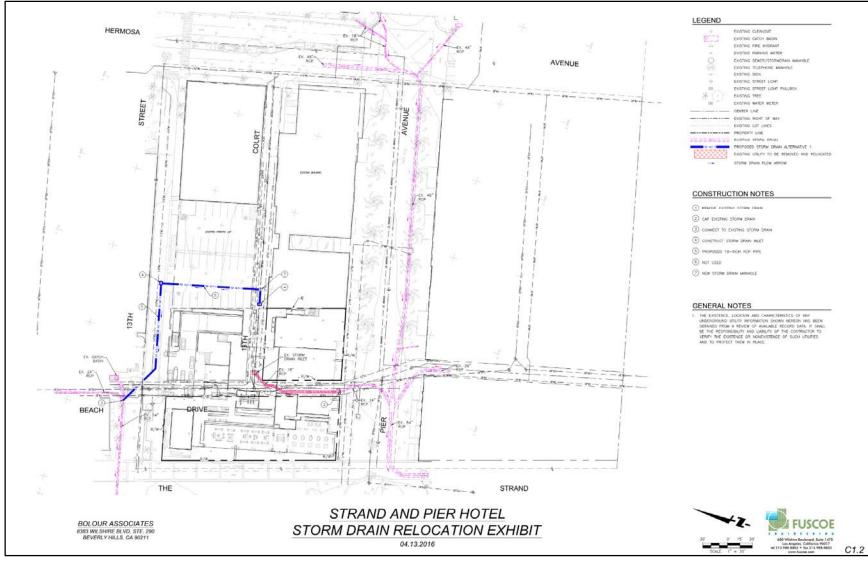


<u>Appendix – Exhibit J : Utility Relocation Options</u>

Strand & Pier Construction Management Plan



## Appendix – Exhibit J : Electrical Relocation Options

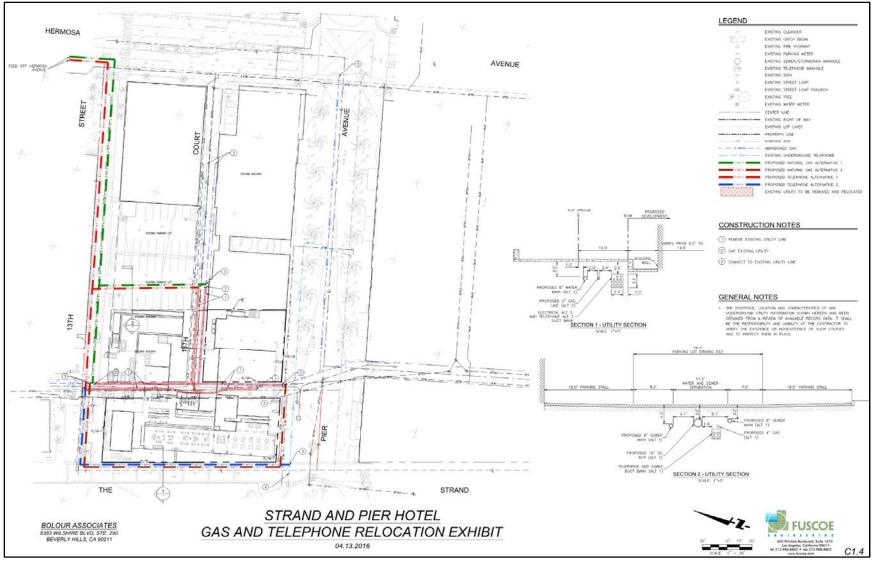


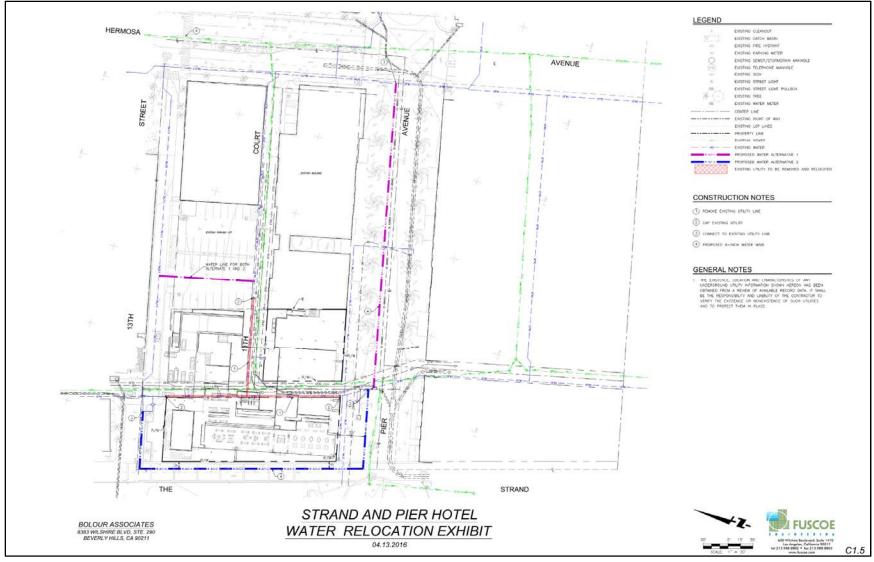
## <u>Appendix – Exhibit J : Storm Drain Relocation Options</u>



## <u>Appendix – Exhibit J : Sewer Relocation Options</u>

## <u>Appendix – Exhibit J : Gas and Telephone Relocation Options</u>





## <u>Appendix – Exhibit J : Water Relocation Options</u>

<u>Appendix – Exhibit K : Dewatering Methodologies</u>

Strand & Pier Construction Management Plan

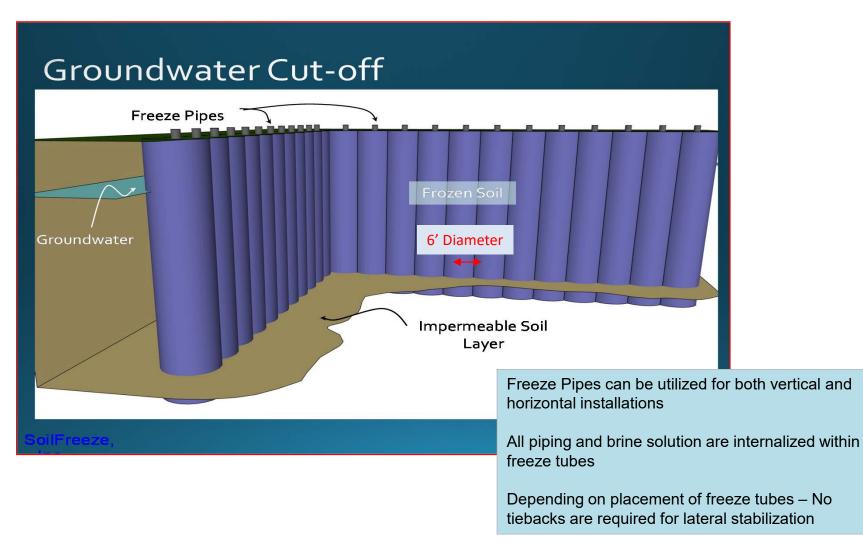
## <u>Appendix – Exhibit K : Dewatering Methodologies</u>

	SYSTEM		FEASIBILITY		PROS		CONS
Option 1	DSM wall with De-watering	•	NOT FEASIBLE	•	Provides stability to perimeter of excavation Seals perimeter from water intrusion	• • • •	Requires tie-backs and potential horizontal bracing Generates high PH spoils to be processed and removed from site continuously (2,400cy) Requires large laydown areas for equipment and grout plant. Requires perimeter trench (by GC) 4 weeks / loud activities with drilling operation Storm drain not sized for required discharge for storm events
Option 2	Ground Freezing	•	FEASIBLE	•	Potential for significant reduction of loads on shoring and tiebacks. Potential elimination of shoring system. Potential for substantial schedule savings If equipment fails, thawing will take weeks, eliminating need for backup generator Reduced environmental impact	•	Stationary equipment throughout process. Early electrical work will be required and provide disconnects to equipment. Design may call for larger mat foundation if tie-downs are not utilized at bottom.
Option 3	DSM wall and Jet grouting bottom seal	•	POTENTIALLY FEASIBLE	•	Work for perimeter DSM wall and bottom jet grouting can occur simultaneously Bottom seal is a solution to mitigate ground water if an impermeable, hard layer is not found with additional borings.	• • •	Jet grouting bottom seal will require 8,100cy of high ph export Long term loud activities on site. Continuous / daily grout deliveries, spoil removals Large, heavy equipment presence on site
Option 4	Sheet piling with de-watering	•	NOT FEASIBLE	•	Sheet pile installation roughly the same as soil mixing perimeter wall. (2 day setup, 22 day install, 2 day de-mobilize) Silent piler rig with continuous flight auger (model # SCZ675-SM)	• • • • •	Very loud activity Longer duration than soil mixing Requires tieback installation (87) Requires sediment control trench (by GC) Storm drain not sized for required discharge for storm events
Option 5	Sheet piling and Jet grouting bottom seal	•	POTENTIALLY FEASIBLE	•	Provides stability to perimeter of excavation Seals perimeter from water intrusion	•	2 contractors on small site for perimeter and bottom seal would be difficult to manage and would also not be as effective to combine 2 activities within (1) 65 day duration Jet grouting bottom seal will require 8,100cy of high ph export Requires large laydown areas for equipment and grout plant. Requires perimeter trench (by GC) 4 weeks / loud activities with drilling operation

<u>Appendix – Exhibit L : Ground Freezing – Ground Water Mitigation</u>

Strand & Pier Construction Management Plan

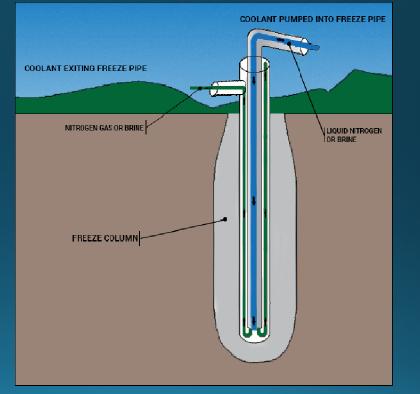
## Soil Freezing Installation Methodology



## Soil Freezing Installation Methodology

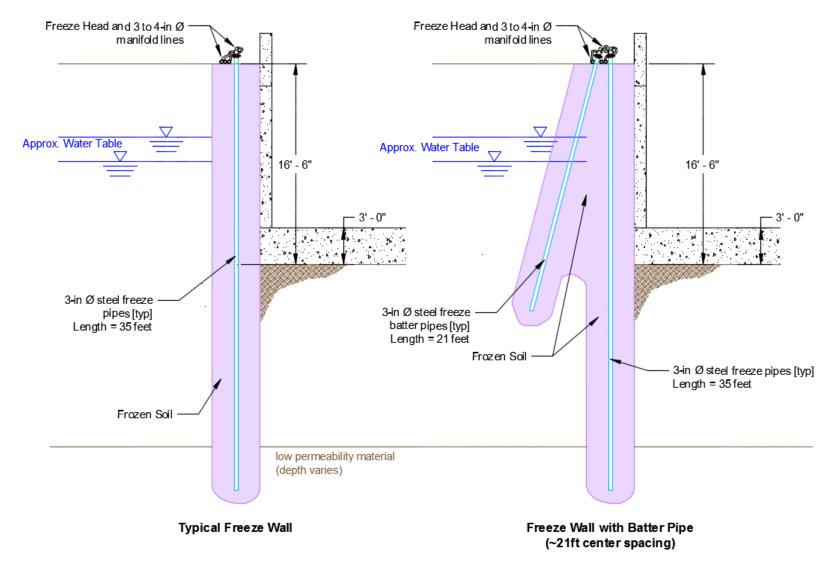
## Ground Freezing Components

- Freeze Pipes
- Freeze Heads and Manifolds
- Chiller Units
- Electrical Power
- Calcium Chloride Brine
- Instrumentation

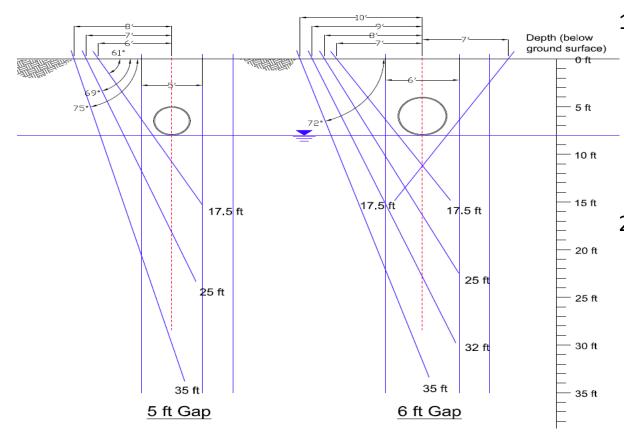


www.soilfreeze.com

## Freeze Pipe Installation



## **Ground Freezing at Existing Utilities**



- Areas of freezing

   are pre determined based
   on existing
   underground
   utility locations
- Freeze pipes are installed below u/g utilities at 60 to 70 degree angle

## Soil Freezing Equipment

## **Chiller Units**

- Size ranges from 20 to 500 tons of chilling capacity.
   Sized to fit each project.
- Brine is chilled as it passes over baffles in specially designed chambers
- Primary Refrigerant is R507
- Highly automated and very reliable



Anticipated Machinery and Power Requirements : (5) units for Perimeter Freeze – (2) for Continuity 3-phase 240V, 150A to 200A per chiller

## **Environmental Advantages**

## Ground Freezing Advantages

- Effective in all soil types (sand, gravel, silt, clay and peat or a mix soil condition)
- Easily installed
  - Good in tight areas or low overhead.
  - Little to no vibrations during installation
  - Adaptable to any site or geometry
- Forms around and below existing buried utilities
- Impermeable Eliminates or greatly reduces dewatering and water treatment costs
- Environmental All electric Equipment, nothing is injected or mixed with the existing soils. At completion, the soil returns to its preconstruction condition.

<u>Appendix – Exhibit M : Hydraulically Pressed Sheet Pile System</u>

Strand & Pier Construction Management Plan

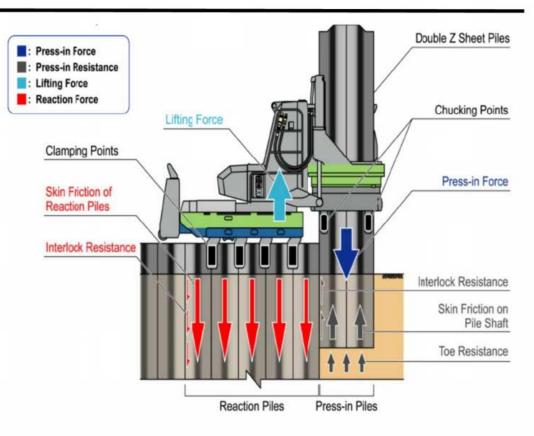
## Sheet Pile Installation Example



### Press-In Sheet Pile Installation Method

### **The Press-In Principle**

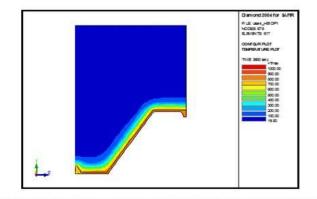
Conventionally, prefabricated piles have been pounded or vibrated into ground. Such methods the inevitably generate excessive noise and vibration because of their reliance on percussive or vibratory energy. Press-In machines have been developed and are based on the principle of non-pollutive pile installation techniques. In practical terms, the Silent Piler grasps previously installed piles and derives reaction force from the skin friction and interlock resistance of these reaction piles. This reaction force provides enables the press-in force to be derived to hydraulically jack subsequent piles into the ground.

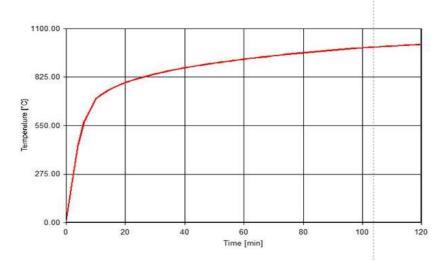


Sheet Piling Perimeter Wall Fire Rating

# **Design: Fire Rating**

- Fire Rating
  - Fire testing
  - ASTM E119 standards
  - 4 hour rating for vertically loaded wall







<u>Appendix – Exhibit N : Rejected Haul Route Alternatives</u>

Strand & Pier Construction Management Plan

## **3.0 Construction Activities**

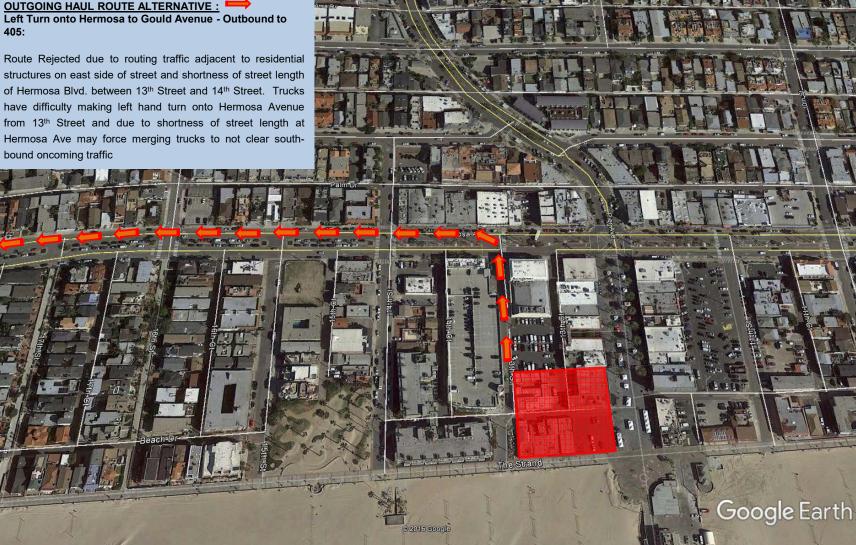


### **3.0 Construction Activities**

#### OUTGOING HAUL ROUTE ALTERNATIVE :

405:

structures on east side of street and shortness of street length of Hermosa Blvd. between 13th Street and 14th Street. Trucks have difficulty making left hand turn onto Hermosa Avenue from 13th Street and due to shortness of street length at Hermosa Ave may force merging trucks to not clear southbound oncoming traffic



### **3.0 Construction Activities**

#### INCOMING HAUL ROUTE ALTERNATIVE :

Left Right onto Hermosa Blvd from Herondo Street -Inbound to Site:

Route Rejected due to routing traffic adjacent to commercial structures on east side of street and difficulty of turning left onto 13<sup>th</sup> Street to access site – due to length of Hermosa Blvd left turn lane at this intersection. If AES Site is utilized for staging, trucks have difficulty making right hand turn onto Hermosa Avenue from AES access street without driving into south-bound oncoming traffic

vndon St

Herondo St

67 SPACES AT AES LOT

5/11/2017

**RIGHT HAND TURN** 

OUT OF AES LOT AND ONTO HARBOR BLVD. CANNOT BE MADE WITHOUT GOING INTO ONCOMING SOUTH LEFT HAND TURN LANE

(acht Club Way

400