

DRAFT

Site Selection Study

Downtown Parking Deck



Prepared For:
City of Fayetteville, Arkansas

November 16, 2012



Cover Letter Introduction

November 16, 2012

Mayor Lioneld Jordan
City of Fayetteville
113 West Mountain Street
Fayetteville, AR 72701

Re: Fayetteville Downtown Parking Deck
Site Selection Study

Dear Mayor Jordan,

We are pleased to submit this Site Selection Study to the City of Fayetteville for the Downtown Parking Deck. The design team comprised of Garver, Carl Walker, Inc., AFHJ Architects, KBA Architects, and Grubbs, Hoskyn, Barton & Wyatt has worked closely with David Jurgens and the City's project team along with the staff at the Walton Arts Center to study the four proposed locations for a parking deck near the Downtown/Dickson Street area. This report contains details of our study, results of the public involvement meetings, and comparisons of the sites to assist the City in the selection process.

Please call me if you have any questions.

Sincerely,

GARVER, LLC

Ron Petrie, P.E.
Senior Project Manager

Engineer's Certification

I hereby certify that this Site Selection Study for the Downtown Parking Deck was prepared by Garver under my direct supervision for the City of Fayetteville, Arkansas.

Ron Petrie, PE
State of Arkansas PE License 9113



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1.0 Background

1.1 Prior Study

A Master Plan was adopted by the City Council in April of 2004 for the Downtown / Dickson Street area. Following the Master Plan adoption, the City and the University of Arkansas hired Martin Alexiou Bryson (MAB) to study parking in the area. The study, completed in August 2005, concluded that a 1,200 space deck was required based on the assumption that certain planned developments would occur. The study identified that 800 additional parking spaces were needed for the area if the Walton Arts Center had no changes in operation. Adding in the potential 2,500 seat theater, the parking shortfall grew to 1,200 spaces. While the theater expansion did not occur, much other commercial development has taken place. Lack of convenient parking is still one of the most common complaints the City receives about the downtown Dickson Street area.

1.2 Meetings Prior to Site Selection Study

On September 21, 2011 a Parking Deck Citizens Advisory Committee Meeting was held at 10:00 a.m. in City Hall Room 326 and was an Informational and Public Input Session.

On October 5, 2011 a Parking Deck Citizens Advisory Committee Meeting was held at 10:00 a.m. in City Hall Room 326 and was an Informational and Public Input Session.

On October 25, 2012 a City Council Agenda Session regarding Parking Bonds was held at 4:30 p.m. in City Hall Room 326 and was an Informational Session.

On November 1, 2011 a City Council Meeting regarding Parking Bonds was held at 6:00 p.m. in City Hall Room 219 and was an Informational and Public Input Session.

On November 2, 2011 a Parking Deck Citizens Advisory Committee meeting was held at 9:00 a.m. in City Hall Room 111 and was an Informational and Public Input Session.

On November 8, 2011 a City Council Agenda Session regarding Parking Bonds was held at 4:30 p.m. in City Hall Room 326 and was Informational Session.

On November 14, 2011 a Town Hall Meeting was held at 7:00 p.m. at the Boys and Girls Club and was an Informational and Public Input Session.

On November 15, 2011 the City Council passed Ordinance No. 5457 authorizing the issuance and sale of not to exceed \$6,500,000 of parking revenue improvement bonds for the purpose of financing all or a portion of the costs of acquisition, construction and equipping of a parking deck facility.

On November 23, 2011 a Parking Deck Citizens Advisory Committee Meeting was held at 9:00 a.m. in City Hall Room 326 and was an Informational and Public Input Session.

On December 16, 2011 Request for Qualifications (RFQ) for the design of a downtown parking deck were submitted.

On February 21, 2012 the City Council approved Resolution No. 42-12, a contract for preliminary site evaluation of a downtown/entertainment district parking deck.

1.3 Project Team

The Design Team is led by Garver and includes representatives of Carl Walker, Inc., AFHJ Architects, KBA Architects, and Grubbs, Hoskyn, Barton, & Wyatt. The City Parking Deck Team, led by City Utilities Director David Jurgens, consists of City parking program personnel, planning staff, accounting staff, and construction management and inspection personnel. Additionally, in May 2012, the Walton Arts Center hired Boora Architects to evaluate the Walton Art Center's short and mid-range expansion needs and to identify how these expansions can integrate well with potential deck configurations. This ensures that a well thought out, integrated and comprehensive design will be developed that both meets the needs of today and allows for expansions of the future. Because the Walton Arts Center sits on one of the blocks where the deck may be built, close integration of future expansion needs is critical.

2.0 Introduction

2.1 Project Description

This project will consist of a parking deck structure located in the Downtown / Dickson Street area that meets the desired objectives stated below.

2.2 Desired Objectives

- A net gain of approximately 300 parking spaces.
- Maintain a total project budget of \$5.5 million.
- Minimize disruption of local residents and commercial properties.
- A facility that will meet or exceed all City regulations and planning documents.
- Ability to expand in the future.

2.3 Selection Criteria

The following criteria, in no particular order of priority, are used in this report to evaluate each of the four proposed sites.

2.3.1 Functional

Internal Circulation and Efficiency

The proposed design must result in a structure that has a straight forward circulation without dead-end pockets and doesn't have an excessive number of turns and way-finding due to the height of the structure. The parking design level of service must be compatible with the anticipated user groups while still maintaining an economical parking efficiency (square feet/car). Vehicular circulation and way-finding must also be safe and work compatibly with pedestrian way-finding in the garage, while maintaining pedestrian safety. Ramping within the garage should also work with existing site topography rather than against whenever feasible.

Vehicular Access Points, Ingress/Egress

It is preferable that the structure provides multiple points of ingress and egress from multiple levels in order to reduce the wait time at the point of egress. This is most critical during event parking when all users egress at the same time. The number of entry/exit lanes must be appropriate for the parking capacity provided as well as the peak-hour flow volumes anticipated in a special event garage. Creative use of site topography to integrate multiple points of ingress/egress is also desired.

Interface with Surrounding Street System

During event parking, it is critical for this structure to allow options for discharging the traffic in a way that minimizes overloading the existing street systems. Multiple exit routes from the garage are desired, allowing patrons to have options for integrating back into the city street system. Entry and exit vehicular queuing and stacking must be compatible for the level of service required for the anticipated user groups.

Pedestrian Access

For general downtown use, it is important that the patrons have easy access to a pedestrian network system that can assist them in reaching their destination in the entertainment district. Location of the deck should provide convenient access to major attractions and avoid hidden lines of sight. Minimum conflict with vehicular traffic should be the goal in order to promote a safe environment. The parking garage should be oriented with pedestrian flow to and from key downtown destinations in mind. This will impact the location of stair and elevator towers as well as the orientation of drive aisles within the garage.

Bus Parking and Drop-Off

The Walton Arts Center hosts many events during the day for school aged children. Large areas for school bus parking and drop-off need to be maintained for these events. The number of school buses has been recorded to reach 30 during these events.

Passive and Active User Safety Factors

The design and location of the structure should provide for a safe way for cars and pedestrians to interact and connect to vehicular and pedestrian networks on their way to their destination. Unsafe pockets that discourage patrons from parking in such locations should be avoided, and open and well lit areas should be provided. Clear and open sight lines within the garage, as well as into and out of the garage from its exterior, should be maximized. The ability to provide openly visible stairs and elevators in the garage should factor into site selection alternatives.

2.3.2 Design

Architectural Vocabulary

The exterior design of the facility should fit within and respect the context of the structure. It is our opinion that the structure should show sensitivity to scale, materials and colors of the surrounding buildings. While we don't advocate mimicking every detail of the surrounding buildings, we do believe that through clever and intelligent use of materials and colors we should develop a design that reflects a modern building that looks its age and doesn't pretend to be something it is not, while respecting the neighborhood flavor and texture.

Urban Design Principals

We believe that a structure such as this has to meet the challenge of meeting good urban design practices. These include proper massing and scale relative to the surroundings that contribute to defining a city block and efficient use of land as an infill project that preserves valuable and flexible land for future development of the downtown Fayetteville in line with long term vision created by the Downtown Master Plan.

Use of Green Building Principles

Sustainable design is a responsible design. These principals should be explored and evaluated for the short and long term cost benefits and promote Fayetteville's vision stated in City Plan 2030.

Structural System and Design

The structural system for the garage should seek to provide both first cost economy as well as life cycle cost economy by providing a durable solution with a minimum service life of 50 years. Multiple structural system alternatives (primarily Cast-In-Place Post-Tensioned Concrete and Precast-Prestressed Concrete) should be taken into account during site selection. Floor to floor heights in the garage shall provide appropriate structural headroom for both code clearances as well as the open visibility headroom and level of service desired for this anticipated user group. Site selection will also take into account the ability to create cost-effective, symmetrical, traditionally and repetitively framed garage solutions. Certainly a long-clear span construction column grid framing will be desired for maximum openness and parking efficiency.

Impact on Neighboring Properties

A responsible architectural design based on sound urban design principals takes into account the effect of the structure on the neighboring properties in terms of property values, views, scale, as well as light and sound pollution.

2.3.3 Future

Future Expansion of Parking Deck

Future expansion can be achieved in various ways. Vertical expansion is more costly and disruptive on the existing parking structure. For safety reasons, complete closure of the existing garage would be required during the construction of additional levels above. This negatively impacts existing parking supply and revenue. Horizontal expansion is more economical but it takes more land. The horizontal expansion can be achieved by either a contiguous structure or a separate structure that can be connected to the existing structure with bridging elements.

Future Expansion of Walton Arts Center

Throughout the site selection study process the City of Fayetteville made it clear that plans for the parking structure must be coordinated with future plans for the Walton Arts Center expansion. During this process we worked very closely with the Walton Arts Center and learned more about their future expansion plans and the phasing for such expansions, to ensure both plans could be integrated and executed.

Future Potential Developments

It is important to realize how locating the parking structure on a certain site will affect the flexibility for future development of that particular site. This result will then be weighed against comparing which potential development is in the best interest of the future of Fayetteville and in line with the vision set out in the Downtown Master Plan.

2.3.4 Codes and Ordinances

Room for Liner Buildings

There are different ways to meet the ordinance requirements for parking structures. The one solution, however, that contributes most to the vitality of the area is the use of liner buildings that are used for various purposes and bring more people to the area. The liner buildings also present the opportunity of breaking down the scale of the structure at the street level to a human scale.

Room for Green Space

The City of Fayetteville requires a minimum 8 foot sidewalk with tree wells every 30 feet. This allows for the green space buffer between the curb on the street and the parking structure.

Effect on Tree Canopy

Various sites are evaluated for their potential impact on existing tree canopies and whether or not any rare species will be misplaced.

Height

Height will be studied for meeting the ordinance requirement.

Fire Safety and Truck Access

Minimum uninterrupted access dimensions and paths for the fire trucks must be provided, some of which may impact the amount of surface parking adjacent to the parking structure.

2.3.5 Infrastructure

Geotechnical Investigation

The underground geotechnical exploration is crucial to a large structure such as a parking deck to determine the correct foundation type and size. Borings will be made on the selected site up to a depth of 70 feet to determine the existing characteristics.

Topography, Utilities, and Environmental Conditions

Existing topography will be taken into account when laying out the levels of the parking structure in order to maximize room and minimize cut required. Existing utilities in and around each site may have to be relocated for construction of the parking deck.

Stormwater Management

The City of Fayetteville Drainage Manual requires that the post-developed runoff be less than or equal to the pre-developed runoff amount. Each site will be evaluated for additional runoff and identify measures that could be put into place to detain and reuse the extra amount.

2.3.6 Logistics

Construction Staging

During construction, some existing surface parking areas will be disrupted in order to allow room for contractor access and storage of equipment and material.

Walton Arts Center Operation

The impact of the construction on the operation of the Walton Arts Center is evaluated and the timing and phasing of the construction must be coordinated with the scheduled events of the Walton Arts Center.

Impact on Existing Parking

Some of the proposed sites will eliminate existing surface parking more than others. These parking counts are included in the cost analysis and the net gain calculations.

Existing Structures

Some of the proposed sites may require removing or replacing existing structures on the site. The pros and cons of this item are evaluated in the study of the various sites.

2.3.7 Cost

Direct Construction Cost

This will be impacted by the number of spaces required to produce the highest number of net gain of parking spaces, depending on the number of existing spaces that will be eliminated due to placement of the parking structure. Other obvious cost issues relate to materials, structural systems, phasing, site conditions, and the elements chosen to meet the planning and ordinance requirements.

Impact on Current Parking Revenues

During construction, a certain number of surface parking spaces will not be available due to the required construction staging area. The revenue loss for these spaces is included in calculations for indirect costs of this project and comparison between various sites.

Replacement or Removal of Existing Structures

This criterion evaluates the cost and pros and cons of removing and/or replacing existing structures as well as the potential of incorporating such structures into the design of the parking structure. These

structures include the Walton Arts Center administration building, the Grub's Restaurant building, the Porter building, The Highroller Cyclery, and other existing structures.

2.3.8 Cultural Factors

Existing Events

The impact on existing events and festivals is included in the analysis of the proposed sites.

3.0 Site Description Narratives

A total of four locations are being considered for the proposed parking deck site as shown in Figure 1 on the following page.



Figure 1 - Proposed Layouts for Site Selection Study

3.1 South Lot

The South Lot is located on the southeast corner of Spring Street and West Avenue. This lot currently has a capacity of 68 cars. See Exhibit C2 in Appendix C for the conceptual layout of the South Lot. Some of the characteristics of the South Lot include:

- A minimum of 368 garage spaces must be provided in order to achieve a net gain of 300 spaces.
- Smaller footprint than the Theater and WAC lot, which typically results in a higher structure.
- Adjacent residential structures to the east and south of the property.
- Severe impact on the adjacent small scale residential properties in terms of view, natural ventilation and property values.
- Low slope terrain.
- Two-street access points available for the bottom level of the parking structure.
- No horizontal contiguous expansion; Vertical expansion only if the height limit permits.
- Off-site construction staging.

3.2 East Lot

The East Lot is located on the east side of School Avenue, across from the Walton Arts Center Administration Building. This lot currently has a capacity of 60 cars. See Exhibit C3 in Appendix C for the conceptual layout of the East Lot. Some of the characteristics of the East Lot include:

- A minimum of 360 garage spaces must be provided in order to achieve a net gain of 300 spaces.
- Smaller footprint than the Theater and WAC lot, which typically results in a higher structure.
- Adjacent residential structures to the east and south and small scale commercial properties to the north and south.
- Severe impact on the adjacent small scale residential and commercial properties in terms of view, natural ventilation and property values.
- Mid slope terrain, higher excavation cost than the South Lot.
- One-street access unless site is extended south to reach Spring Street.
- No horizontal contiguous expansion; vertical expansion only if the height limit permits.
- Off-site construction staging.

3.3 Theater Lot

The Theater Lot is located north of Spring Street, east of West Avenue, and west of School Avenue. Currently this lot does not provide any city parking; however, there are 28 spaces that are utilized by employees of the Walton Arts Center and utilized as VIP parking during events. See Exhibits C4 to C10 for conceptual layouts of the Theater Lot. Some of the characteristics of the Theater Lot include:

- 28 spaces of Walton Arts Center Administration Building parking needs to be exclusively dedicated within the new parking structure.

- Larger footprint than the East and South lots, resulting in a lower structure.
- Adjacent commercial structures, small and large scale.
- No adjacent residential property.
- Mixed slope terrain, from low to high.
- Potential direct access to three streets, from two different levels.
- Vertical and/or horizontal expansion possible on the same lot, depending on the layout.
- Potential to construct the parking deck in stages.
- Coordination with Walton Arts Center expansion required.
- Coordination with access to back stage loading and unloading area of the Walton Arts Center is required.
- Coordination with Walton Arts Center operation required.
- Demolition of the Walton Arts Center Administration Building possible depending on the layout.
- Demolition of Porter Building and Grub's Restaurant Building possible depending on the layout.
- Potential loss of \$70,000 annual income from Grub's Restaurant Building Lease.
- Most potential for an inconspicuous structure utilizing existing and future buildings.
- Overhead utility relocation.
- Minimal negative impact on adjacent residential areas.

3.4 WAC Lot

The WAC Lot is located on the south side of Dickson Street, at the southwest corner of Dickson Street and West Avenue, directly west of the Walton Arts Center. See Exhibits C11 to C17 in Appendix C for conceptual layouts of the WAC Lot. Some of the characteristics of the WAC Lot include:

- Most disruption of existing parking of all 4 sites, amount varies with the layout.
- Horizontal and vertical expansion possible.
- Potential to construct the parking deck in stages.
- One street access directly from new structure, depending on the layout.
- One or both access points through existing parking lot, depending on the layout.
- Flat terrain.
- Known subsurface challenges due to location of existing culverts and potentially poor soil.
- Larger foot print, lower height potential.
- Potential for retail on the north side.
- Existing underground utilities.
- Negative impact on small businesses to the south, in terms of view and scale.
- Coordination with existing trail system is required.
- Limits flexibility for future development of this lot, in coordination with the Downtown Master Plan.
- Available construction staging area on site / more efficient construction process.

- Negative impact on the school bus parking area both during deck construction and once the deck is built.
- Negative impact on usable space for events and festivals.
- This option would occupy a significant portion of one of the largest remaining open areas in the Entertainment District, reducing future land use flexibility.

4.0 Site Survey and Utilities Narratives

Based upon utility coordination, mapping, and field investigation, existing utilities for all lot options are shown on the Utility Basemap, Exhibit C1 in Appendix C. Utility coordination and mapping is included in the March 12, 2012 Meeting Minutes in Appendix A. The utilities include Fayetteville (water, storm and sanitary sewer), Source Gas (low/intermediate pressure Gas), AT&T (overhead and underground cable), Cox Communications (overhead fiber and coax cable), SWEPCO (overhead and underground electric), and University of Arkansas (underground fiber).

With the exception of the water system fire demand, the existing utilities have sufficient capacity to serve a parking deck. With the exception of the new 8 inch plastic water main on the south side of the WAC Lot, the existing 4 inch, 6 inch, and 8 inch water mains adjacent to the lot options are old cast iron pipes (CIP). As attested with the water and sewer maintenance, the old pipes have significant tuberculation that has reduced the flow capacity with increased roughness and decreased inside diameter (see Figure 2).



Figure 2 - Tuberculation of Old CIP Water Lines

Assuming an open type parking deck and a height restriction of six stories or approximately 84 feet, automatic sprinklers will not be required for the parking deck per National Fire Protection Association (NFPA 88A, 6.4.4). Also, in section 6.5.1 of NFPA 88A, since the parking structure would in a maximum case exceed 50 feet in height, a Class I standpipe will be required for use. A Class I system is defined in NFPA 14, 3.3.14.1 as a system that provides 2-1/2 inch hose connections to supply water for use by fire departments. The Class I standpipe system has a minimum design standard that is later outlined in NFPA 14. A minimum residual pressure of 100 psi at the outlet of the hydraulically most remote 2-1/2 inch hose connection is required. The flow rate required for a Class I system is outlined in 7.10.1.1.1 which states that Class I systems shall have a minimum flow rate for the hydraulically most remote 4" standpipe of 500 GPM through two (2) 2-1/2 inch outlets at one location.

Based upon information provided by the City of Fayetteville, the elevation of the outfall of the water storage tanks on E. Rodgers Drive is 1578 feet. The average elevation at the proposed lots is approximately 1332 feet. Fire hydrant testing data is shown on the Utility Basemap, Exhibit C1 in Appendix C. The static pressure head of an 84 foot tall building from an elevation of 1332 feet can be calculated to be approximately 70 PSI. This is below the minimum residual pressure of 100 psi for the most hydraulically remote hose connection per NFPA standards.

A similar booster pump station for all lot options will be needed to meet the fire demands per NFPA regulations. With the new booster pump, the supplying water line will need to be replaced to be able to meet the flow demands. Specifically, the existing 6 inch cast iron pipe along Spring Street will need to be replaced with an 8 inch line from the existing 12 inch along Locust Avenue to the lot option. However, additional improvements to the water system such as a 12 inch water line loop, outside what is needed for this project, should be considered for system improvements.

4.1 South Lot

The opinion of probable construction cost to replace the existing 6 inch water main with an 8 inch along Spring Street from Locust Avenue to West Avenue is \$166,000. Other overhead utilities are located outside of the lot and would not be affected.

4.2 East Lot

The opinion of probable construction cost to replace the existing 6 inch water main with an 8 inch along Spring Street from Locust Avenue to the East Lot is \$100,000. If the East Lot is expanded south to Spring Street then the overhead primary feed electric line that is located along the north side of Spring Street would require relocation. The opinion of probable construction cost to bury the overhead line is approximately \$225,000. It may be possible to relocate the overhead electric line to the south side of Spring Street to a new overhead line for an opinion of probable construction cost of \$90,000.

4.3 Theater Lot

The opinion of probable construction cost to replace the existing 6 inch water main with an 8 inch along Spring Street from Locust Avenue to the Theater Lot is \$133,000. The overhead electric line that includes COX and AT&T that is located along the north side of Spring Street is a primary feed, and the opinion of probable construction cost to bury is approximately \$240,000. It may be possible to relocate the overhead electric line to the south side of Spring Street to a new overhead line for an opinion of probable construction cost of \$100,000.

4.4 WAC Lot

The opinion of probable construction cost to replace the existing 6 inch water main with an 8 inch along Spring Street from Locust Avenue to West Avenue is \$166,000. Also, the existing University of Arkansas fiber optic and existing storm sewer pipes will need to be relocated. The opinion of probable construction cost to relocate the fiber is \$30,000, and the cost to relocate the existing double 6 foot by 6 foot box culvert to avoid the deck columns is \$92,500. Other overhead utilities are located outside of the lot and would not be affected.

5.0 Public Involvement

The first public involvement meetings associated with this study were held on April 4, 2012 from 1:30 – 3:30 p.m. and 5:30 p.m.-7:00 p.m.in the upstairs lobby of the Walton Arts Center. During these public meetings, a presentation was given and a tour of all four sites was conducted. Large helium balloons

were used to communicate the maximum height of the structure, which would be required if a 300 space parking structure were to be located on the East or South lots. The WAC and Theater lots were not studied at the same level at this point simply because there were many options possible that could vary the height from 4 to 6 stories depending on the foot print. This was presented as a starting point for discussion.

Comments were received from the first public involvement meetings until April 9, 2012. A third public involvement meeting and tour was held on April 19, 2012 for the benefit of the City Council members who could not make the other meetings. All of these meetings were open to the public.

5.1 Public Comments

As a result of these meetings, as well as the input received from on the website that was provided by the City of Fayetteville, the following comments and questions were collected:

1. Have you considered use of other nearby parking facilities such as County, Library, and Churches for shuttling service?
2. Include efficient parking such as parking on ramp as part of the criteria.
3. Make sure ramps are screened, often the intention is such but at the end the first thing that is cut from the budget is the screening of the ramps.
4. Need to justify that the parking is needed now even without Walton Arts Center before bonds are issued.
5. Without parking, redevelopment would not happen.
6. Consider delaying the project to build at the same time with Walton Arts Center once they have firmed up their plans for expansion. It will be cheaper if the entire construction is done at the same time.
7. Has future transit plans been studied by the City and is there a benefit to developing an intermodal facility?
8. What happens to Bike, Blues, and BBQ?
9. When was it determined that we need 1000 spaces for downtown?
10. Reference to the downtown master plan was made; Sell the property on the edges of the WAC lot to private developers, use the revenue, construct the parking at the same time as the private developer, collect property tax, hide the parking behind the liner buildings.
11. The Walton Arts Center will probably not add seats in our lifetimes. Wait till their Master Plan is done. We don't need a deck right now.

12. Take Holistic view, and don't approach this as just a place to locate the deck.
13. Which surface lots are you including in the statistics of full capacity 208 days a year? How do you determine a lot is full? Does "208 days full" statement mean all lots were full simultaneously? Don't understand what the methodology was to determine we need 1000 spaces.
14. Let the year play out, coordinate with the Walton Arts Center and their master plan.
15. Consider other locations nearby: Block bordered by West / Lafayette / Vandeventer / Maple. This puts parking within 2 blocks of WAC, 1 block from Dickson St. Construction would not hinder existing facility use. Future development of Walton Arts Center (or other commercial) would remain uninhibited.

For detailed comments on the four sites, refer to the public meeting correspondence in Appendix A.

Collectively the South and the East lots were deemed as the least desirable options due to their impact on the neighboring residential and small business properties and the increased height of the structure due to the small site.

Consequently, the City Council members at the agenda session on April 19, 2012, directed the Design Team to focus their attention on the Theater and WAC lots. Therefore the next phase of the study, starting with the geotechnical investigation, focused on the Theater and WAC lots.

Formal presentations and Public Input Sessions were also made at Town Hall Meetings to the public on the following dates and locations:

- March 12, 2012 at 12:00 p.m. at the Senior Center
- June 4, 2012 at 7:00 p.m. at St. James Missionary Baptist Church
- August 20, 2012 at 7:00 p.m. at Butterfield Trail Village
- October 11, 2012 at 5:00 p.m. at the University of Arkansas Law School

6.0 Geotechnical Investigation

Grubbs, Hoskyn, Barton & Wyatt performed subsurface exploration on the Theater and WAC Lots. Five (5) borings were drilled to a depth of 70 feet at each lot. Locations of these borings, boring logs, and other detailed information can be found in the *Geotechnical Feasibility Study Report*, dated May 2012 in Appendix B.

6.1 Theater Lot

The Theater Lot consists of level to steep terrain with fair to good surface drainage. The existing underlying soils consist of clay hillside material, weathered shale, and sandstone. With a depth of cut of up to about 16 feet in the eastern half of the site, the expected material at the cut elevation is expected to be weathered shale. Given the typical heavy column loads associated with a parking structure and the

underlying sandstone material, drilled shaft piers are recommended for this site. Pier size is recommended to be a minimum of 30 inches in diameter with pier depths estimated to be between 8 to 22 feet. Also with the expected cut of up to 16 feet adjacent to School Avenue, proper temporary retaining structures such as sheet piling or soil nailing may be needed during construction.

6.2 WAC Lot

The WAC Lot consists of an existing surface parking lot with gently sloping terrain with good surface drainage. The existing surface generally flows from northeast to southwest across the site. An existing underground double barrel 6 foot X 6 foot concrete box culvert follows this drainage path. The existing underlying soils consist of variable on-site fill to a depth of 6 to 11 feet from the construction of the surface parking lot, over hard shale and fractured sandstone, on highly fractured bedrock. With the presence of the highly fractured rock, and groundwater at a depth of 8 to 12 feet, it is recommended that micropiles be utilized for this site. Micropiles for this site for each column would generally be a group of 4 to 6 eight inch piles driven to depth of bedrock.

7.0 Parking Structure Concepts Analysis

7.1 Theater Lot Options and Narrative

Based on the understanding that the Walton Arts Center intended to share the usage of a new 600 seat performance hall tentatively planned by the University of Arkansas, the design team proceeded with evaluating various options for this site that differed in location and orientation. A total of 7 layouts were studied. See Exhibits C4 to C10 in Appendix C for concept drawings. Some options involved demolition of the Grub's Restaurant Building / Porter Building and Walton Arts Center Administration Building, some involved demolition of the Walton Arts Center Administration Building only, some avoided demolition of any of those three buildings, and some incorporated the Porter Building into the layout.

All the following options were studied keeping the loading dock access open to the Walton Arts Center.

Theater Lot – Option A (Exhibit C4)

- Four level, two bay, 318 car (net gain 308) garage.
- Two entry/exits. One at Spring Street and one at School Avenue.
- New surface parking lot where Grub's building would be removed.
- Porter Building would remain.
- Existing Walton Arts Center Administration Building would be removed.
- Flat floor parking bay closest to the Walton Arts Center, ramping in south bay.

Theater Lot – Option A.1 (Exhibit C5)

- Four level, three bay, 358 car (net gain 341) garage.
- One entry/exit at School Avenue.
- New surface parking lot where Grub's building would be removed.

- Porter Building would remain.
- Existing Walton Arts Center Administration Building would be removed and replaced with new space at southeast corner of garage facing Spring Street.
- Flat floor parking bay closest to the Walton Arts Center, ramping in middle bay.

Theater Lot – Option B (Exhibit C6)

- Four level, four bay, 322 car (net gain 305) garage.
- Two entry/exits. One at West Avenue and one at School Avenue.
- New surface parking lot where Grub's and Porter buildings would be removed.
- Existing Walton Arts Center Administration Building would be removed.
- Drive aisles run to/from the Walton Arts Center building.

Theater Lot – Option C (Exhibit C7)

- Five level, three bay, 331 car (net gain 303) garage.
- Two entry/exits. One at Spring Street and one at School Avenue.
- Grub's and Porter buildings unaffected.
- Existing Walton Arts Center Administration Building would be removed.
- Drive aisles run to/from the Walton Arts Center building. Ramped bay next to School Avenue.

Theater Lot – Option C.1 (Exhibit C8)

- Four level, three bay, 328 car (net gain 300) garage.
- Same as Option C except more Level 1 parking in order to reduce garage height.

Theater Lot – Option C.2 (Exhibit C9)

- Five level, two bay, 332 car (net gain 304) garage.
- Two entry/exits. One at Spring Street and one at School Avenue.
- Grub's and Porter buildings unaffected.
- Existing Walton Arts Center Administration Building would be removed and rebuilt as a liner building.
- Drive aisles run to/from the Walton Arts Center building. Ramped bay next to School Avenue.
- Two level liner building along Spring Street and School Avenue facades. Parking above liner on Levels 3 and 4 of garage.

Theater Lot – Option D (Exhibit C10)

- Five level, three bay, 324 car (net gain 307) garage.
- Two entries and three exits. One at West Avenue, one at Spring Street and one at School Avenue.

- Grub's, Porter and Walton Arts Center Administration buildings are not removed.
- New surface parking lot just north of Grub's building.
- Flat floor parking bay closest to the Walton Arts Center, ramping in second and third bays.

Following the public involvement meetings in April 2012, the City requested that the Walton Arts Center provide some details on their future expansion plans. In response, the Walton Arts Center hired Boora Architects in May 2012 to provide site plan details of their future expansion plans and to determine how a parking deck could be integrated closely with their proposed expansion.

The Design Team worked closely with Boora Architects in order to understand the arts center plans for the future. A collaborative effort resulted in the developing of an option that would allow for the future expansion of the theater and allow room for the Walton Arts Center Administration offices.

On July 26, 2012 Boora Architects presented their findings to the Walton Arts Center Board of Directors. The Walton Arts Center's future improvements were shown with and without the parking deck located on the Theater Lot (Figure 3 and Figure 4 on Page 23, respectfully). On September 25, 2012 the Walton Arts Center Board of Directors passed a resolution stating that more parking was needed now near the facility, and that they could design their expansion with the parking deck on or off the Theater Lot, with their preference being to have it somewhere else than the Theater Lot. The Board of Directors passed the resolution with the full acknowledgement that the final site selection would be up to the City Council. The Board of Directors also requested that the City proceed with the study of the East Lot with the understanding that the properties on the south side of the lot would have to be acquired in order to make the layout on this site functionally more efficient and to reduce the height of the structure.

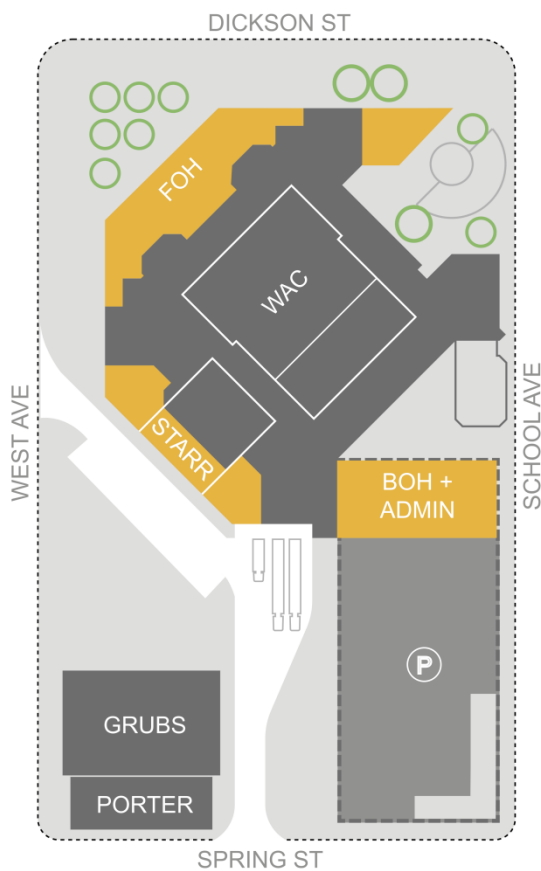


Figure 3 – Boora's layout with Parking Deck – Phase 1

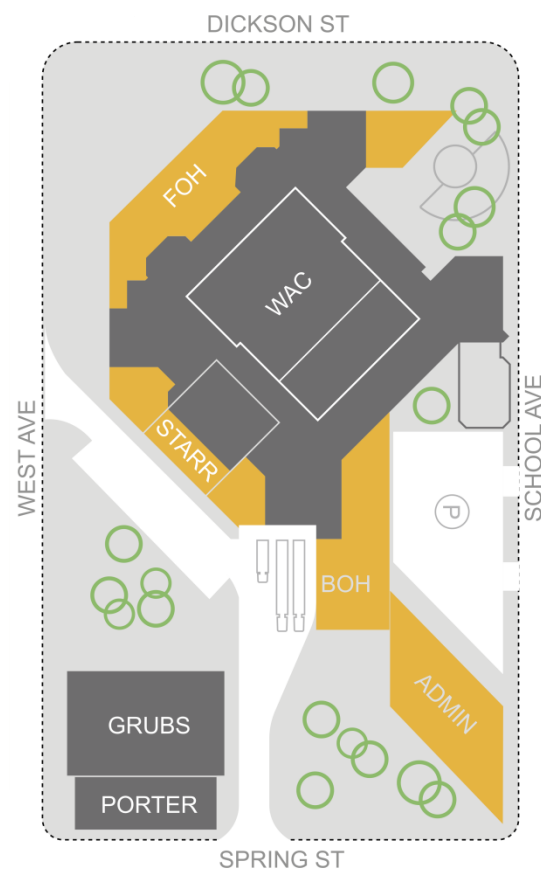


Figure 4 – Boora's layout without Parking Deck – Phase 1

7.2 Theater Lot Recommended Option

The collaborated effort resulted in Option C.2 becoming the apparent recommended option. This option leaves the Porter Building and Grub's Restaurant Building, leaves room for expansion of the Walton Arts Center, and fits tightly on the site making full and efficient use of land. Due to the terrain, the presence of the structure on School Avenue is less dominant than Spring Street. Skillful design of the liner buildings can further reduce the structure's apparent height.

The recommended option for the Theater Lot (Exhibit C18 in Appendix C) is based on a net gain of 302 spaces, building a total of 330 spaces. This design included all of the required and preferred planning and ordinance elements. A conceptual opinion of probable cost was developed for this option of \$8.24 million, prompting the need to reduce the size of the recommended option.

To reduce the size of the recommended option, the Design Team first removed all screening, liner buildings, and other non-essential items to develop a “bare bones” parking deck. The conceptual opinion of probable cost for this option was reduced to \$6.84 million.

In order to meet the total project budget of \$5.5 million for the recommended option, the Design Team reduced the size of the parking deck from 330 cars to 246 cars, resulting in a net gain of 218 cars. The conceptual opinion of probable cost for this reduced “bare bones” option is \$5.52 million. Adding liner buildings back into the parking deck results in a conceptual opinion of probable cost of \$5.67 million.

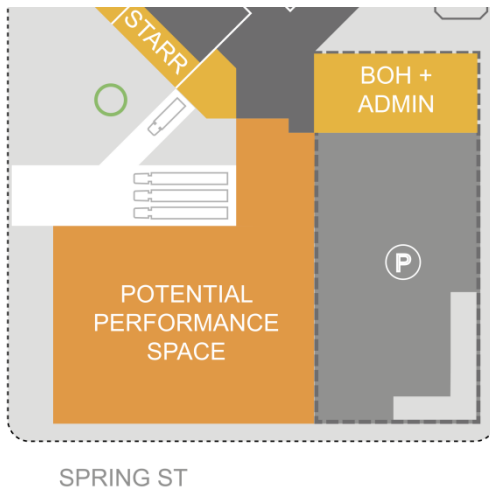
Treatment of the liner buildings breaks down the scale of the structure at pedestrian level, particularly on Spring Street, where the visible height of the structure is the tallest. The remainder of the face on the two main streets is treated with display windows at the pedestrian level. Adding façade screening on the two main streets reduces the visibility of the structure as a parking structure and makes it fit the ambience of the area. With the additional screening as shown in Figure 5 added to the east (School Avenue) and south (Spring Street) facades, the conceptual opinion of probable cost is \$5.93 million.



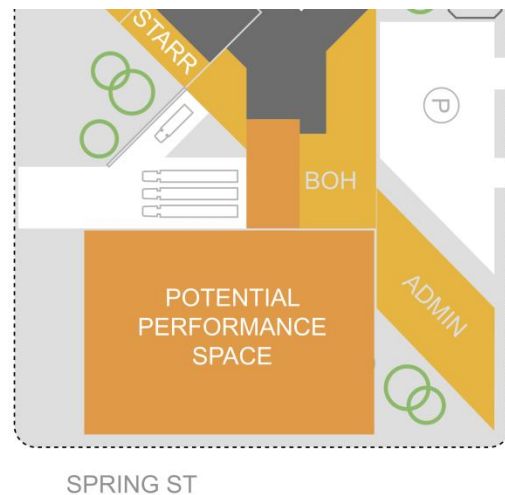
Figure 5 - Theater Site Sketch with East and South Screening and Liner Buildings

In the July 26, 2012 presentation by Boora Architects to the Walton Arts Center Board of Directors, a potential performance space was shown as a Phase 2 Expansion Concept. This Phase 2 Expansion Concept is shown in Figures 6 and 7 on Page 25.

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.



**Figure 6 - Boora's layout with
Parking Deck - Phase 2**



**Figure 7 - Boora's layout without
Parking Deck - Phase 2**

Until the Walton Arts Center constructs the potential performance space shown in Figures 6 and 7, the west side of the parking structure will be visible from West Avenue. Adding the screen as shown in Figure 8 to the façade of the west side of the parking structure results in a conceptual opinion of probable cost of \$6.18 million.

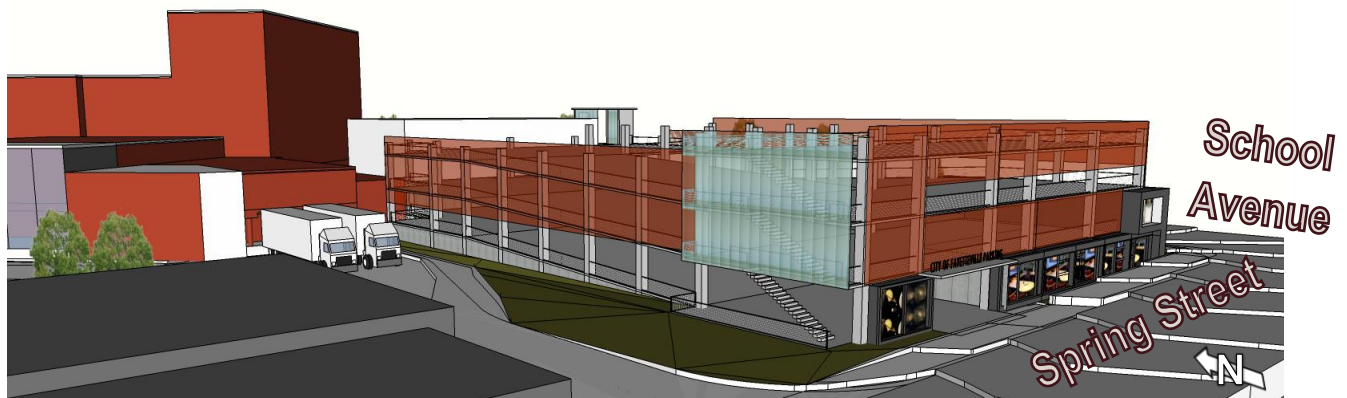


Figure 8 – Theater Site with Additional West Screening

On the north side, the relocated Walton Arts Center Administration Building successfully buffers the view of the parking structure.

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.

7.3 WAC Lot Options and Narrative

The Design Team focused on the southern half of the WAC Lot in order to leave the more valuable frontage on Dickson Street available for future development. A total of 7 layouts were studied that varied in location and orientation. See Exhibits C11 to C17 in Appendix C for option concept drawings.

The main differences from the Theater Lot are the terrain and the level of visibility from Dickson Street and West Avenue. All the following options were studied keeping the Frisco Trail pathway open and accessible.

WAC Lot – Option A (Exhibit C11)

- Four level, four bay, 478 car (net gain 314) garage.
- Enter garage from north side using existing WAC Lot entrance off West Avenue.
- Two exits from garage. One north to Dickson Street via lot and one south to West Avenue using existing WAC Lot exit to West Avenue.
- Drive aisles run north /south direction.
- Flat floor parking bays closest to the WAC, ramping in western bays.

WAC Lot – Option A.1 (Exhibit C12)

- Five level, four bay, 494 car (net gain 330) garage.
- Entry/exits the same as Option A.
- Drive aisles run north/south direction.
- Flat floor parking in three eastern bays, express ramping in west bay.

WAC Lot – Option A.2 (Exhibit C13)

- Four level, four bay, 482 car (net gain 302) garage.
- New primary garage entry/exit at east side using existing WAC Lot entrance off West Avenue.
- Secondary entry/exit at north end via existing lot.
- Drive aisles run north/south direction.
- Flat floor parking bays closest to West Avenue, express ramping in western bay.
- Northeast garage corner alignment for potential pedestrian bridge over West Avenue to Walton Arts Center.
- Ample room for extensive liner buildings facing both West Avenue and Spring Street.

WAC Lot – Option B (Exhibit C14)

- Four level, three bay, 478 car (net gain 342) garage.
- New primary entry/exit at West Avenue. Secondary exit north to Dickson Street via lot and one south to West Avenue using existing WAC Lot exit to West Avenue.
- Drive aisles run east/west direction.

- New surface parking configuration at south end of garage. Also provides for future horizontal expansion to the south one bay.
- Ramped middle bay and essentially flat outer bays.

WAC Lot – Option B.1 (Exhibit C15)

- Five level, two bay, 438 car (net gain 317) garage.
- New primary entry/exit at West Avenue. Secondary entry/exit north to Dickson Street via lot and one secondary exit only south to West Avenue using existing WAC Lot exit to West Avenue.
- Drive aisles run east/west direction.
- New surface parking configuration at south end of garage. Also provides for future horizontal expansion to the south one bay.
- Ramped north bay and essentially flat south bay.
- Two level liner building facing West Avenue and room for future liner building facing Spring Street.

WAC Lot – Option B.2 (Exhibit C16)

- Five level, two bay, 397 car (net gain 301) garage.
- New primary entry/exit at West Avenue. Secondary entry/exit north to Dickson Street via lot.
- Drive aisles run east/west direction.
- New surface parking configuration at south end of garage. Also provides for future horizontal expansion to the south one bay.
- Ramped north bay and essentially flat south bay.
- Two level liner building facing West Avenue and room for future liner building facing Spring Street.

WAC Lot – Option C (Exhibit C17)

- Four level, three bay, 551 car (net gain 341) garage.
- New primary garage entry/exit at east side using existing WAC Lot entrance off West Avenue.
- Secondary entry/exit at north end via existing lot.
- Drive aisles run north /south direction.
- Flat floor parking bays closest to the WAC, express ramping in western bay.
- Northeast garage corner alignment for potential pedestrian bridge over West Avenue to WAC.
- Closely follows Illustrative Master Plan from the Downtown Master Plan, allowing room for future liner buildings along the street side.

7.4 WAC Lot Recommended Option

Based on input from the City Parking Deck Team, it became apparent that Option B.2 was the recommended option for the WAC Lot. This option minimizes the footprint of the structure resulting in the disruption of the least amount of parking spaces and allowing future horizontal expansion.

The recommended option for the WAC Lot (Exhibit C19 in Appendix C) is based on a net gain of 301 spaces, building a total of 398 spaces. This design included all of the required and preferred planning and ordinance elements. A conceptual opinion of probable cost was developed for this option of \$8.06 million, prompting the need to reduce the size of the recommended option.

To reduce the size of the recommended option, the Design Team first removed all screening, liner buildings, and non-essential items to develop a “bare bones” parking deck. The conceptual opinion of probable cost for this option was reduced to \$5.87 million.

In order to meet the total project budget of \$5.5 million for the recommended option, the Design Team reduced the size of the parking deck from 398 cars to 339 cars, resulting in a net gain of 242 cars. The conceptual opinion of probable cost for this reduced “bare bones” option is \$5.09 million. Adding liner buildings back into the parking deck results in a conceptual opinion of probable cost of \$5.25 million.

Adding a façade screen to the east side of the parking structure as shown in Figure 9 along West Avenue with a 2-story liner building breaks down the scale at the pedestrian level. With the addition of the screening as shown in Figure 9 to the east facade, the conceptual opinion of probable cost is \$5.51 million.



Figure 9 – WAC Lot with East Screening and 2-Story Liner Building

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.

Since the parking structure on this site has a very dominant presence and visibility from Dickson Street and businesses located to the south of the structure, additional screening can be added to the northern and southern facades as shown in Figures 10 and 11.



Figure 10 – WAC Lot with Additional North Screening



Figure 11 – WAC Lot with Additional South Screening

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.

The Design Team also recommends exploring options of designing a removable screen, which could be dismantled and reinstalled at the new face of the structure once the structure is expanded. With the additional screening on the north and south facades the conceptual opinion of probable cost is \$6.18 million. In the future, with the addition of the liner buildings outside the parking structure as shown in Figure 12, the main parking structure becomes less imposing on the properties located south of the structure.



Figure 12 – WAC Lot showing Future Liner Buildings on South

7.5 East Lot Options and Narratives

Based upon the request of the Walton Arts Center Board of Directors, the City Parking Deck Team directed the Design Team to study the East Lot with the assumption that the lot would be extended south to Spring Street with the purchase of the properties currently located to the south of the East Lot. The dimensions and terrain of the lot become very similar to the Theater Lot.

The following outlines the changes in characteristic of the expanded site:

- Similar footprint as the Theater Lot.
- Larger footprint than the previous study reduces height and the use of slope reduces visible height.
- Terrain similar to Theater Lot.
- Higher excavation cost than the South Lot.
- Two-street access from two levels.
- No horizontal contiguous expansion, vertical only if the height limit permits.

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.

The following options were evaluated for the East Lot.

East Lot Site – Option A (Exhibit C3)

- Five level, two bay, 378 car (net gain 318) garage.
- One entry/exit on School Avenue.
- Both bays ramped due to short length of site. Majority of parking on ramps.
- Ramping orientation works to synchronize with existing site grading.

East Lot Site – Option B (Exhibit C20)

- Four level, two bay, 363 car (net gain 303) garage.
- Two entry/exits, one on School Avenue and one on Spring Street.
- West bay next to School generally flat while east bay next to alley ramped.
- Ramping orientation works to synchronize with existing site grading.
- Maintains existing retail building at southwest corner of site, and adds liner building to it.

7.6 East Lot Recommended Option

The recommended option for the East Lot (Exhibit C20 in Appendix C) is based on a net gain of 303 spaces, building a total of 363 spaces. The “bare bones” option for the recommended option has a conceptual opinion of probable cost of \$6.28 million.

In order to meet the total project budget of \$5.5 million for the recommended option, the Design Team reduced size of the parking deck from 363 cars to 293 cars, resulting in a net gain of 233 cars. The conceptual opinion of probable cost for this reduced “bare bones” option is \$5.37 million. Adding Liner buildings into the parking deck results in a conceptual opinion of probable cost of \$5.48 million. Liner Buildings for the East Lot include saving the building currently used by The Highroller Cyclery on the northeast corner of School Avenue and Spring Street for use as a liner building and constructing a small one story liner building on Spring Street adjacent to The Highroller Cyclery.

Screening of the south (Spring Street) and west (School Avenue) facades of the structure as shown in Figure 13 on Page 32 breaks down the visibility of the parking deck from pedestrian level. Adding the screen to the south and west facades bring the conceptual opinion of probable cost to \$5.76 million.



Figure 13 – East Lot with Liner Building and South and West Screening

The structure sits at very close proximity to the residential units to the east and the businesses to the north. If additional screening was added to the north and east facades of the structure as shown in Figure 14, the conceptual opinion of probable cost would be \$6.15 million. It is very important to note that the final recommended 3 level option is considerably lower in height than the conceptual 5 level layout for this site.



Figure 14 - East Lot with Additional East and North Screening

Design considerations must be taken to reduce the sound, light and air pollution to these neighboring properties. These specific measures are not included in the cost analysis. The structure, however, is shifted to the west as much as practical, while allowing space for green space on School Avenue.

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.

7.7 South Lot Option and Narrative

The South Lot was removed from final consideration at the City Council Agenda Session on April 19, 2012 and is included here for a general comparison between sites. The conceptual layout for the South Lot (Exhibit C2 in Appendix C) is based on a net gain of 311 spaces, building a total of 379 spaces. The following figures (Figures 15, 16, and 17) represent the massing of the 5 level structure shown in the conceptual layout (Exhibit C2). The South Lot was not evaluated for cost.



Figure 15 – South Lot View from the Northeast



Figure 16 – South Lot View from the Southwest



Figure 16 – South Lot View from the Northwest

The sketches presented are at an abstract level. They are not intended to be the final design, nor are they true representation of materials and textures. This study is only for purpose of communicating the massing and the scale of the structure and illustrating its incorporation into the overall massing of the adjacent buildings.

8.0 Opinion of Probable Cost

A summary of the conceptual opinions of probable cost is provided below. See Appendix D for a detailed breakdown of the Opinion of Probable Cost.

8.1 Theater Lot

Summary of Direct Costs:

- 300 Space Minimum Net Gain “Bare Bones” = \$6.84 million
- Reduced 218 Space Net Gain “Bare Bones” = \$5.52 million
 - With the addition of Liner Buildings = \$5.67 million
 - With the addition of Screening on East and South = \$5.93 million
 - With the addition of Screening on West = \$6.18 million

Summary of Indirect Costs:

- Walton Arts Center Administration Building Moving Expenses = \$10,000
- Office Rental for 1 year = \$100,000
- Temporary Parking for Administration Building = \$39,500
- Loss of Parking Revenue for Temporary Staging Area = \$39,500

Total Indirect Cost for the Theater Lot = \$189,000

8.2 WAC Lot

Summary of Direct Costs:

- 300 Space Minimum Net Gain “Bare Bones” = \$5.87 million
- Reduced 242 Space Net Gain “Bare Bones” = \$5.09 million
 - With the addition of Liner Buildings = \$5.25 million
 - With the addition of Screening on East = \$5.51 million
 - With the addition of Screening on North and South = \$6.18 million

Summary of Indirect Costs:

- Loss of Parking Revenue for Deck Construction = \$153,000
- Loss of Parking Revenue for Temporary Staging Area = \$46,000

Total Indirect Cost for the Theater Lot = \$199,000

8.3 East Lot

Summary of Direct Costs:

- 300 Space Minimum Net Gain “Bare Bones” = \$6.28 million
- Reduced 233 Space Net Gain “Bare Bones” = \$5.37 million
 - With the addition of Liner Buildings = \$5.48 million
 - With the addition of Screening on East = \$5.76 million
 - With the addition of Screening on North and South = \$6.15 million

Summary of Indirect Costs:

- Loss of Parking Revenue for Deck Construction = \$95,000
- Loss of Parking Revenue for Temporary Staging Area = \$39,500

Total Indirect Cost for the Theater Lot = \$134,500

9.0 Final Site Comparisons

9.1 Narrative

Each of these sites present opportunities and challenges. There are two ways that these sites can be evaluated; “direct cost” which can easily translate into cost per parking space and “indirect cost” or “value impact” of the development. The direct costs can be determined in a rather straight forward manner. The impact that the structure will have on present and future value of the adjacent properties involves a variety of factors that cannot be translated to a cost per parking space. In addition, the values reflecting the vision for the future of Fayetteville’s Dickson Street/Downtown area cannot be quantified for site comparisons.

9.2 Selection Criteria Matrix

The selection criteria bring all of these potential decision making factors together for a comprehensive comparison and are presented in matrix form. If a certain criterion is equally met by the four sites, that criterion is not listed on the matrix.

The Selection Criteria Matrix has been scored on a scale of 1 to 3:

1 = Least meets selection criteria.

3 = Most meets selection criteria.

	CRITERIA	THEATER LOT	WAC LOT	EAST LOT	SOUTH LOT
1.	Multiple Access Points on Different Levels	3	1	3	1
2.	Access onto Multiple Adjacent Streets	3	2	3	3
3.	Pedestrian Access	2	3	2	1
4.	Avoids Impact on School Bus Parking	3	1	3	3
5.	Efficient use of land as infill, avoids using valuable land for future large scale development	3	1	2	2
6.	Avoids Impact on Adjacent Residential Properties	3	3	1	1
7.	Avoids Impact on Adjacent Commercial Properties	3	2	1	1
8.	Avoids Reduction of Tree Canopy	3	3	1	2
9.	Allows Future Vertical Expansion	3	3	3	1
10.	Allows Future Horizontal Expansion	1	3	1	1

	CRITERIA	THEATER LOT	WAC LOT	EAST LOT	SOUTH LOT
11.	Avoids Impact on Walton Arts Center Expansion / Operations	1	2	2	2
12.	Room for liner buildings	3	2	3	3
13.	Positive Effect on Festivals	3	1	2	3
14.	Good Foundation / Subsurface Conditions	3	1	3	2
15.	Avoids Replacement / Removal of Existing Structures	2	3	1	3
	Total Score	39	31	31	29

According to the site selection criteria matrix the Theater Lot scores as the Most Desirable Location while the South Lot scores as the Least Desirable Location.

These following criteria are not included in the matrix because they are equally met for each site:

- Internal circulation efficiency.
- Passive and active user safety factors.
- Structural system and design efficiency.
- Sidewalk / Green Space area.
- Fire safety and truck access.
- Avoiding impact on school bus drop off.
- Storm water management.
- Ability to utilize LEED Building Criteria.

9.3 Cost Matrix

	CRITERIA	THEATER LOT	WAC LOT	EAST LOT	SOUTH LOT
1.	Overall Size of Parking Deck	246 spaces	339 spaces	293 spaces	-
2.	Net Gain	218 spaces	242 spaces	233 spaces	-
3.	Number of Spaces Lost for Deck Construction over 1 year period (\$ Revenue Lost)	28 spaces (\$44,200)	97 spaces (\$153,000)	60 spaces (\$95,000)	-
4.	Comparable Cost per Parking Space	\$15,703 ¹	\$13,251	\$13,019 ²	-
5.	Total Direct Cost which includes liner buildings and all screening options	\$6.18 million	\$6.18 million	\$6.15 million	-
6.	Total Indirect Costs	\$193,700	\$199,000	\$134,500	-
7.	Total Comparison Cost (Direct + Indirect)	\$6.37 million	\$6.38 million	\$6.29 million	-

¹ Does not include cost to replace Walton Arts Center Administration Building.

² Does not include cost to purchase two properties south of the existing lot or demolition of the two existing residential structures.

9.4 Final Recommendation

In accordance with the scope of services for the Site Selection Study, the Design Team is required to provide a recommendation that is based on the findings of the study phase. The significant findings of the study are summarized below:

Item	Theater Lot	WAC Lot	East Lot	South Lot
Selection Criteria Matrix Score	39	31	31	29
Total Parking Deck Spaces	246	339	293	-
Net Gain in Parking Spaces	218	242	233	-
Total Parking Revenue Lost During Construction	\$83,700	\$199,000	\$134,500	-
Total Parking Deck Costs	\$6.37 million	\$6.38 million	\$6.29 million	-

The findings from the study clearly show that the Theater Site most meets the Selection Criteria with a score of 39 out of total possible score of 45. However, the WAC Lot will provide a net gain of 24 additional parking spaces than the Theater Lot and nine additional parking spaces than the East Lot.

The scores for the selection criteria matrix are not weighted since the level of importance of each selection criteria can be a matter of personal preference. However, there are items for three of the four sites that the Design Team considers to be significant factors in the decision making process:

Site	Significant Decision Making Factors
WAC Lot	<ul style="list-style-type: none"> ▪ Substantial loss of revenue and parking spaces during construction. ▪ Loss of the only remaining large tract of land in the downtown Dickson Street area for future municipal purposes/developments.
East Lot	<ul style="list-style-type: none"> ▪ Lack of compatibility with the adjacent residential properties. ▪ Procurement of the residential structures and commercial business along Spring Street.
South Lot	<ul style="list-style-type: none"> ▪ Lack of compatibility with the adjacent residential properties.

While a parking deck can successfully be built on all of the sites, based on the findings of the study and the significant factors mentioned above, the Design Team recommends that the Theater Site be selected for the construction of the Downtown Parking Deck.

APPENDIX A

Public Meeting Correspondence

DOWNTOWN PARKING DECK PUBLIC INPUT SESSIONS SUMMARY (Revised)

APRIL 4, 2012 - APRIL 9, 2012 and APRIL 19, 2012

1 of 3

Following is a summary of the comments and questions collected at the meeting and from on-line forms during the above mentioned period.

AM session April 4, 2012:

1. Have you considered use of other nearby parking facilities such as County, Library, and Churches for shuttling service?
2. Include efficient parking such as parking on ramp as part of the criteria
3. Make sure ramps are screened, often the intention is such but at the end the first thing that is cut from the budget is the screening of the ramps
4. Need to justify that the parking is needed now even without WAC before bonds are issued
5. Without parking redevelopment would not happen.
6. Consider delaying the project to build at the same time with WAC once they have firmed up their plans for expansion. It will be cheaper if the entire construction is done at the same time
7. Has future transit plans been studied by the City and is there a benefit to developing an intermodal facility?
8. What happens to BBB?

Pm session, April 4, 2012:

1. Where did the 1000-needed parking spaces for the downtown area come from
2. Reference to the downtown master plan was made; Sell the property on the edges of the WAC lot to private developers, use the revenue, construct the parking at the same time as the private developer, collect property tax, hide the parking behind the liner buildings
3. WAC will probably not add seats in our lifetimes. Wait till their Master Plan is done. We don't need a deck right now
4. Take Holistic view, and don't approach this as just a place to locate the deck

Received later:

1. Which surface lots are you including in the statistics of full capacity 208 days a year? How do you determine a lot if full? Does "208 days full" statement mean all lots were full simultaneously? Don't understand what the methodology was to determine we need 1000 spaces
2. Let the year play out, coordinate with WAC and their master plan
3. Consider other locations nearby:
Block bordered by West / Lafayette / Vandeventer /

Maple. This puts parking within 2 blocks of WAC, 1 block from Dickson St. Construction would not hinder existing facility use. Future development of WAC (or other commercial) would remain uninhibited.

SOUTH LOT

1. Bad idea for local residents
2. Don't even consider impacting the residences surrounding this lot. I am confused why this is even an option
3. Limited space and direct impact on neighboring residents, the balloon display provided a visible confirmation that the building height required to achieve the necessary parking spaces would not transition well with the neighboring properties; loss of tree canopy
4. Unacceptable, too small, too close to residential
5. Not a viable option, small foot print, too high, appearance not in character with Dickson Street, too ugly, limited street access, traffic nightmare
6. Too many residential properties, bad street access, too tall
7. Don't support because of residential neighbors and the required height
8. Too high, destroys lifestyle of neighbors, wasn't this a long term green space in the Master Plan?
9. Undesirable because of impact on the residential structures
10. A couple of residents favor the South Lot. They don't want the green space and historic structure on the Theater Lot torn down for a parking deck, and they worry how a deck would impact the businesses south of the WAC lot (Pink Papaya, et al).

EAST LOT

1. Please don't build it here, I live next door
2. My least favorite site. It negatively affects too many businesses and residents
3. Bad idea for local residents.
4. I live at the apartments next door and I wouldn't want to see a concrete wall next to my window
5. Don't even consider impacting the residences surrounding this lot. I am confused why this is even an option. Also, why are we impacting revenue producing Kingfish?
6. Limited space and direct impact on neighboring residents, the balloon display provided a visible



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confirmation that the building height required to achieve the necessary parking spaces would not transition well with the neighboring properties; loss of tree canopy

7. Locust Street neighbors have directly expressed serious concern about the impact such a structure would have on their quality of living as well as property values.
8. Unacceptable, too small, too close to residential
9. Not a viable option, small foot print, too high, appearance not in character with Dickson Street, too ugly, limited street access, traffic nightmare, even worse than South Lot
10. Too many residential properties, bad street access, too tall, impacts businesses to the north, street access is even worse than the South Lot
11. Don't support because of residential neighbors and the required height
12. Negative impact on neighbors, serious congestion in nearby streets, Junctions would be problematic, Character of downtown would be harmed
13. Undesirable, access is too limited

WAC LOT

1. Great if sales / property taxes were added with Dickson and West Streets businesses for new lot
2. Sell the property on the edges of the WAC lot to private developers, use the revenue, construct the parking at the same time as the private developer, collect property tax, and hide the parking behind the liner buildings
3. Would be great, but not supportive if the entire lot is used
4. This lot seems to make the most sense only if liner buildings are implemented and we add in revenue producing business structures
5. Provides the most flexibility for design and staging; promotes the Downtown Master Plan goals by replacing a flat parking lot surface with a vertical structure; least impact on tree canopy; best option for future expansion; We also liked the idea of incorporating festival events into the structure as mentioned by City staff.
6. Best spot but Theater second choice
7. Most suitable, flattest, easiest to build upon, can follow master plan, liner buildings privately developed generates revenue, not as tall as other sites, adjacent to additional parking at Underwood parking deck
8. Best choice, flat, easy to build, no residential neighbors, good prospect for commercial liner buildings, good for extra revenue for City
9. Favorite especially if it exits into Dickson Street and West Avenue, partially underground, If commercial liner buildings erected along West Avenue allow a Piazza to front Dickson Street
10. Potential for using top level for events, as well as the North wall for display
11. Consider locating liner buildings on the south side of the deck if WAC lot is chosen to create a more pedestrian friendly environment for transition to the existing businesses to the south, especially with the trail in place
12. Consider locating the parking deck further back from West avenue to allow for future development on the street front

THEATER LOT

1. My strong preference; It could allow for coordinated development of deck, WAC storage expansion, WAC administration space, and leaves other surface lots intact with greater future ease of developing WAC lot for deck or retail
2. Need to consider coordinating with WAC. If WAC needs 6-12 months to raise funds, please wait on bond issue to do coordinated construction with WAC facilities. Allocate appropriate costs to WAC. Building deck with future construction for WAC storage, admin will not be as cost effective and would include two construction periods
3. Only if WAC agrees to long term Master Plan for additional growth
4. First choice unless Grubs gets shut down from it. I don't feel like you should penalize businesses because WAC wants to expand or because the planners of WAC did not foresee the demand for expansion.
5. This lot would be acceptable if it does not affect Grubs. Why would we want to remove a \$70k/year lease?
6. Loss of what little green space exists around Dickson Street, removing a historic structure, both are negative impacts. Let it be lost in a future WAC expansion and not due to parking deck. Ability to provide WAC administrative space exists in the liner buildings in WAC Lot as well
7. Second choice if WAC lot needs to be saved for future needs
8. First choice, Based on the timelines, we are looking at construction within 12 months, WAC says they

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need 6-12 months to raise money, so it might be that this can fit in or slightly pushed back, don't rush and I agree with a 50-70 year plan

9. Second choice, most complex, not as good as WAC
10. Not practical because of the terrain, complicated due to WAC plans, moving Grubbs is a negative, loss of a quite lovely environment
11. Could Porter Building be preserved, built around, punched through with columns? Best location, covered path to WAC, better priority parking, 3 streets for access, multiple levels points of entry reduces traffic jam, prominent corner @school and Spring for urban infill
12. Flexible for multiple entrance and exit, partially underground, walkway to theater, concerned about nearby residences for aesthetic reasons, seem premature to build if we don't have WAC Master Plan in place
13. Theater lot seems like the one with most potential and flexibility with the possibility of multiple access point to different levels

OTHER FACTORS NOT CONSIDERED

1. Justification for more parking at the present time.
2. Consider partnership with facilities close by for shuttling services
3. Since WAC is not building the 600 - Seat Theater the need for a deck is diminished.
4. Transforming existing property to meet goals of Downtown Master Plan
5. Information given at the meeting about parking lots being full 208 days is very helpful, must be repeated to negate the discussion that we don't need parking right now
6. Attract diversity and all types of people to live in downtown. Destruction of residential areas, traffic overload or aesthetic deterioration will not achieve this
7. Add a small convenience store to keep people on-foot
8. Underground parking
9. Include surface runoff and storm water filtration as part of the site selection criteria. Filtering the runoff from the parking surface that carries grease and oil should be included



APPENDIX B

Geotechnical Feasibility Study Report

**GEOTECHNICAL FEASIBILITY STUDY
FAYETTEVILLE DOWNTOWN PARKING DECK SITES
FAYETTEVILLE, ARKANSAS**

Report

To

**Garver, LLC
Fayetteville, AR**

May 2012

May 14, 2012
Job No. 12-044

Garver, LLC
2049 E. Joyce Boulevard, Suite 400
Fayetteville, Arkansas 72703

Attn: Mr. Ron Petrie, P.E.
Senior Project Manager

**GEOTECHNICAL FEASIBILITY STUDY
PROPOSED FAYETTEVILLE DOWNTOWN PARKING DECK SITES
FAYETTEVILLE, ARKANSAS**

INTRODUCTION

Presented herein are the results of the geotechnical feasibility study performed for the proposed parking deck sites located on West Avenue south of Dickson Street in Fayetteville, Arkansas. These services were authorized by Mr. Brock Hoskins on March 7, 2012, and have been performed in general accordance with our Master Service agreement dated June 8, 2010, and the scope of work described in Garver's Work Order No. 11047180 dated March 7, 2012.

We understand that the proposed parking deck is anticipated to be a 4 to 6 story structure with about 300 parking spaces. The project is currently in the initial planning stages. A site has not been selected for the project. Four possible sites were initially considered for the feasibility study. However, only two of these sites have been investigated in this phase of the study. The first site, hereafter referred to as "WAC site", is located at the northwest corner of West Avenue and Spring Street. The second site, hereafter referred to as "Theater site", is located at the northeast corner of West Avenue and Spring Street, just south of the Walton Arts Center building.

The purposes of the feasibility study were to develop general geotechnical information of consequence to foundation design, and site grading and construction considerations. The study is also intended to identify subsurface conditions that warrant further investigation. These purposes were achieved by:

- ◆ Performing a site reconnaissance to observe site conditions and surface features;

- ◆ Drilling representative sample borings to illuminate the general subsurface conditions at the site and obtain samples for laboratory testing;
- ◆ Performing laboratory tests to broadly establish pertinent physical and engineering properties of the foundation and subgrade soils; and
- ◆ Analyzing field and laboratory data to prepare a report addressing suitable foundation types, construction considerations, and site grading planning.

SUBSURFACE EXPLORATION

Subsurface conditions at the sites were explored by drilling a total of ten (10) sample and core borings to 70-ft depth. Five (5) borings were drilled at each of the sites. The site vicinity is shown on Plate 1. The approximate boring locations are shown on the Plan of Borings, Plates 2 and 3. The subsurface conditions encountered in the borings, as well as the results of field and laboratory tests, are shown on the boring logs, Plates 4 through 13. The surface elevations at the borings were inferred from the available topographic information and are shown on the logs. Keys to the terms and symbols used on the logs are presented as Plates 14 and 15.

The borings were drilled with Mobile B-53 truck-mounted rotary-drilling rig using a combination of dry-auger and rotary-wash drilling procedures. Samples were obtained at approximately 2-ft intervals to a depth of 10 ft and at 5-ft intervals thereafter.

Samples were typically obtained using a 2-inch-diameter split-barrel sampler driven into the strata by the blows of a 140-lb safety hammer dropped 30 inches, in accordance with Standard Penetration Test (SPT) procedures. The number of blows required to drive the standard split-barrel sampler the final 12 inches of an 18-inch total drive, or portion thereof, is defined as the Standard Penetration Number (N). Recorded N-values are shown on the boring logs in the "Blows Per Ft" column. Where rock hardness precluded recovering samples via SPT methods, auger cuttings were obtained for visual classification.

To obtain representative samples of bedrock, rock cores were obtained using an NX-3 size double-tube core barrel with diamond bit. For each core run, the percent recovery was determined as the ratio of recovery to total length of the core run. Where rock coring was performed, recovery values are shown in the right hand columns of the log forms, opposite the corresponding core run.

All samples were removed from samplers in the field. Samples were then visually classified by the field engineer or geotechnical technician and placed in appropriate containers to prevent moisture loss and/or disturbance during transfer to our laboratory for further examination.

The borings were advanced using dry-auger procedures to the extent possible to facilitate evaluation of shallow groundwater conditions. Observations regarding groundwater are noted in the lower-right portion of the logs and are discussed in subsequent sections of this report. The bore holes were kept open where possible for the purpose of recording fluctuations in groundwater levels. A summary of groundwater observations is enclosed as Attachment A.

LABORATORY TESTING

To evaluate pertinent soil properties, laboratory tests consisting of natural water content determinations and classification tests were performed. Fifty (50) natural water content determinations were performed to develop a representative water content profile for each boring. Water content results are plotted on the boring logs as solid black circles.

To verify field classification and to evaluate soil plasticity, twelve (12) Atterberg (liquid and plastic) limit determinations and twelve (12) sieve analyses were performed on selected, representative soil samples. The Atterberg limits are plotted on the boring logs as plus signs connected with a dashed line. The percent by weight of soil passing the No. 200 sieve is noted in the "- No. 200 %" column on the far right side of the log forms.

Laboratory strength testing included forty-four (44) uniaxial compression tests on rock cores. Compressive strength determined from these tests is plotted in lbs per sq inch on the logs at the appropriate depth. A summary of unconfined compressive strength tests on rock cores is also enclosed as Attachment B.

GENERAL SITE and SUBSURFACE CONDITIONS

Site Conditions

WAC site: The project site is located at the northwest corner of West Avenue and Spring Street in Fayetteville, Arkansas. The subject site is the south half of the pay parking lot owned by the City of Fayetteville. The asphalt pavement at the site is in a fair to good condition. The site has reportedly undergone significant grading activities in the past. A portion of the site was reportedly occupied by Arkhola ready mix plant prior to the construction of the present parking lot. A retaining wall separates the site from Spring Street at the south end with a maximum wall height of about 5 ft at the southwest corner. A railroad is present on the west side of the site.

The site gently slopes from northeast to southwest. The site has a vertical relief of about 10 ft with El 1330 at the northeast corner of the site to El 1320 at the southwest corner. Some

underground storm sewers are present. An underground box culvert traverses from the corner of Dickson and West Avenue to the southwest corner of the site. A small detention pond is present at the northeast corner of the site. The pond apparently collects spring water from the east side of West Avenue. The pond drains into an inlet; however, it is not clear how this water is drained away from the site. Surface drainage at the site is considered good.

Theater site: The Theater site is bounded by West Avenue on the west, Spring Street on the south, School Avenue on the east and Walton Arts Center on the north. The western half of the site is occupied by Grubbs restaurant and a historic building. An asphalt drive is present along the east and north sides of these buildings. A portion of the site on the north side of the buildings is grass covered. The site is relatively level with elevations ranging from about El 1332 to El 1334.

A retaining wall separates the western half of the site from the eastern half. The wall is about 7.5 ft tall. The eastern half of the site is generally grass covered with the exception of a paved parking lot on top of the hill at the north end. A single-story building is present just north of the parking lot. Beyond the parking lot, the terrain drops sharply to the south from approximate El 1350 at the north end to approximate El 1340 near Spring Street. The terrain also drops to the west of the parking lot.

The Theater site has a vertical relief of about 16 ft across the site. Surface drainage is considered fair to good. Numerous underground utilities and overhead power lines are present.

Site Geology

The site is located on Fayetteville fault line. However, the fault is considered inactive. The geology of the site is the early Pennsylvanian Period Hale Formation. The Hale Formation is made up of two members: a lower Cane Hill member and an upper Prairie Grove member. The Cane Hill member is typically composed of dark gray silty shale interbedded with siltstone and thin-bedded fine-grained sandstone. Some lithologies are locally calcareous. Isolated thick to massively bedded sandstone sometimes are present. The Prairie Grove member is composed of thin to massive, often crossbedded, light gray to dark brown, limy sandstone or variously sandy limestone and oolitic limestone. The lower contact of the Prairie Grove is considered unconformable. The Hale Formation (Cane Hill Member) rests with pronounced unconformity upon older strata. The reported thickness of the Hale Formation ranges from a few feet to more than 300 ft.

Seismic Conditions

The Washington County, Arkansas site is located in Seismic Zone 1, i.e., the area of low anticipated seismic damage. Based on the results of the borings, a Soil Profile Type S_1 and a Seismic Site Coefficient (S) value of 1.0 in accordance with Standard Building Code criteria are considered appropriate. As per the criteria of IBC 2006, the site may be classified as Seismic Site Class C (very dense soil and soft rock profile) based on the average properties of soil and rock within the exploration depths of the borings and our knowledge of local geology.

Subsurface Conditions

WAC Site

Surficial soils at the site consist of on-site fill to 6- to 11-ft depth. The content of on-site fill varies significantly across the site. It consists of stiff to very stiff "hillside" cherty clay, dense black sand (possible foundry sand), firm to stiff silty clay with shale fragments and loose dark gray weathered shale fragments. The fill exhibits moderate to low shear strength and moderate to high compressibility. Approximately 1-ft thick concrete was encountered at Boring A-1 at about 10-ft depth. Lateral extent of this concrete is not known. A ready mix plant was reportedly present on the site. The concrete encountered may be the result of operations of the ready mix plant.

The on-site fill is underlain by loose to medium dense brown, reddish brown and tan clayey fine sand and soft to stiff gray, tan and brown sandy clay with shale fragments to 8- to 17-ft depth. These soils are believed to be alluvium deposits. They exhibit low to moderate shear strength and moderate to high compressibility.

The overburden soils are underlain by a discontinuous stratum of soft to friable gray, brown and tan highly weathered shale and low strength dark gray shale to 14- to 27-ft depth.

The basal stratum encountered in the borings consists of hard to very hard gray and light gray fine-grained sandstone and moderately hard dark gray shale. The sandstone and shale are often interbedded. The top of bedrock appears to dip to the west from El 1315 at the west end to El 1301 at the west end. Unconfined compressive strength of the sandstone ranges from 5490 to 19830 lbs per sq inch with an average of about 9400 lbs per sq inch. The sandstone is highly fractured. Significant water loss was encountered during drilling in this stratum. This is an indication of presence of voids.

Theater Site

Natural overburden soils consist of medium dense to dense brown, reddish brown and reddish tan clayey fine sand to 5- to 15-ft depth at the north end of the site (see Borings B-1, 2 and 5). These soils are considered residual derived from weathering of sandstone. The clayey fine sand exhibits moderate shear strength and low compressibility.

Below the overburden soils at the north end and near the ground surface at the south end of the site is friable to low hardness tan, gray and dark gray weathered shale. SPT N values exceeded 50 blows per ft in the weathered shale indicating high shear strength and low compressibility. The weathered shale is not considered competent rock.

The weathered shale is underlain by hard to very hard gray and light gray fine-grained sandstone to 21- to 52-ft depth. The top of the sandstone dips to the west and to the north with approximate El 1326 at the south end to El 1316 at the northwest corner. The sandstone includes numerous shale seams. Unconfined compressive strength of the sandstone ranges from 4830 to 19010 lbs per sq inch with an average of about 11300 lbs per sq inch. The sandstone is considered competent. The sandstone is underlain by moderately hard dark gray shale. The shale is sometimes interbedded with hard sandstone. Water loss was not encountered during drilling in any of the borings.

To aid in visualizing subsurface conditions, Generalized Subsurface Profiles are presented in Attachments C and D. The sections for these profiles are shown on the Generalized Subsurface Profile Sections plates in these attachments. It should be recognized that the stratigraphy illustrated by the profiles has been inferred between discrete boring locations. In view of the natural variations in stratigraphy and conditions, variations from the stratigraphy illustrated by the profiles should be anticipated.

Groundwater Observations

Groundwater levels were observed during drilling, at the completion of drilling, and 24 hours after completion where bore holes remained open. Groundwater level was also taken periodically at three of the borings at the Theater site. A summary of groundwater observations is enclosed as Attachment A.

At the WAC site, groundwater was encountered at depths ranging from 8 to 12 ft. At the Theater site, groundwater was encountered at depths ranging from 6 to 21 ft. Periodic observation of

groundwater levels indicated that water level generally ranges from El 1328 to El 1332. Significant fluctuation in groundwater level was observed at Boring B-4. It ranged from 6 to 1.5 ft below existing grades. Groundwater levels will be influenced by seasonal precipitation and surface infiltration and should be expected to vary with seasonal site conditions.

Significant Conditions

The significant site and subsurface conditions considered pertinent to design and construction of the project are:

WAC Site

- a) The gently sloping terrain of the site with good surface drainage;
- b) The presence of asphalt pavement;
- c) The presence of variable on-site fill to 6- to 11-ft depth and potential for encountering concrete debris in the fill;
- d) The presence of hard to very hard sandstone and moderately hard shale at 16- to 27-ft depth (El 1306 to El 1315), highly fractured nature of the bedrock and potential for encountering voids within the bedrock;
- e) The presence of underground utilities and a large box culvert; and
- f) The presence of groundwater at 8- to 12-ft depth, and the potential for seasonal variations in groundwater levels.

Theater Site

- a) The level to sharply sloping terrain of the site with fair to good surface drainage;
- b) The presence of existing structures at the southwest portion of the site;
- c) The presence of an existing single-story structure just north of the parking lot;
- d) The moderate shear strength and low compressibility exhibited by the natural overburden soils at the site;
- e) The presence of friable to low hardness weathered shale at or close to the anticipated subgrade;
- f) The presence of competent hard to very hard sandstone at elevations ranging from El 1316 to El 1326;
- g) The presence of numerous underground utilities; and
- h) The presence of groundwater at elevations ranging from El 1328 to El 1332, and the potential for seasonal variations in groundwater levels and potential for downgradient seepage.

The relationship of these factors to design and construction of the project is considered in subsequent sections of this report.

CONCLUSIONS

Foundations

Specific information on structures, layout and site grading has not been developed at this time. Consequently, foundations can be addressed only in general terms. Foundation loads are expected to be heavy. For a six-story parking deck, maximum interior column load on the order of 1800 kips and maximum exterior column load on the order of 1300 kips are anticipated.

WAC site

For the purpose of analyses in this report, we have assumed that the lower level of the deck will approximately follow the existing grades. Shallow foundation system is not feasible to support the structural loads because of the depth at which the bedrock is present. A deep foundation system consisting of drilled piers is not recommended because of the potential for encountering voids in the bedrock. Pier installation would warrant temporary casing to control caving of pier holes and groundwater, and to facilitate probing of pier bottom. Probing the bottom of the piers is critical to verify bearing capacity and to detect potential voids. Probing would be extremely difficult because of the presence of groundwater. Significant loss of concrete could occur during pier installation where voids are present. This could result in significant additional costs to the project during the construction phase. Considering these factors, drilled pier foundation system is not considered appropriate for this site.

A deep foundation system consisting of micropiles is considered suitable. Micropile derives its axial capacity from the bond strength between the rock/grout interface. Consequently, micropiles can be deepened to account for any voids encountered during the micropile installation. Installation of micropiles should also be relatively easier compared to installation of drilled piers.

Theater site

For the purpose of analyses in this report, we have assumed that finish floor of lower level of the parking deck will be at El 1334±. In this case site grading is expected to include up to about 16 ft of cut in the eastern half of the site and be minor in the western half. Weathered to highly weathered shale is expected to be exposed at the bottom of the cut areas. In the western portion of the site, overburden soils are expected to be present to a relatively shallow depth

underlain by weathered shale. Even though the weathered shale is generally suitable for shallow foundations, considering the heavy column loads shallow foundation system consisting of continuous and individual footings founded in the weathered shale is not considered suitable. A deep foundation system consisting of straight-shaft drilled piers founded into hard to very hard competent sandstone is considered suitable. A deep foundation system consisting of micropiles is also considered suitable.

Recommendations for these foundation systems are discussed in the following report sections.

Drilled Piers

Foundation loads for the Theater site may be supported on drilled straight-shaft piers founded at least 5 ft or 1.5 times the diameter of the pier, whichever is greater, into the competent hard to very hard gray and light gray sandstone. Drilled piers so founded can most likely be sized based on a maximum net allowable end-bearing capacity of 75 to 100 kips per sq ft.

Resistance to uplift will be provided by the weight of the foundation units and circumferential shaft friction. An average allowable skin resistance values of 1000 lbs per sq ft for weathered shale and 8 kips per sq ft for the hard to very hard sandstone may be assumed. The upper 5 ft of shaft penetration should be neglected from skin friction considerations.

A minimum shaft diameter of 30 inches and a minimum pier length of 8 ft are recommended for drilled piers. Required pier length is estimated to range from about 8 to 22 ft below the anticipated finish floor at El 1334.

Groundwater seepage could be a factor in drilled pier construction. The Contractor should be prepared to dewater the pier holes. Temporary casing may be required to control groundwater inflow and/or prevent caving during pier installation. Underwater concrete placement may be warranted.

Heavy-duty drilling equipment, rock drilling tools and coring will be required to advance the pier excavations through the weathered shale into the hard to very hard sandstone. The sandstone encountered in the borings is considered competent with compressive strength ranging from 4800 to in excess of 19000 lbs per sq inch. The sandstone could have stronger intervals as

well. Very slow and difficult coring conditions should be expected in the sandstone bedrock. The presence of groundwater is also likely to slow down pier drilling and pier installation process.

Micropiles

Structural loads at both the sites may be supported on a foundation system consisting of micropiles. Some general information on micropiles is enclosed in Appendix E. Micropiles may be designed using an allowable rock/grout interface adhesion of 30 lbs per sq inch for moderately hard shale and 75 lbs per sq inch for hard to very hard sandstone. However, these values should be confirmed using load tests. A permanent casing will most likely be warranted within the overburden soils at the WAC site. The permanent casing should extend through the overburden soils just into the bedrock. We recommend that the pile penetration in the overburden soils be neglected from skin friction considerations. Design of micropiles should be performed by an experienced licensed Structural Engineer.

Floor Slab

Slab-on-fill or slab-on-grade construction is appropriate for floor slabs at both the sites. Some undercut of on-site weak soils may be warranted in the slab areas. At the Theater site, some seepage may occur in the cut areas. Consequently a subfloor drainage system is recommended. It may be possible to retain the existing asphalt pavement at the WAC site where some fill is required for site grading.

Below-Grade Walls/Retaining Walls

Site grading at the Theater site is expected to include significant cut. Below-grade walls/retaining walls are anticipated to retain cut slopes. Below-grade walls that are fixed at the top by framing and floor slabs, restricting rotation about the wall base, will be acted on by at-rest lateral earth pressures. Where walls are free to rotate, such as cantilever retaining walls, they will be acted on by active earth pressures.

The below-grade walls and retaining walls may be supported on drilled pier and grade beam system. Alternatively they may be supported on continuous footings founded in weathered shale. Footings founded at least 2 ft into the weathered shale may be designed using a maximum net allowable bearing capacity of 4000 lbs per sq ft. Resistance to sliding may be evaluated using friction (δ) of 22° between concrete and weathered shale. An appropriate factor of safety should be applied to the sliding analysis. Additional lateral resistance may be obtained by passive

resistance of the weathered shale. Passive resistance of the weathered shale in the upper 2 ft should be neglected. Below 2 ft, an allowable passive resistance of 1500 lbs per sq ft may be assumed.

Equivalent fluid pressure (EFP) values for below-grade wall design have been developed for at-rest earth pressure (restrained walls) and active earth pressures (unrestrained). Lateral earth pressures will also vary with soil backfill type, degree of backfill compaction, and drainage conditions.

Where walls are backfilled with an approved on-site low-plasticity material or imported fill, the zone behind walls extending at least 1.5 ft laterally should be backfilled with clean, free-draining crushed stone encapsulated in filter fabric. For drainage of perched water from wall backfill, a perimeter drain should be provided within the free-draining stone. The walls may then be designed using drained earth pressure parameters.

To minimize lateral earth pressures, walls can be backfilled with clean, crushed stone in a zone extending on a minimum 1-horizontal to 1-vertical configuration. Clean granular backfill should be placed in maximum 12-inch-thick lifts and densified by vibrating equipment, rodding or other appropriate means. Granular backfill should be separated from the on-site soil by a suitable filter fabric. A fabric such as Amoco 4545 or an approved equivalent is suitable.

The remainder of the wall backfill may consist of low plasticity clayey soils, compacted to a minimum of 95 percent of the maximum dry density as determined by Standard Proctor (ASTM D-698) procedures. The upper 12 to 18 inches of wall backfill should consist of low-permeability clayey soils compacted to the Standard Proctor value recommended above. This top layer should limit infiltration of surface water into backfill. The on-site silty clay is suitable for this use. Maximum particle size in wall backfill should be limited to about 1.5 inches. Compaction within 5 ft of walls should be achieved with hand compaction equipment. Care should be taken when compacting as overcompaction may cause damage to walls.

A summary of recommended equivalent fluid pressures is tabulated below for walls backfilled with either free-draining, clean, crushed stone or the approved on-site low-plasticity fill or imported fill.

Earth Pressure Condition	Free-draining crushed stone or gravel backfill, Equivalent Fluid Pressure, lbs per sq ft per ft depth	Approved low-plasticity select backfill or imported fill, Equivalent Fluid Pressure lbs per sq ft per ft depth
At rest (restrained), drained	50	85
At rest (restrained), undrained	85	100
Active (unrestrained), drained	35	55
Active (unrestrained), undrained	80	90

The lateral earth pressures for undrained conditions are based on the assumption that the walls will be subject to full hydrostatic pressure. Drained conditions assume positive and continuous drainage of infiltrated water from backfill.

Wall design must also consider surcharge loads. We recommend lateral earth pressure coefficient values of 0.65 and 0.5 be used for evaluation of the restrained and unrestrained conditions, respectively.

Rock Excavation

We anticipate that the surficial soils and weathered shale at the Theater site may be excavated using conventional medium- to heavy-duty excavating equipment and techniques. Based on the results of the borings, rock excavation is not anticipated for site grading. However, excavations extending into the sandstone bedrock will require rock excavation techniques such as a hoe ram, jack hammering, or blasting. As indicated, rock coring will be required to advance the pier holes onto the sandstone bedrock.

Temporary Excavation

Site grading for the Theater site is expected to include significant cut in the eastern half of the site. Temporary open-cut excavations can probably be made on a 1-horizontal to 1-vertical configurations in the overburden soils and 1-horizontal to 1.5-vertical configuration in the weathered shale. Stability of short-term excavations must be evaluated in the field based on specific site observations. Temporary slopes should be monitored on a continuing basis and

flattened as warranted by site conditions. Where seepage is encountered in the cut slopes, flattening of the slopes may be warranted.

It should be noted that a single-story building is present just north of the site where maximum depth of cut is expected. Open cut excavation should be planned so as not to adversely affect the existing building. As an alternative to sloping temporary cuts, excavations may be cut with near-vertical sidewalls. Temporary support for vertical cut excavations may utilize soil nailing and shotcrete wall, or other suitable systems. Depending on the system and design criteria selected, support systems are subject to lateral movements and potential loss of ground at the top of excavations. Soil movement and settlement related to the selected support system must be evaluated based on the proximity of adjacent foundations and structures.

CLOSURE

The recommendations presented in this report are based on the results of the preliminary borings performed at the sites. In addition, plans and site grading information are not developed at this time. Comments and recommendations provided in this report should be considered preliminary and should not be used for design. Additional subsurface investigation and analyses must be performed after a site is selected and plans are more developed.

The following illustrations are attached and complete this report:

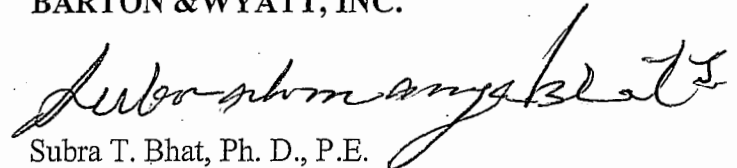
Plate 1	Site Vicinity
Plates 2 and 3	Plans of Borings
Plates 4 through 13	Logs of Borings
Plates 14 and 15	Key to Terms and Symbols
Attachment A	Summary of Groundwater Observations
Attachment B	Summary of Rock Core Breaks
Attachment C	Generalized Subsurface Profiles-WAC Site
Attachment D	Generalized Subsurface Profiles-Theater Site
Attachment E	General Information on Micropiles

* * * * *

We appreciate the opportunity to be of service to you on this project. Should you have any questions, please call on us.

Sincerely,

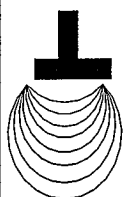
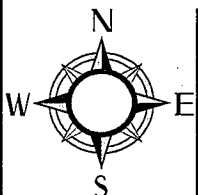
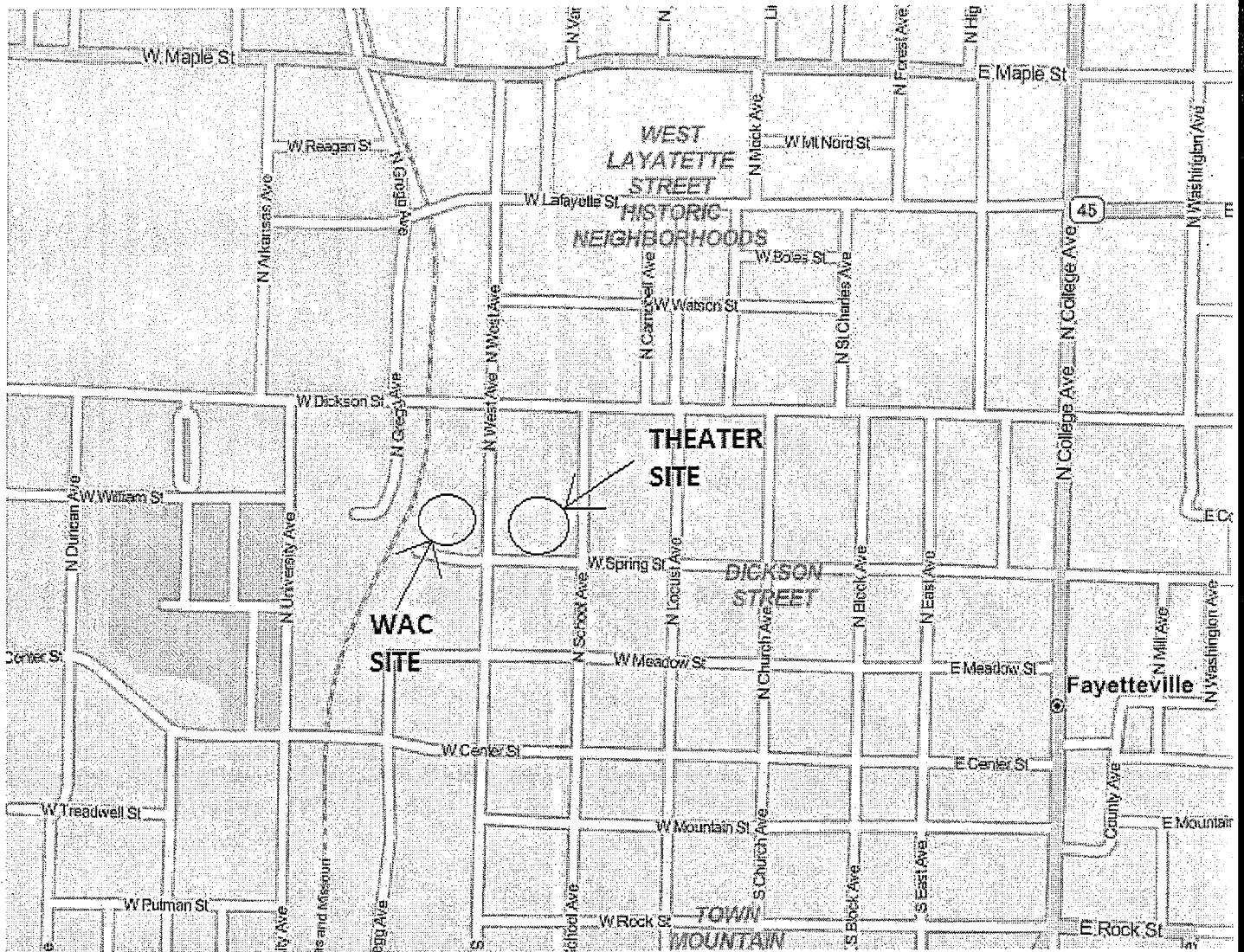
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BARTON & WYATT, INC.



Subra T. Bhat, Ph. D., P.E.
Principal/Manager of Springdale Office

STB

Copies Submitted: Garver, LLC
Attn: Mr. Ron Petrie, P.E. (3+e-mail)
Senior Project Manager
Attn: Mr. Jeff Webb, P.E. (1+e-mail)
Project Manager
Carl Walker, Inc.
Attn: Mr. Tim D. Christle, P.E. (1+e-mail)
Senior Vice President, New Parking Structures

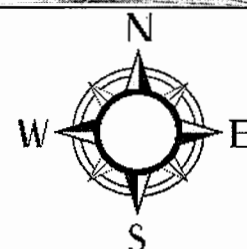
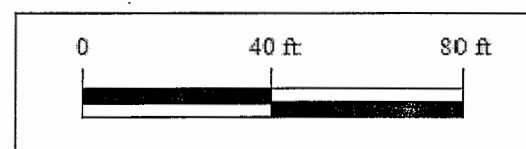
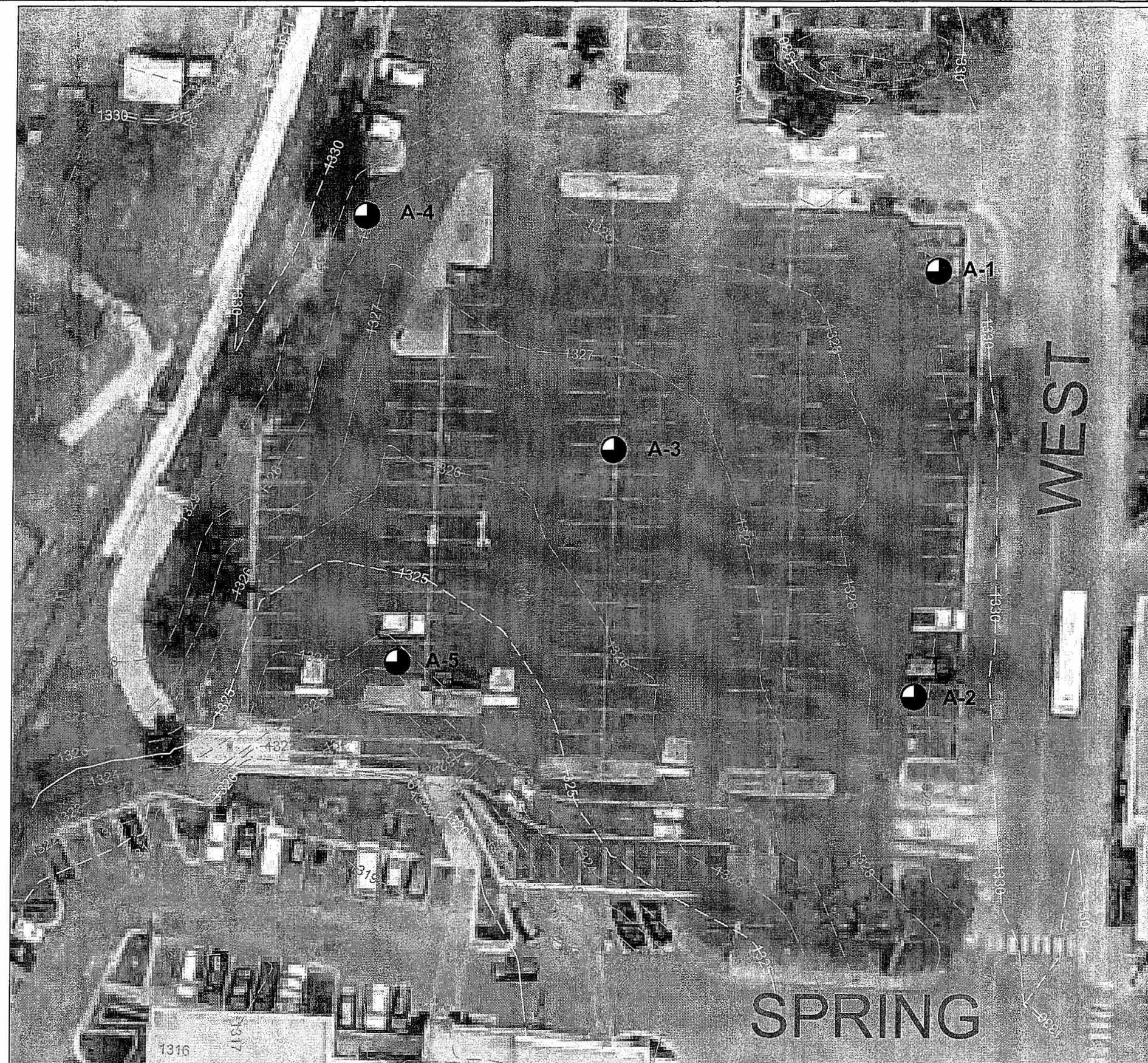


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SITE VICINITY
FAYETTEVILLE DOWNTOWN PARKING DECK
FAYETTEVILLE, ARKANSAS

Job No.: 12-044

Plate 1



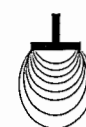
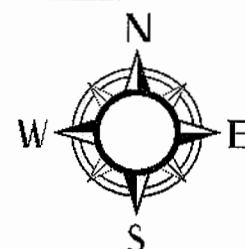
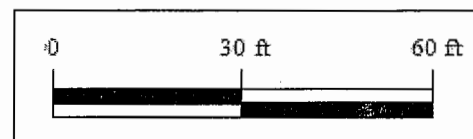
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Plan of Borings
Fayetteville Downtown Parking Deck - WAC Site
Fayetteville, Arkansas

Scale: 1" = 40 ft

Job No.: 12-044

Plate 2



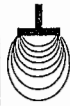
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Plan of Borings
Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

Scale: 1" = 30 ft

Job No.: 12-044

Plate 3



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LOG OF BORING NO. A-1

Fayetteville Downtown Parking Deck - WAC Site
Fayetteville, Arkansas

TYPE: Auger to 8.5 ft /Wash

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						- No. 200 %	% Recovery	% RQD		
						PLASTIC LIMIT	WATER CONTENT	LIQUID LIMIT								
			SURF. EL: 1329 +/-			10	20	30	40	50	60	70				
5			6" Asphalt over 12" Crushed stone	53			•									
			Very stiff red and reddish tan sandy clay with chert fragments (FILL)	20		•										
			- with tan fine sand and some organics below 5.5 ft	30												
10			Concrete	50/0"												
15			Medium dense reddish tan clayey fine sand with some soft highly weathered shale layers	20												
			Moderately hard dark gray shale	50/0"												
				50/0"												
20																
25																
30			Hard gray sandstone with dark gray shale partings and pockets and seams										qu= 10010 psi	85	27	
			- with vertical fractures at 30.5 and 31.25 ft											qu= 13950 psi		
														qu= 5860 psi	80	45
35													qu= 9800 psi	100	45	
40																
45				50/0"												
50				50/0"												
55				50/0"												
60				50/0"												
65				50/0"												
70				50/0"												
			Note: 20% water loss was encountered below 10 ft during drilling.													
COMPLETION DEPTH: 70.0 ft				DEPTH TO WATER IN BORING: 11 ft				DATE: 3/28/2012								
DATE: 3-28-12																

RECRODN200 12-044-1.GPJ 4-27-12

LOG OF BORING NO. A-2
Fayetteville Downtown Parking Deck - WAC Site
Fayetteville, Arkansas

LOCATION: See Plate 2

RECRODN200 12-044-1.GPJ 4-27-12



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LOG OF BORING NO. A-3

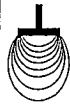
Fayetteville Downtown Parking Deck - WAC Site
Fayetteville, Arkansas

TYPE: Auger to 17 ft /Wash

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						- No. 200 %	% Recovery	% RQD	
						0.2 0.4 0.6 0.8 1.0 1.2 1.4									
						PLASTIC LIMIT	WATER CONTENT				LIQUID LIMIT				
			SURF. EL: 1327 +/-			10	20	30	40	50	60	70			
			6" Asphalt over 12" Crushed stone	34											
5			Stiff to very stiff red and reddish tan sandy clay with numerous chert fragments (FILL)	16			+				+		41		
				15											
				12											
10			- with a chert boulder at 7 ft	50											
			Dense black fine to medium sand (possible foundry sand) (FILL)												
15			Stiff gray and tan sandy clay	13			+				+		75		
				25/0"											
20			Hard gray fine-grained sandstone, calcareous with thinly bedded shale seams	50/0"									95	8	
25															
30															
	</														

RECDN200 12-044-1.GPJ 4-27-12



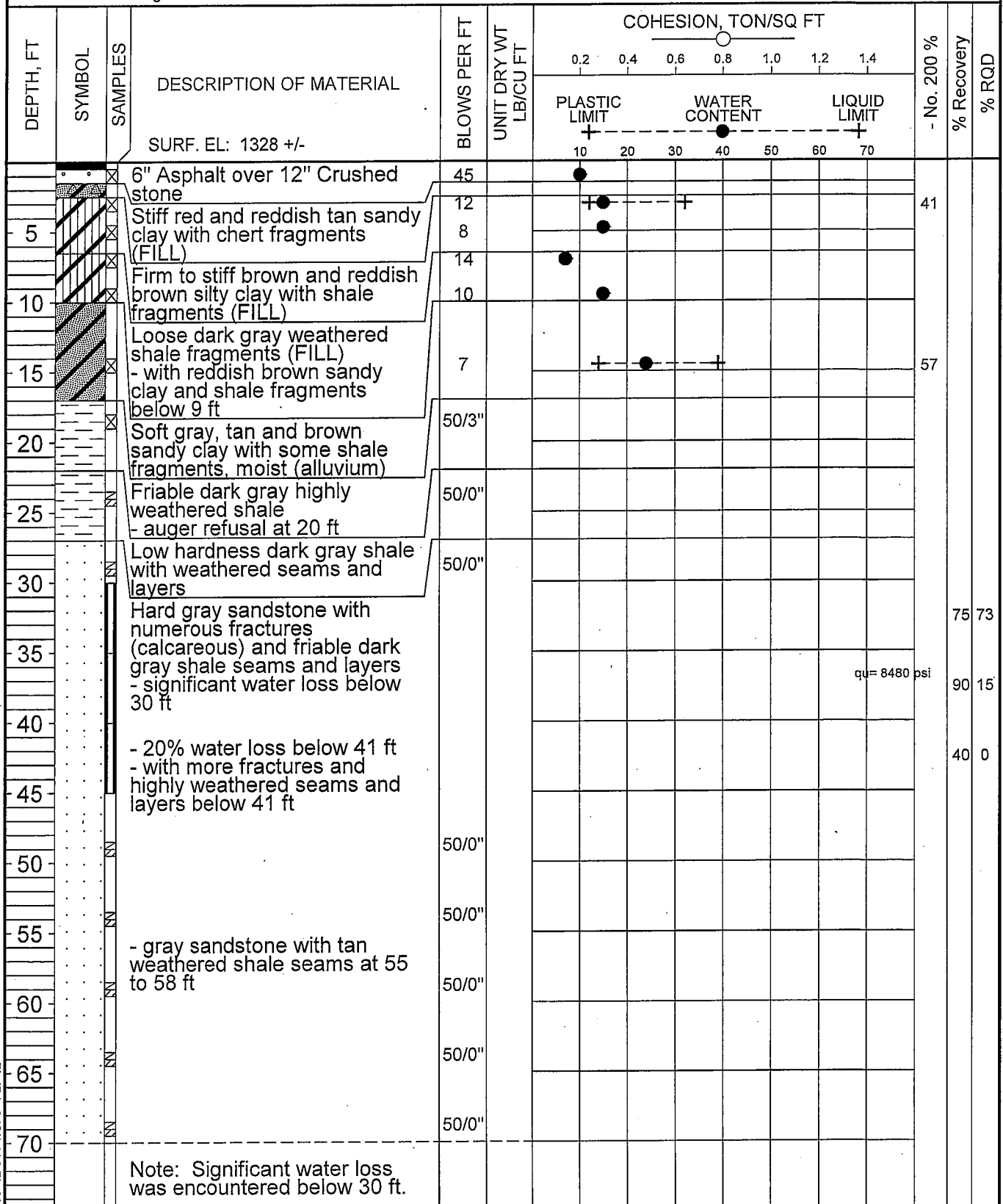
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LOG OF BORING NO. A-4

Fayetteville Downtown Parking Deck - WAC Site
Fayetteville, Arkansas

TYPE: Auger to 22 ft /Wash

LOCATION: See Plate 2



COMPLETION DEPTH: 70.0 ft
DATE: 3-27-12

DEPTH TO WATER
IN BORING: 10.5 ft

DATE: 3/27/2012



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LOG OF BORING NO. A-5

Fayetteville Downtown Parking Deck - WAC Site
Fayetteville, Arkansas

TYPE: Auger to 16 ft /Wash

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT		PLASTIC LIMIT	WATER CONTENT	LIQUID LIMIT	No. 200 %	% Recovery	% RQD
						0.2	0.4	0.6	0.8	1.0	1.2	1.4	
			SURF. EL: 1323 +/-										
			6" Asphalt over 12" Crushed stone	34									
5			Very stiff red and reddish tan sandy clay with chert fragments (FILL)	34									
			- with crushed stone at 5.5 to 6 ft	54									
10			Loose red and brown clayey fine sand with some sandstone fragments and ferrous nodules	50/6"									
			Soft olive gray, tan and brown sandy clay with occasional gravel	7									
15			Moderately hard dark gray shale with sandstone seams and layers	9									
			- losing water at 17 ft	50/0"									
20			Hard gray fine grained sandstone with some dark gray shale seams and layers and with numerous horizontal and occasional vertical fractures										
25			- with moderately hard dark gray shale layer at 33.5 to 34 ft										
30													
35													
40													
45													
50													
55													
60													
65													
70													
			Note: Significant water loss was encountered below 17 ft.										

COMPLETION DEPTH: 70.0 ft
DATE: 3-26-12

DEPTH TO WATER
IN BORING: 12 ft

DATE: 3/26/2012

LOG OF BORING NO. B-1
Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

LOCATION: See Plate 3

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT							- No. 200 %	% Recovery	% RQD	
						0.2 0.4 0.6 0.8 1.0 1.2 1.4										
						PLASTIC LIMIT	WATER CONTENT					LIQUID LIMIT				
			SURF. EL: 1350 +/-			10	20	30	40	50	60	70				
5			Stiff dark brown clayey silt with rootlets and organics (FILL)	15			●									
			18		●	+	+							23		
			19		●									17		
			48		●	+		+						78		
10			Medium dense reddish brown and tan clayey fine sand with some sandy clay seams and layers and occasional sandstone fragments	50/7"			●									
15			- reddish brown, dark brown and reddish tan with some ferrous nodules below 4.5 ft	50/8"			●									
			50/6"			●										
20			Low hardness tan and gray weathered shale													
25			- dark gray, gray and tan with numerous ferrous stains below 9 ft													
			- dark gray and tan, less weathered below 14.5 ft													
25			- auger refusal at 23.5 ft										qu= 11590	psi		
30			Hard gray fine-grained sandstone, calcareous												100	
			- with cemented vertical fracture at 24-25.25 ft											qu= 14040	psi	90
			- with dark gray shale seams at 25.5-26 ft											qu= 11470	psi	
			- with numerous closely spaced shale seams, flat bedded at 26-28 ft											qu= 8260	psi	100
35			- gray with occasional shale seams below 28 ft										qu= 6660	psi	73	
40			- with dark gray shale seams and layers below 34 ft													
			50/0"													
45			Moderately hard dark gray shale with some sandstone seams	50/0"												
50			- with light gray sandstone seams and layers below 37.5 ft	50/0"												
			50/0"													
55			Moderately hard gray sandstone with weathered seams and layers	50/0"												
60			Moderately hard dark gray shale with gray sandstone seams	50/0"												
			50/0"													
65				50/0"												
70				50/0"												
			Note: No water loss was encountered during drilling.													

COMPLETION DEPTH: 70.0 ft
DATE: 3-18-12

DEPTH TO WATER
IN BORING: 21 ft after 48 hours

DATE: 3/20/2012



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LOG OF BORING NO. B-2

Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

TYPE: Auger to 10 ft /Wash

LOCATION: See Plate 3

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT		PLASTIC LIMIT	WATER CONTENT	LIQUID LIMIT	- No. 200 %	% Recovery	% RQD
						0.2	0.4	0.6	0.8	1.0	1.2	1.4	
			SURF. EL: 1350 +/-										
5			Firm to stiff reddish brown fine sandy clay with ferrous stains and some clayey fine sand seams	12									
				23									
				45									
10			Medium dense reddish brown and dark brown fine sand, cemented (completely weathered sandstone)	28									
			- reddish tan, tan and red with fine sandy clay seams and layers at 6.5 to 8.5 ft	50/10"									
			- brown and reddish brown with some sandstone fragments below 8.5 ft										
15			- with dark brown sandy clay layers below 13 ft	32									
			Soft tan highly weathered clayey shale, laminated	50/6"									
20			Friable dark gray, olive gray and tan weathered shale	50/3"									
25													
30			Very hard light gray fine-grained sandstone, calcareous										
			- with thinly bedded shale seams below 29 ft, horizontally bedded (spaced at approximately 3 inches)										
35			- with numerous closely spaced dark gray shale seams below 30 ft										
			- with medium hard dark gray shale layer at 33-33.5 ft	50/0"									
40			- with less shale seams below 33.5 ft										
45				50/0"									
50				50/0"									
55			Moderately hard dark gray shale with few sandstone seams	50/0"									
60				50/0"									
65				50/0"									
70				50/0"									
			Note: No water loss.										

qu = 20690 psi

qu = 15070 psi

qu = 13400 psi

qu = 8600 psi

100 57

95 45

COMPLETION DEPTH: 70.0 ft
DATE: 3-23-12

DEPTH TO WATER
IN BORING: 21 ft after 48 hours

DATE: 3/25/2012



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LOG OF BORING NO. B-3

Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

TYPE: Auger to 9.5 ft /Wash

LOCATION: See Plate 3

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT		PLASTIC LIMIT	WATER CONTENT	LIQUID LIMIT	- No. 200 %	% Recovery	% RQD
						0.2	0.4	0.6	0.8	1.0	1.2	1.4	
			SURF. EL: 1341 +/-										
5			Firm dark brown and reddish brown fine sandy clay with surface organics	10									
			Soft tan and gray highly weathered clayey shale	16									
			Friable tan, gray and dark gray weathered shale	23									
10			- dark gray, less weathered below 8 ft	43									
			Hard to very hard light gray fine grained sandstone, calcareous with dark gray shale seams	50/6"									
15													
20													
25			Hard gray sandstone and medium hard dark gray shale, interbedded	50/0"									
30			Moderately hard gray sandstone with shale seams and layers	50/0"									
35			Moderately hard dark gray shale with gray sandstone seams and layers, 1 to 3 inches thick	50/0"									
40				50/0"									
45				50/0"									
50				50/0"									
55				50/0"									
60			Hard gray sandstone, calcareous with dark gray shale seams	50/0"									
65				50/0"									
70				50/0"									
			Note: No water loss was encountered during drilling.										

COMPLETION DEPTH: 70.0 ft
DATE: 3-16-12

DEPTH TO WATER
IN BORING: 9 ft

DATE: 3/16/2012



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LOG OF BORING NO. B-4

Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

TYPE: Auger to 8 ft /Wash

LOCATION: See Plate 3

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT						- No. 200 %	% Recovery	% RQD
						0.2	0.4	0.6	0.8	1.0	1.2	1.4		
			SURF. EL: 1334 +/-											
			6" Asphalt over 2" crushed stone	24									46	
			Stiff brown fine sandy clay, calcareous	43									48	
5			Friable gray, dark gray and tan weathered shale	50/8"										
			- dark gray and tan, less weathered below 6 ft	50/9"										
10			Very hard light gray sandstone, calcareous with frequent dark gray shale seams, flat bedded										90	30
15													100	68
20													100	47
25			Moderately hard dark gray shale with occasional gray sandstone seams											
			- with interbedded gray sandstone seams and layers below 23 ft	50/0"										
30				50/0"										
35				50/0"										
40				50/0"										
45				50/0"										
50				50/0"										
55				50/0"										
60				50/0"										
65				50/0"										
70				50/0"										
			Note: No water loss was encountered during drilling.											

COMPLETION DEPTH: 60.0 ft
DATE: 3-17-12

DEPTH TO WATER
IN BORING: 6 ft after 24 hours

DATE: 3/18/2012

REC-RQD-N200 12-044.GPJ 5-15-12



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Consulting Engineers

LOG OF BORING NO. B-5

Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

TYPE: Auger to 17.5 ft /Wash

LOCATION: See Plate 3

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT		PLASTIC LIMIT	WATER CONTENT	LIQUID LIMIT	- No. 200 %	% Recovery	% RQD
						0.2	0.4	0.6	0.8	1.0	1.2	1.4	
			SURF. EL: 1333 +/-										
5			Firm dark brown clayey silt with rootlets and organics	36									
			Stiff brown clayey silt	50/7"									
			Dense brown and reddish tan fine sand, cemented (completely weathered sandstone)	26									
10				53									
				50/9"									
15			Friable tan and gray highly weathered shale with some ferrous stains										
			- with highly weathered seams and layers below 6.5 ft										
20			Friable dark gray slightly weathered shale	50/0"									
			Very hard gray and light gray fine grained sandstone, calcareous										
25			- with dark gray shale seams below 20 ft										
			- more shale at 24-25 ft										
30													
35			- moderately hard dark gray shale at 34.25-35 ft										
			- moderately hard dark gray shale at 36.75-37.5 ft										
40													
45				50/0"									
50			Moderately hard dark gray shale with sandstone seams and layers	50/0"									
55				50/0"									
60				50/0"									
65			Hard gray sandstone with dark gray shale seams	50/0"									
70				50/0"									
			Note: No water loss was encountered during drilling.										

COMPLETION DEPTH: 70.0 ft
DATE: 3-17-12

DEPTH TO WATER
IN BORING: Dry to 17.5 ft

DATE: 3/17/2012



SYMBOLS AND TERMS USED ON BORING LOGS

SOIL TYPES

(SHOWN IN SYMBOLS COLUMN)



Gravel



Sand



Silt



Clay

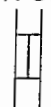
Predominant type shown heavy

SAMPLER TYPES

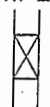
(SHOWN ON SAMPLES COLUMN)



Shelby
Tube



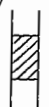
Rock
Core



Split
Spoon



No
Recovery



Cutting

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on No. 200 sieve): Includes (1) Clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

DESCRIPTIVE TERM

N-VALUE

RELATIVE DENSITY

VERY LOOSE

0-4

0-15%

LOOSE

4-10

15-35%

MEDIUM DENSE

10-30

35-65%

DENSE

30-50

65-85%

VERY DENSE

50 and above

85-100%

FINE GRAINED SOILS (major portion passing No. 200 sieve): Includes (1) Inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

DESCRIPTIVE TERM

UNCONFINED COMPRESSIVE STRENGTH TON/SQ. FT.

VERY SOFT

Less than 0.25

SOFT

0.25-0.50

FIRM

0.50-1.00

STIFF

1.00-2.00

VERY STIFF

2.00-4.00

HARD

4.00 and higher

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

TERMS CHARACTERIZING SOIL STRUCTURE

SLICKENSIDED - having inclined planes of weakness that are slick and glossy in appearance.

FISSURED - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

LAMINATED - composed of thin layers of varying color and texture.

INTERBEDDED - composed of alternate layers of different soil types.

CALCAREOUS - containing appreciable quantities of calcium carbonate.

WELL GRADED - having a wide range in grain sizes and substantial amounts of all intermediate particle sizes.

POORLY GRADED - predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.

Terms used on this report for describing soils according to their texture or grain size distribution are in accordance with the UNIFIED SOIL CLASSIFICATION SYSTEM, as described in Technical Memorandum No.3-357, Waterways Experiment Station, March 1953



BORING LOG TERMS - ROCK

ROCK TYPES (SHOWN IN SYMBOLS COLUMN)



Sandstone



Limestone



Siltstone



Coal



Shale

Joint Characteristics -	<u>Spacing</u> Very Close Close Moderately Close Wide Very Wide	0.75 to 2.5 in. 2.5 to 8 in. 8 to 24 in. 2 to 6 ft More than 6 ft	Degree of Weathering -	Fresh - No visible signs of decomposition or discoloration. Rings under hammer impact. Slightly Weathered - Slight discoloration inwards from open fractures, otherwise similar to fresh. Moderately Weathered - Discoloration throughout. Weaker minerals such as feldspar decomposed. Strength somewhat less than fresh rock, but cores cannot be broken by hand or scraped by knife. Texture preserved. Highly Weathered - Most minerals somewhat decomposed. Specimens can be broken by hand with effort or shaved with knife. Core stones present in rock mass. Texture becoming indistinct but fabric
Bedding Characteristics -	Very Thin Thin Medium Thick Massive	0.75 to 2.5 in. 2.5 to 8 in. 8 to 24 in. 2 to 6 ft More than 6 ft		
Lithologic Characteristics -	Clayey Shaly Calcareous (limy) Siliceous Sandy (arenaceous) Silty Plastic Seams			
Parting -	Less than 1/16 inch			
Seam -	1/16 to 1/2 inch			
Layer -	1/2 to 12 inches			
Stratum -	Greater than 12 inches			
Hardness-	Soft (S) - Reserved for plastic material alone. Friable (F) - Easily crumbled by hand, pulverized or reduced to powder and is too soft to be cut with a pocket knife. Low Hardness (LH) - Can be gouged deeply or carved with a pocket knife. Moderately Hard (MH) - Can be readily scratched by a knife blade; scratch leaves a heavy trace of dust and scratch is readily visible after the powder has been blown away. Hard (H) - Can be scratched with difficulty; scratch produces little powder and is often faintly visible; traces of the knife steel may be visible. Very hard (VH) - Cannot be scratched with a pocket knife. Knife steel marks left on surface.		Solution and Void Conditions - Solid, contains no voids Vuggy (pitted) Vesicular (igneous) Porous Cavities Cavernous Swelling Properties - Nonswelling Swelling Slaking Properties - Nonslaking Slakes slowly on exposure Slakes readily on exposure	
Texture -	Fine - Barely seen with naked eye Medium - Barely seen up to 1/8 in. Coarse - 1/8 in. to 1/4 in.			
Structure -	Bedding Flat - 0° - 5° Gently Dipping - 5° - 35° Moderately Dipping - 35° - 55° Steeply Dipping - 55° - 85° Fractures, scattered Open Cemented or Tight Fractures, closely spaced Open Cemented or Tight Brecciated (Sheared and Fragmented) Open Cemented or Tight Joints Faulted Slickensides		Rock Quality Designation (RQD) -	<u>RQD (Percent)</u> Greater than 90 75 - 90 50 - 75 25 - 50 Less than 25 <u>Diagnostic Description</u> Excellent Good Fair Poor Very Poor

ATTACHMENT A

**Summary of Groundwater Observations
Fayetteville Downtown Parking Deck - WAC Site
12-044**

Boring #	Date	Elapsed Time	Approximate Water Depth	Approximate Water Elevation (ft)	Comments
A-1	3/28/2012	0 hrs	11'	1318	After completion of drilling
A-2	3/25/2012	0 hrs	15'	1314	After completion of drilling
	3/26/2012	24 hrs	8'	1321	
	3/27/2012	48 hrs	8'	1321	
	3/28/2012	72 hrs	8' - 7"	1320	
A-3	3/24/2012	0 hrs	11' - 2"	1316	After completion of drilling
	3/25/2012	24 hrs	11' - 2"	1316	
A-4	3/27/2012	0 hrs	10' - 6"	1318	After completion of drilling
	3/28/2012	22 hrs	11'	1317	
A-5	3/26/2012	0 hrs	12'	1311	After completion of drilling
	3/27/2012	24 hrs	12'	1311	
	3/28/2012	48 hrs	12'	1311	

Summary of Groundwater Observations **Fayetteville Downtown Parking Deck - Theater Site** **12-044**

Boring #	Date	Elapsed Time	Approximate Water Depth	Approximate Water Elevation (ft)	Comments
B-1	3/24/2012	24 hrs	15'	1335	Bailed to unknown depth
	3/26/2012	72 hrs	18'	1332	
	3/26/2012	0 hrs	40'	1310	Bailed
	3/26/2012	2 hrs	20' - 6"	1329	
	3/26/2012	6 hrs	18'	1332	
	3/27/2012	24 hrs	17' - 6"	1332	
	3/28/2012	48 hrs	17' - 6"	1332	
	4/4/2012	9 days	18'	1332	
	4/4/2012	0 hrs	22'	1328	Bailed on 4/4/2012
	4/4/2012	15 mins	21' - 10"	1328	
	4/4/2012	30 mins	21' - 8"	1328	
	4/4/2012	1 hr	21' - 3"	1329	
	4/4/2012	1.5 hrs	21' - 3"	1329	
	4/25/2012	21 days	19' - 8"	1330	
B-2	3/23/2012	0	48'	1302	After bailing
	3/24/2012	16 hrs	15'	1335	
	3/25/2012	40 hrs	17' - 6"	1333	
	3/26/2012	72 hrs	16'	1334	
	3/26/2012	0 hrs	40'	1310	Bailed a second time
	3/26/2012	2 hrs	40'	1310	
	3/26/2012	6 hrs	38'	1312	
	3/27/2012	24 hrs	36'	1314	
	3/28/2012	48 hrs	28'	1322	
	4/4/2012	9 days	29'	1321	
	4/4/2012	0 hrs	35'	1315	Bailed on 4/4/2012
	4/4/2012	15 mins	35'	1315	
	4/4/2012	30 mins	35'	1315	

**Summary of Groundwater Observations
Fayetteville Downtown Parking Deck - Theater Site
12-044**

B-2	4/4/2012	1 hr	35'	1315	
	4/4/2012	1.5 hrs	35'	1315	
	4/25/2012	21 days	21'	1329	
B-4	3/24/2012	0 hrs	18'	1316	After bailing
	3/25/2012	24 hrs	6' - 6"	1327	
	3/26/2012	48 hrs	6'	1328	
	3/26/2012	0 hrs	20'	1314	Bailed a second time
	3/26/2012	2 hrs	7'	1327	
	3/26/2012	6 hrs	6' - 6"	1327	
	3/27/2012	24 hrs	6'	1328	
	3/28/2012	48 hrs	6'	1328	
	4/4/2012	9 days	7' - 2"	1327	
	4/4/2012	0 hrs	15'	1319	Bailed on 4/4/2012
	4/4/2012	15 mins	10' - 5"	1324	
	4/4/2012	30 mins	10' - 2"	1324	
	4/4/2012	1 hr	9' - 8"	1324	
	4/4/2012	1.5 hrs	9' - 2"	1325	
	4/25/2012	21 days	1' - 6"	1332	

ATTACHMENT B

Summary of Rock Core Breaks
Fayetteville Downtown Parking Deck - WAC Site
12-044

Test #	Boring #	Sample Depth, ft	Compressive Strength, psi
1	A-1	29.5	10010
2	A-1	31.5	13950
3	A-1	35.75	5860
4	A-1	40.75	9800
5	A-2	14.25	19340
6	A-2	15.75	6250
7	A-2	22.75	6360
8	A-2	23.75	6350
9	A-2	28.25	19830
10	A-3	26.25	8890
11	A-3	28.75	5620
12	A-3	31.25	5490
13	A-4	37.75	8480
14	A-5	21.25	8360
15	A-5	31.25	6720

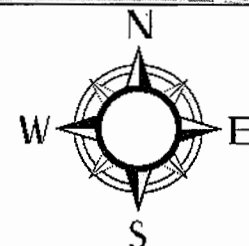
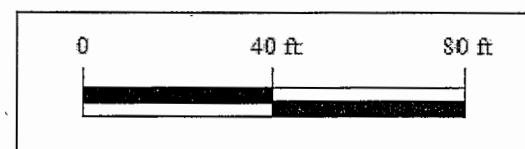
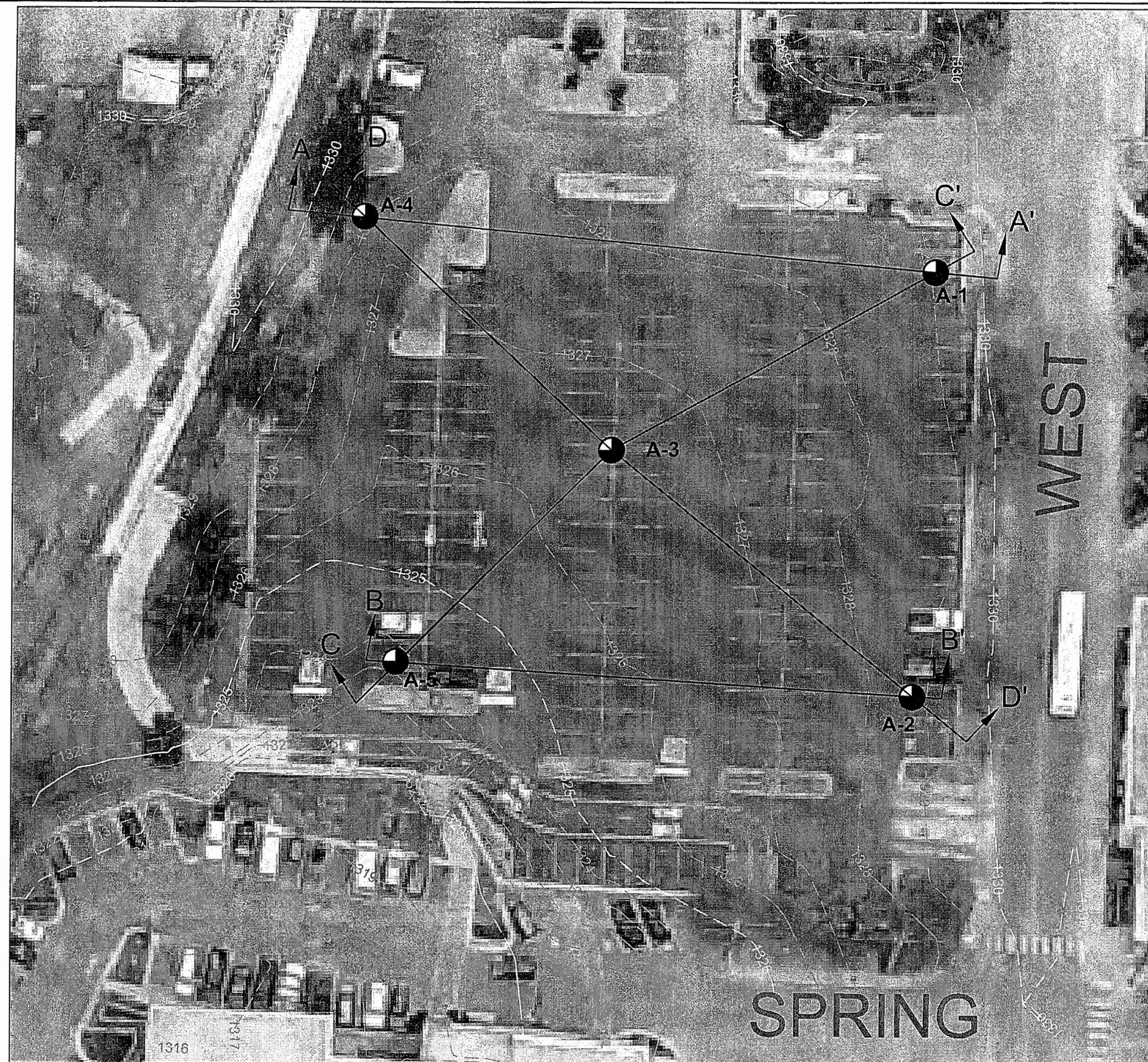
Summary of Rock Core Breaks

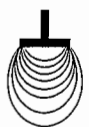
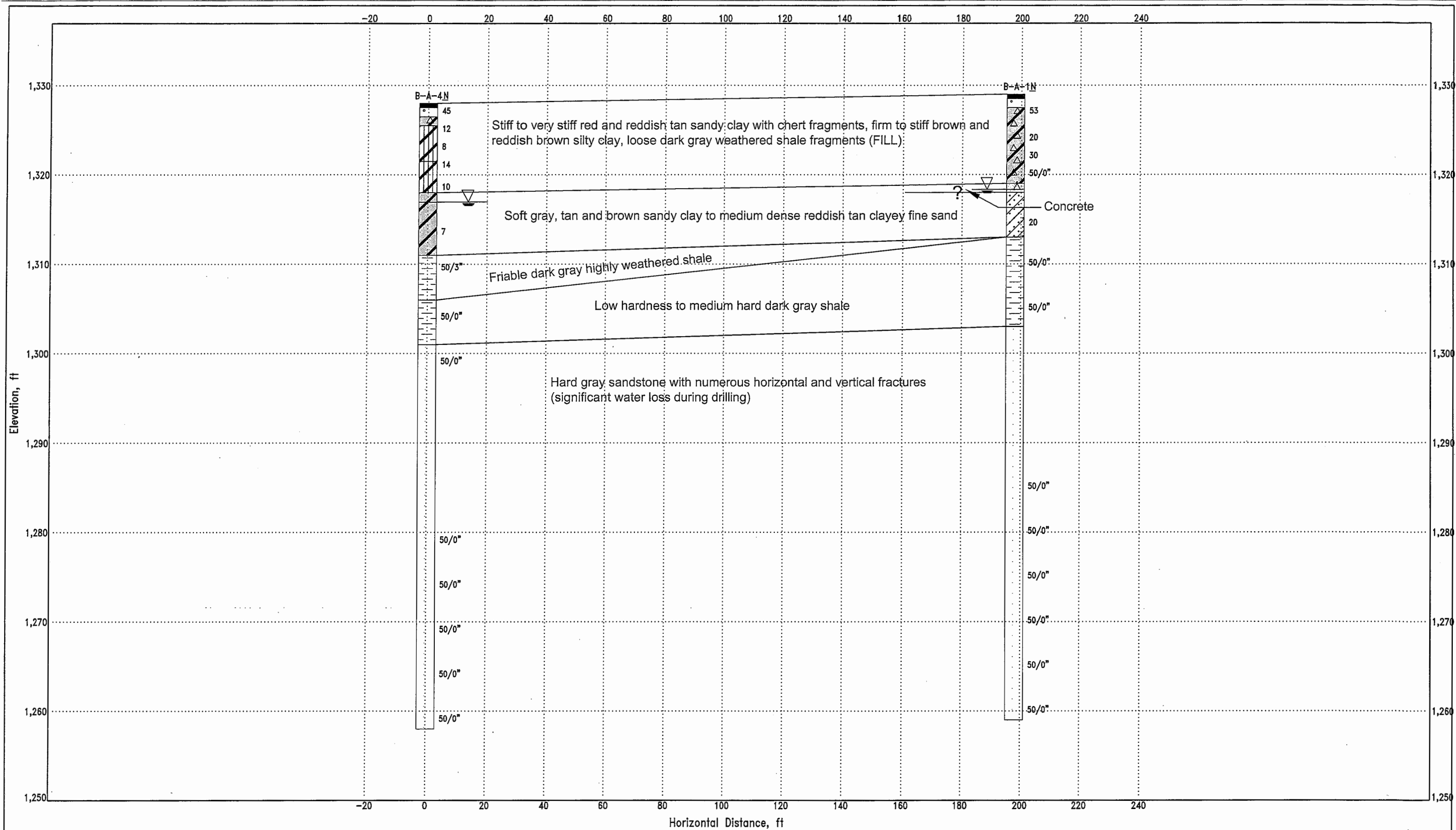
Fayetteville Downtown Parking Deck - Theater Site

12-044

Test #	Boring #	Sample Depth, ft	Compressive Strength, psi
1	B-1	25	11590
2	B-1	29.25	14040
3	B-1	30.25	11470
4	B-1	31.25	8260
5	B-1	31.75	6660
6	B-1	32.25	15980
7	B-2	28.25	20690
8	B-2	28.75	15070
9	B-2	33.75	13400
10	B-2	35.25	8600
11	B-3	11.5	13110
12	B-3	14.75	7010
13	B-3	19.25	5150
14	B-4	9.25	19010
15	B-4	14.75	12530
16	B-4	19.25	12860
17	B-4	20.25	4830
18	B-4	22	4860
19	B-5	19.25	16230
20	B-5	19.75	7770
21	B-5	20.75	8740
22	B-5	23.5	13200
23	B-5	26.25	6880
24	B-5	29.75	11830
25	B-5	30.75	5440
26	B-5	31.25	8650
27	B-5	33.25	15850
28	B-5	33.75	13470
29	B-5	35.75	14860

ATTACHMENT C





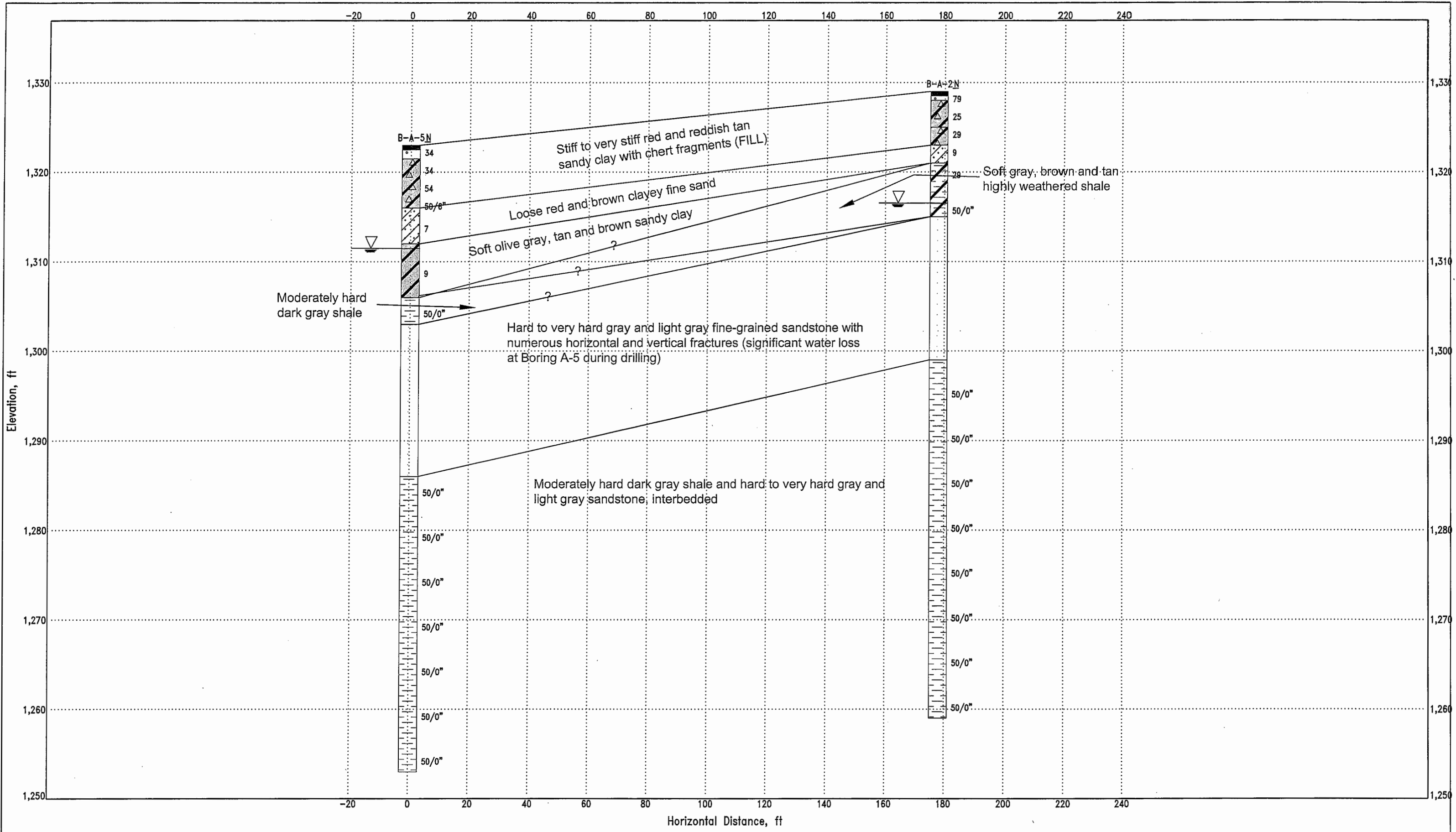
Grubbs, Hoskyn,
Barton & Wyatt, Inc.

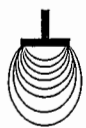
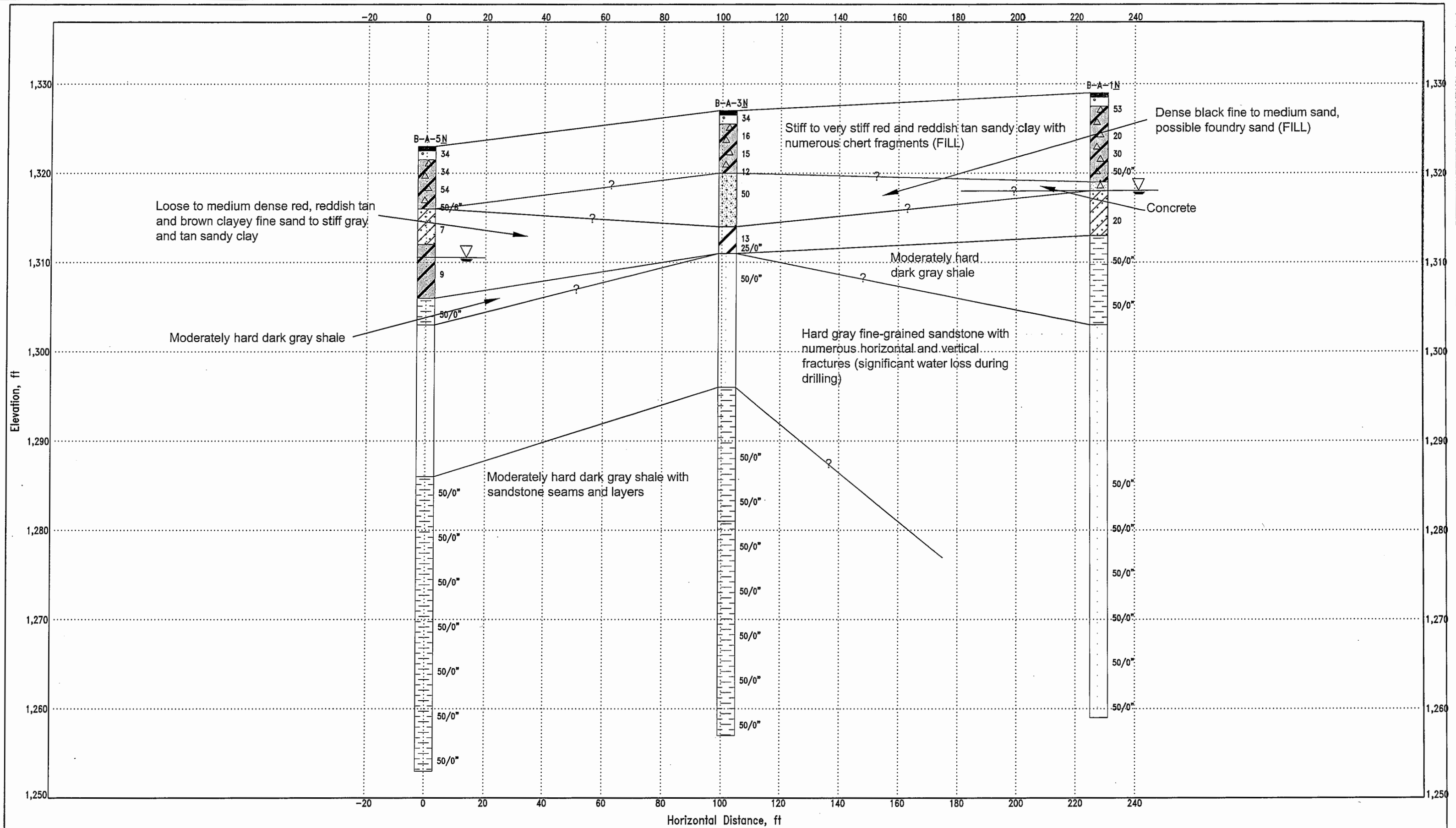
NOTES:
1. Subsurface conditions have been inferred between discrete boring locations. Actual conditions may vary.
2. Ground surface approximate.

SCALE: As Shown

Generalized Subsurface Profile AA'
Fayetteville Downtown Parking Deck – WAC Site
Fayetteville, Arkansas

Project Number: 12-044



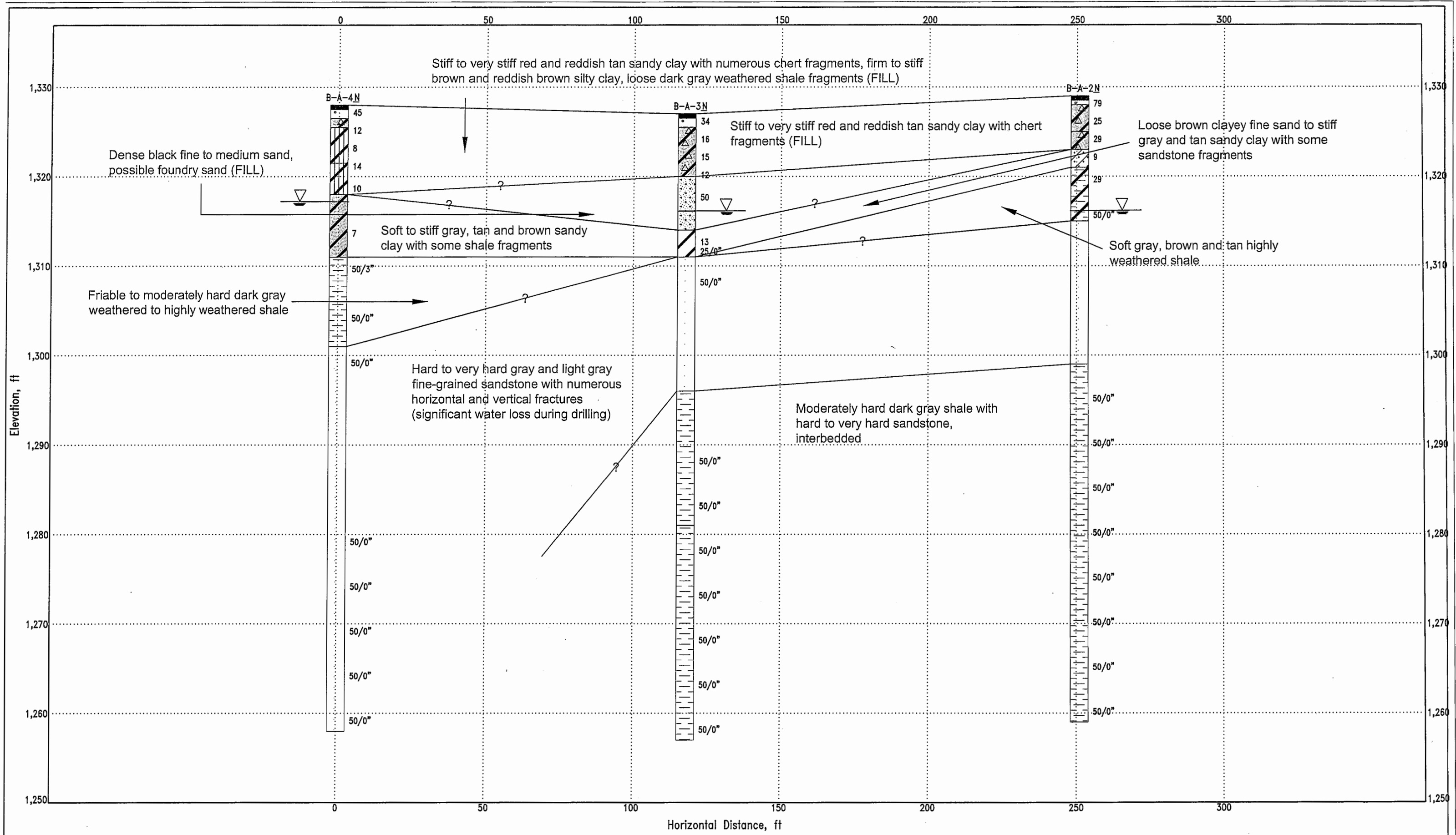


Grubbs, Hoskyn,
 Barton & Wyatt, Inc.

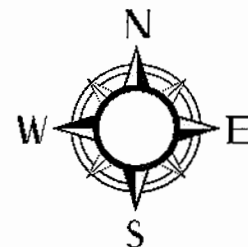
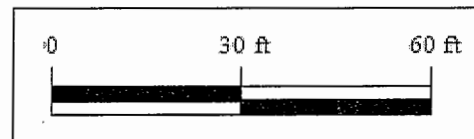
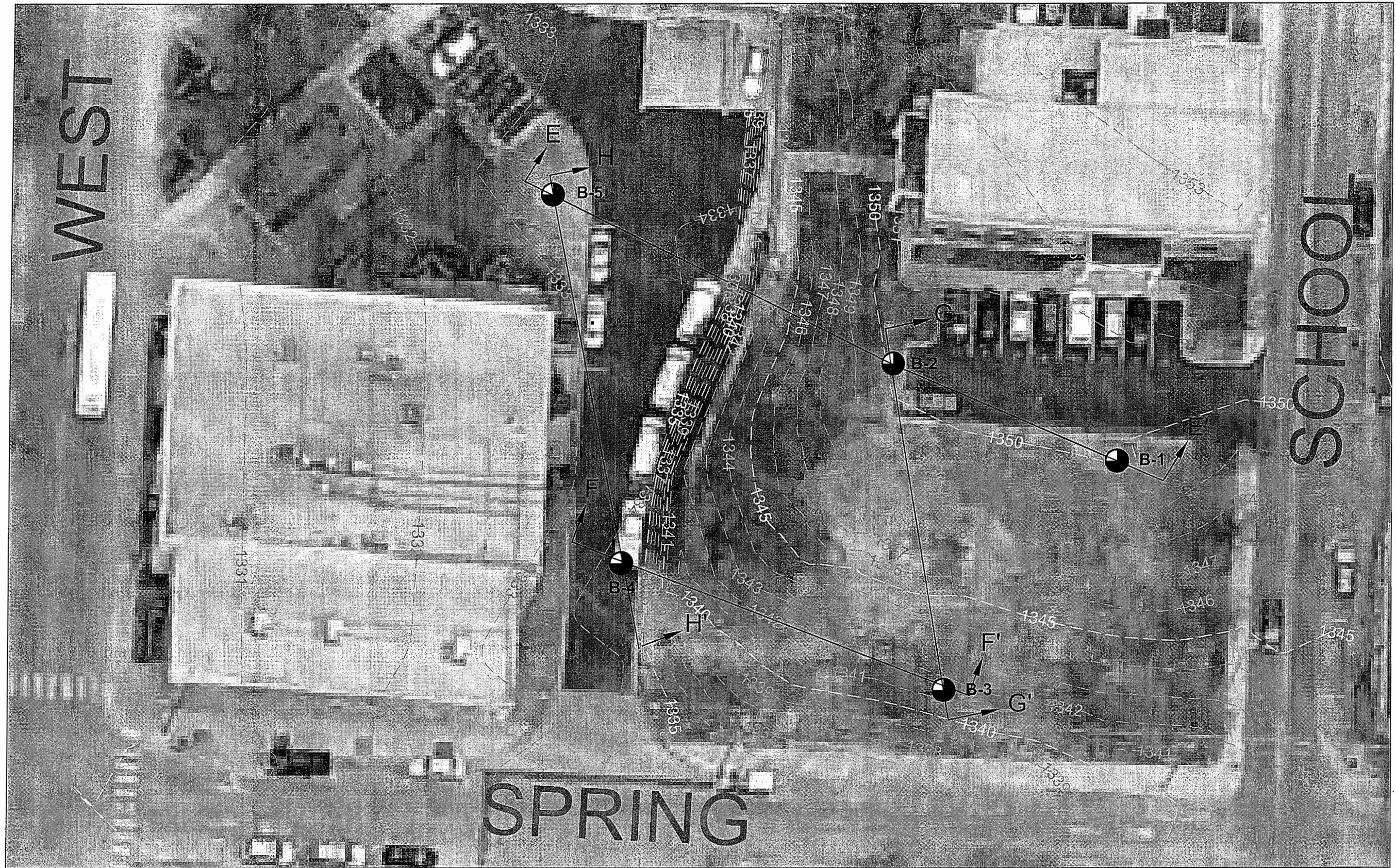
NOTES:

1. Subsurface conditions have been inferred between discrete boring locations. Actual conditions may vary.
2. Ground surface approximate.

SCALE: As Shown



ATTACHMENT D

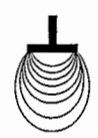
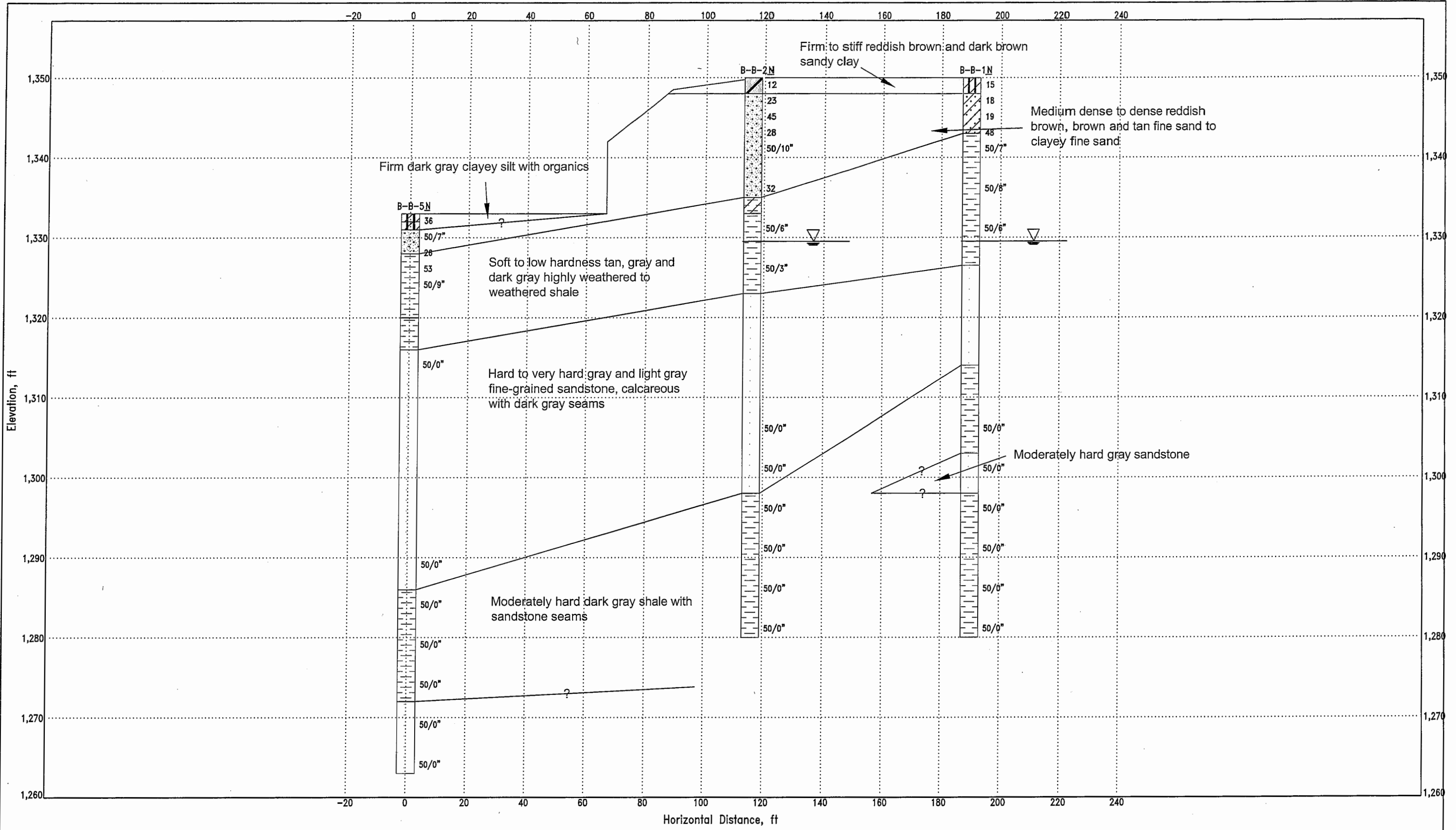


Grubbs, Hoskyn,
Barton & Wyatt, Inc.
Consulting Engineers

Generalized Subsurface Profile Sections
Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

Scale: 1" = 30 ft

Job No.: 12-044

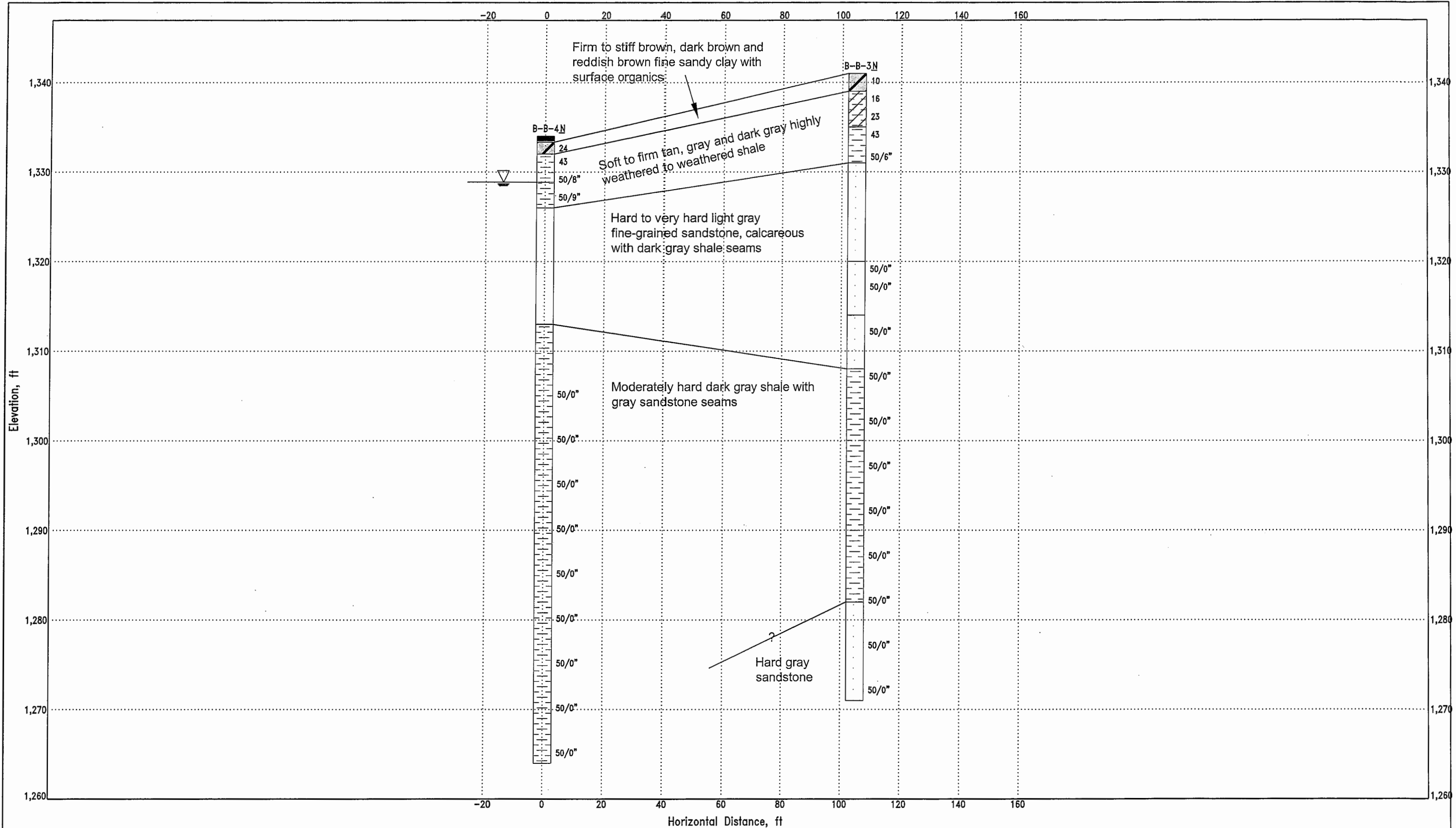


Grubbs, Hoskyn,
Barton & Wyatt, Inc.

NOTES:
1. Subsurface conditions have been inferred between discrete boring locations. Actual conditions may vary.
2. Ground surface approximate.

SCALE: As Shown

Generalized Subsurface Profile EE'
Fayetteville Downtown Parking Deck – Theater Site
Fayetteville, Arkansas
Project Number: 12-044



Grubbs, Hoskyn,
Barton & Wyatt, Inc.

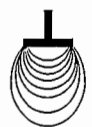
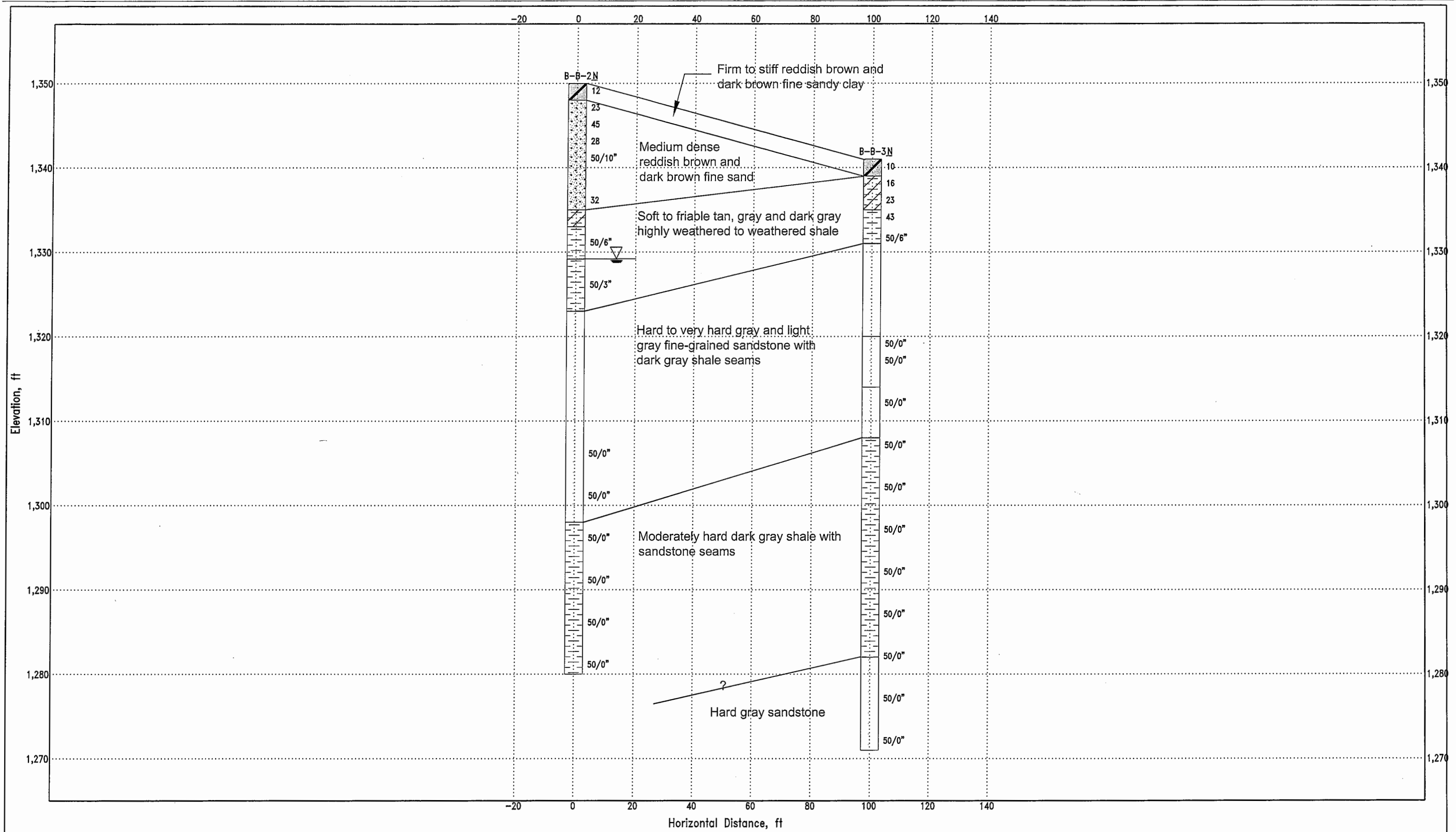
NOTES:

1. Subsurface conditions have been inferred between discrete boring locations. Actual conditions may vary.
2. Ground surface approximate.

SCALE: As Shown

Generalized Subsurface Profile FF'
Fayetteville Downtown Parking Deck – Theater Site
Fayetteville, Arkansas

Project Number: 12-044



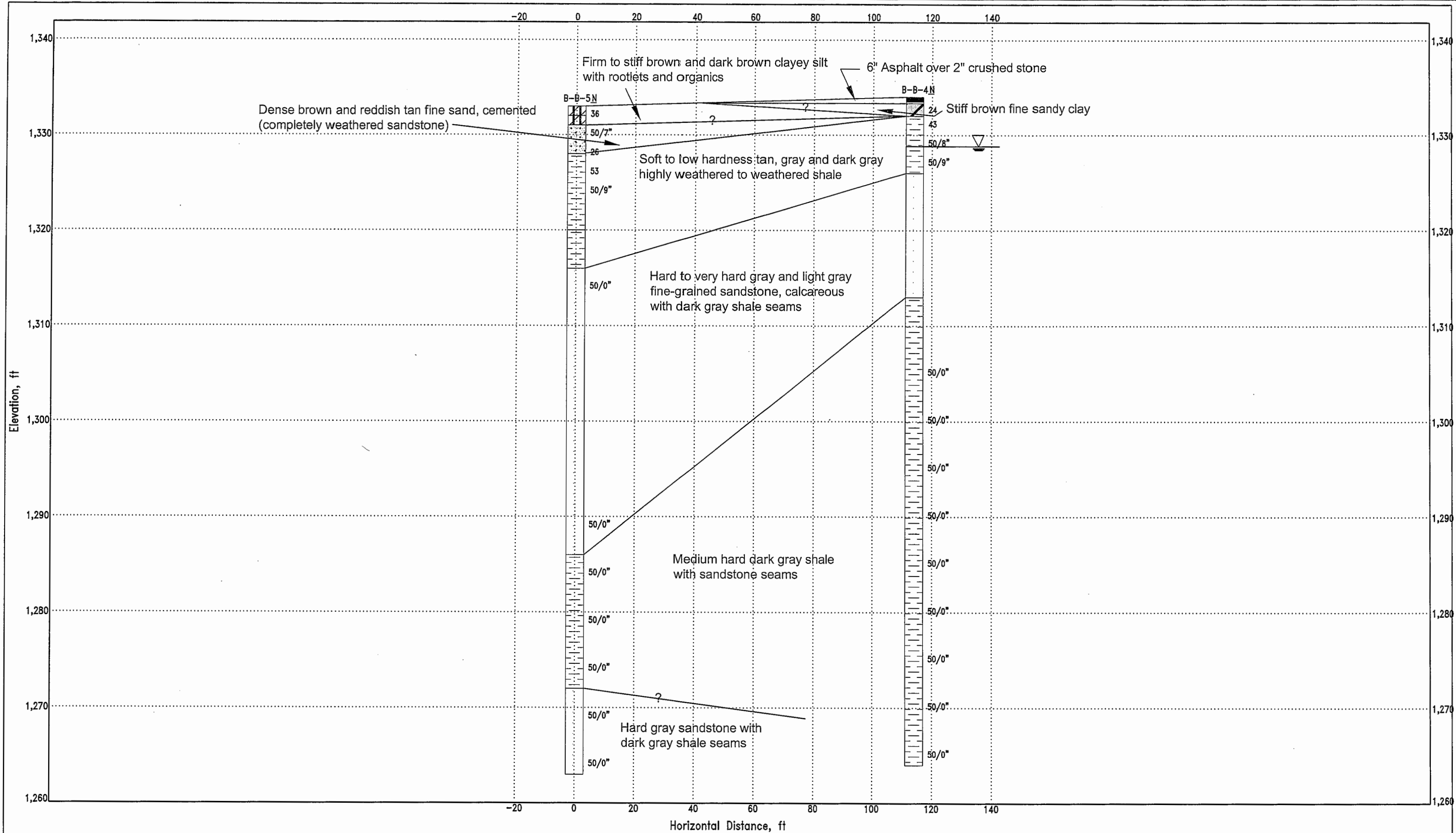
Grubbs, Hoskyn,
Barton & Wyatt, Inc.

NOTES:
1. Subsurface conditions have been inferred between discrete boring locations. Actual conditions may vary.
2. Ground surface approximate.

SCALE: As Shown

Generalized Subsurface Profile GG'
Fayetteville Downtown Parking Deck – Theater Site
Fayetteville, Arkansas

Project Number: 12-044



Grubbs, Hoskyn,
Barton & Wyatt, Inc.

NOTES:

1. Subsurface conditions have been inferred between discrete boring locations. Actual conditions may vary.
2. Ground surface approximate.

SCALE: As Shown

Generalized Subsurface Profile HH'
Fayetteville Downtown Parking Deck - Theater Site
Fayetteville, Arkansas

Project Number: 12-044

ATTACHMENT E

1.2 MICROPILE DEFINITION AND DESCRIPTION

A micropile is a small-diameter (typically less than 300 mm (12 in.)), drilled and grouted non-displacement pile that is typically reinforced. A micropile is constructed by drilling a borehole, placing steel reinforcement, and grouting the hole as illustrated in Figure 1-1. Micropiles can withstand relatively significant axial loads and moderate lateral loads, and may be considered a substitute for conventional driven piles or drilled shafts or as one component in a composite soil/pile mass, depending upon the design concept employed. Micropiles are installed by methods that cause minimal disturbance to adjacent structures, soil, and the environment. They can be installed where access is restrictive and in all soil types and ground conditions. Micropiles can be installed at any angle below the horizontal using the same type of equipment used for the installation of ground anchors and for grouting projects.

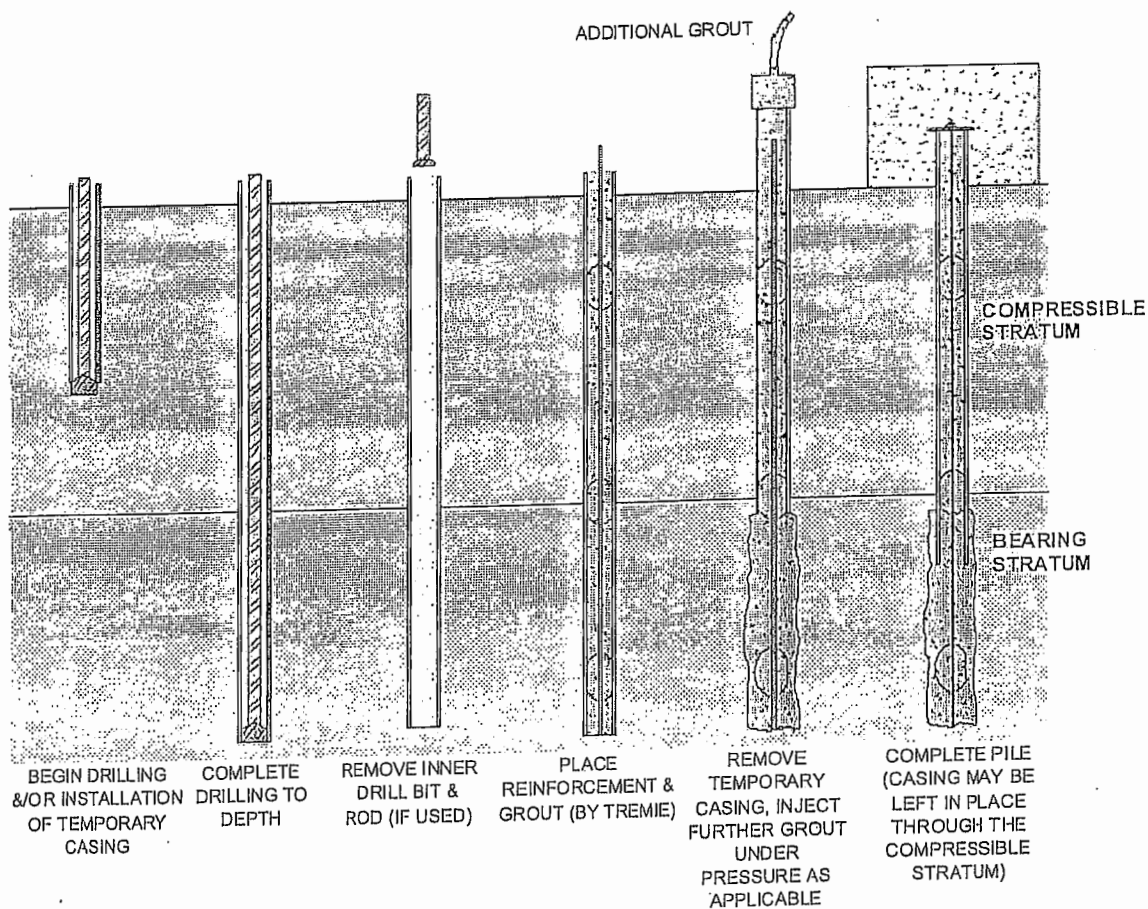


Figure 1-1. Micropile Construction Sequence.

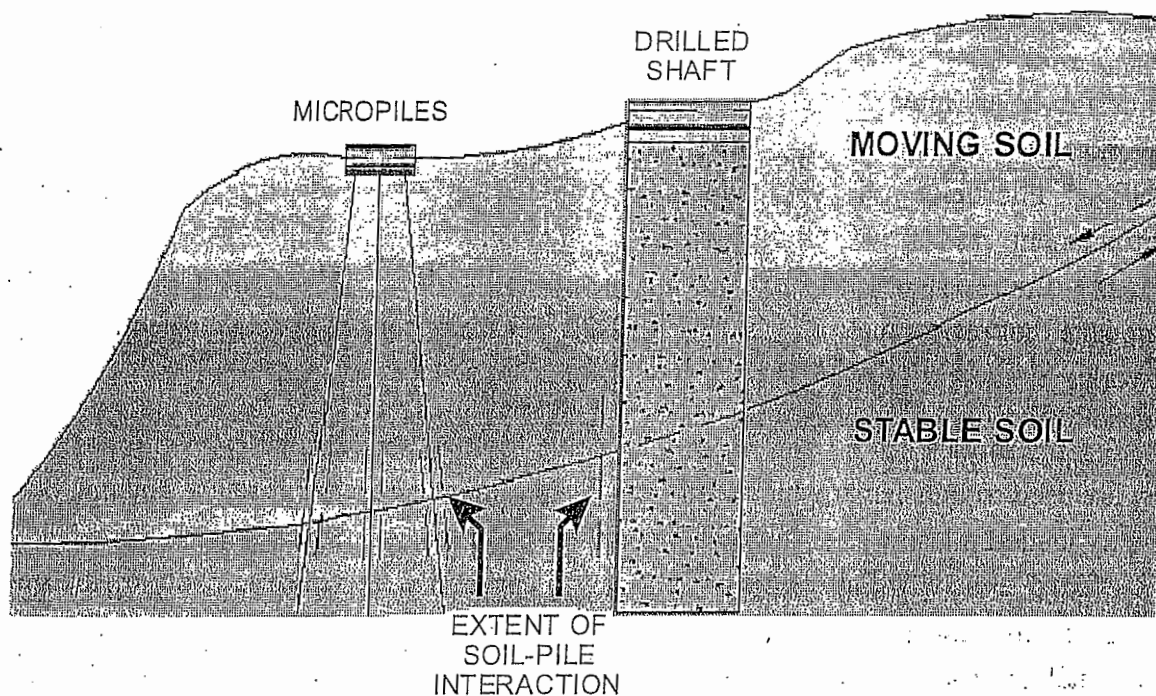
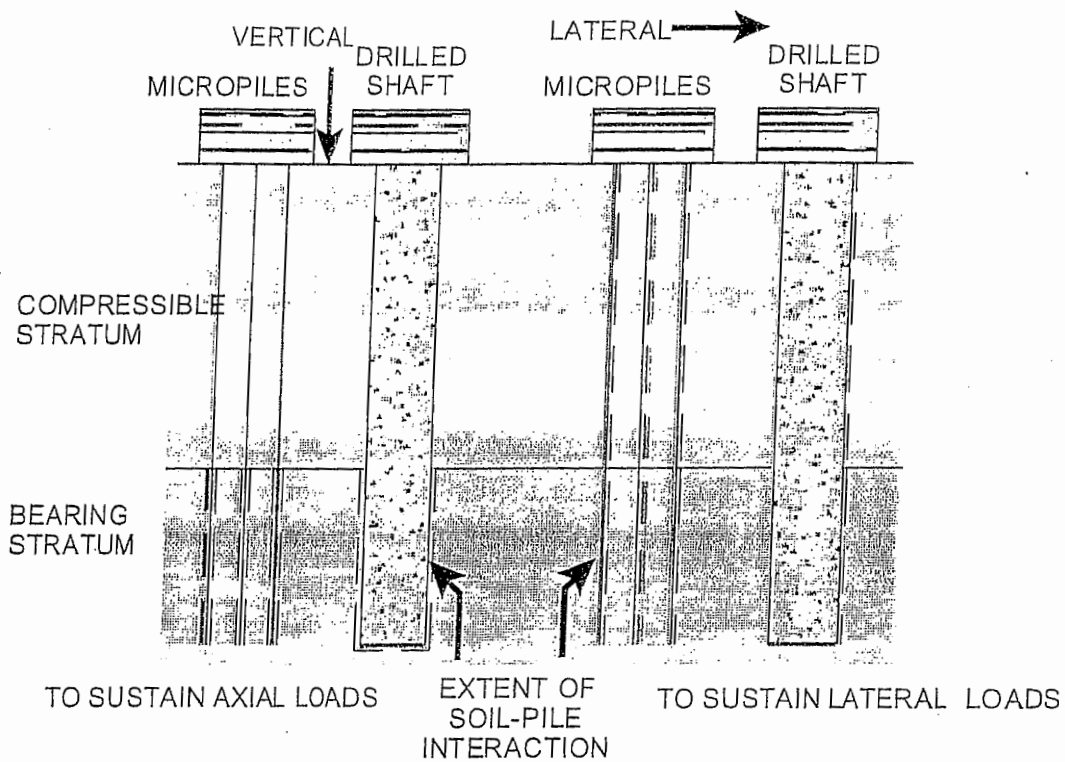


Figure 2-1. CASE 1 Micropiles.

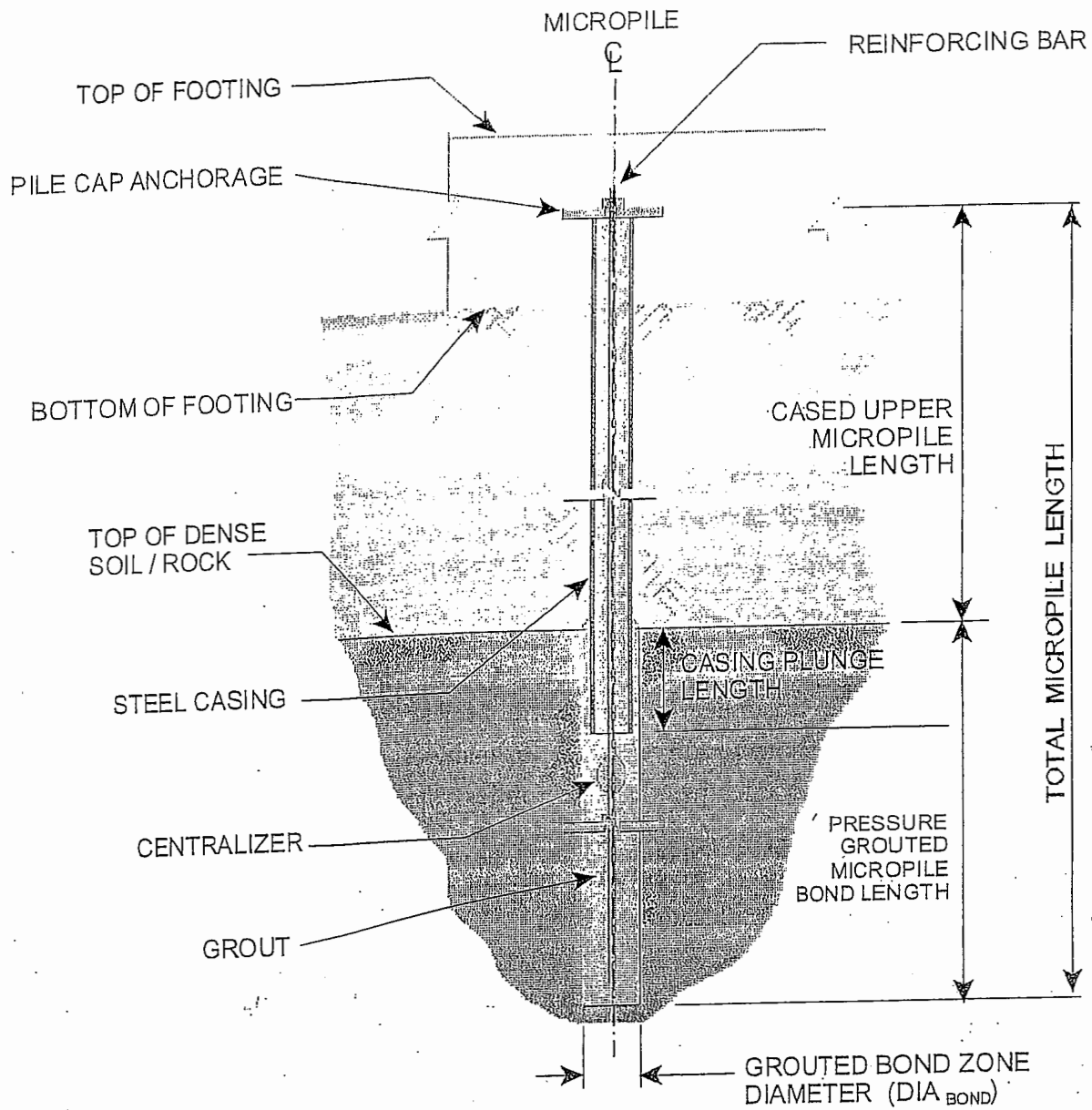


Figure 5-1. Detail of a Composite Reinforced Micropile.

5.2 STEP 1: EVALUATE PROJECT REQUIREMENTS AND MICROPILE FEASIBILITY

It is essential to systematically consider various foundation types and to select the optimum alternative based on the superstructure requirements, the subsurface conditions, and foundation cost. Foundation types may include shallow foundations consisting of spread

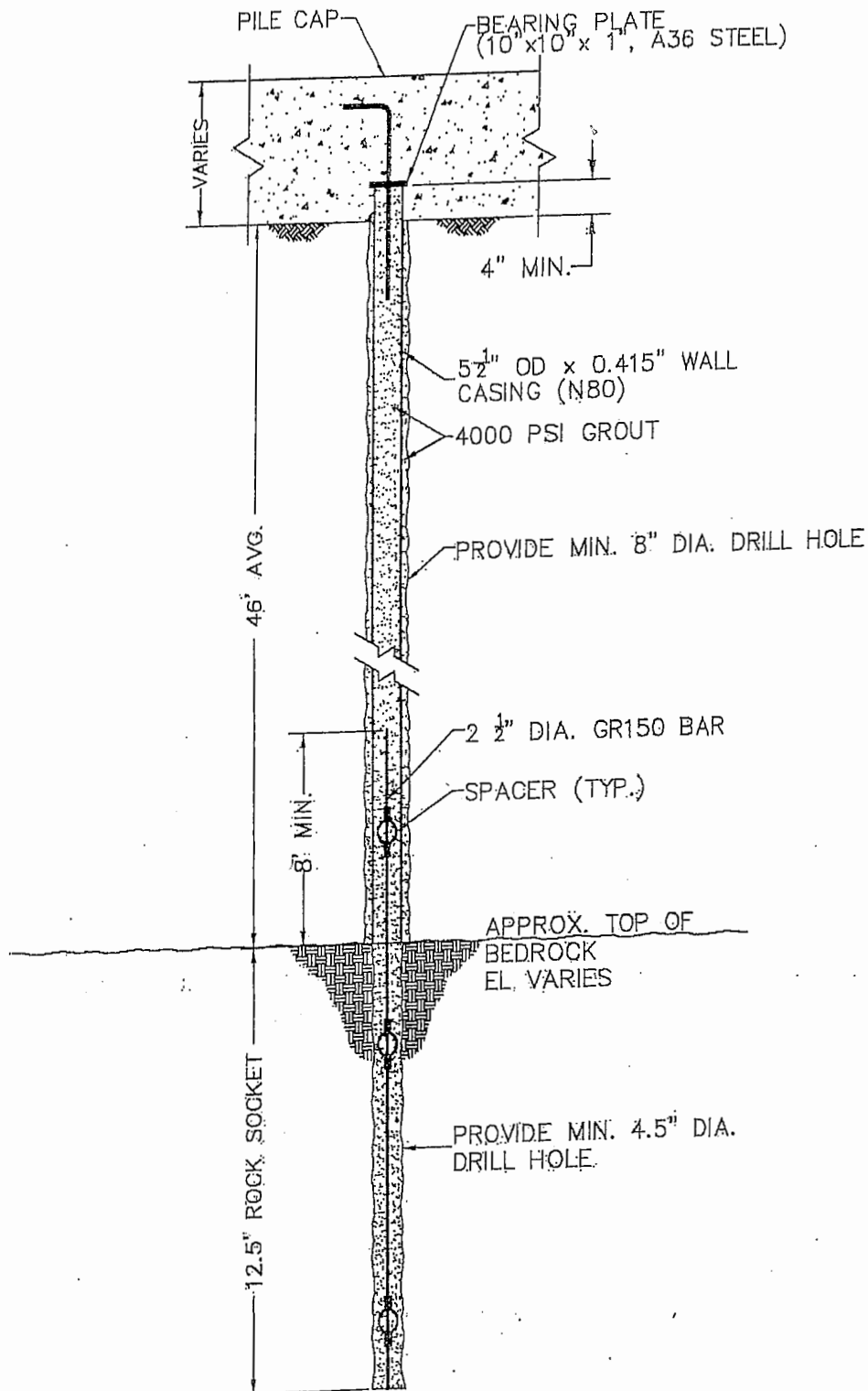


Figure 5-2 Example Micropile Detail.

APPENDIX C

Drawings

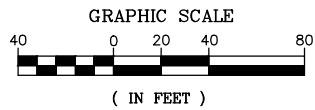
List of Drawings

- C1 – Utility Basemap
- C2 – South Lot Conceptual Layout
- C3 – East Lot Conceptual Layout
- C4 to C10 – Theater Lot Conceptual Layouts
- C11 to C17 – WAC Lot Conceptual Layouts
- C18 – Theater Lot Recommended Option
- C19 – WAC Lot Recommended Option
- C20 – East Lot Recommended Option

Files: \\glitdc01\itprojects\2011\11047180 - Fayetteville Downtown Parking Deck\Drawings\REF\Utility Basemap.dwg Last Save: 3/19/2012 5:23 PM Last saved by: JTMartin
Last plotted by: Martin, Jerry T. Plot Style: Garver Color Full.ctb Plot Scale: 1:40 Plot Date: 3/19/2012 5:24 PM Plotter used: DWG To PDF.pc3



- GAS
- WATER
- SANITARY SEWER
- STORM SEWER
- OVERHEAD ELECTRIC
- COMMUNICATIONS
- COAX
- FIBER
- UARK FIBER



REV.	DATE	DESCRIPTION	BY

CITY OF FAYETTEVILLE
FAYETTEVILLE, ARKANSAS
DOWNTOWN PARKING DECK
SITE SELECTION STUDY

UTILITY BASEMAP

JOB NO.: 11047180
DATE: MARCH, 2012
DESIGNED BY: CRB
DRAWN BY: JTM

BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

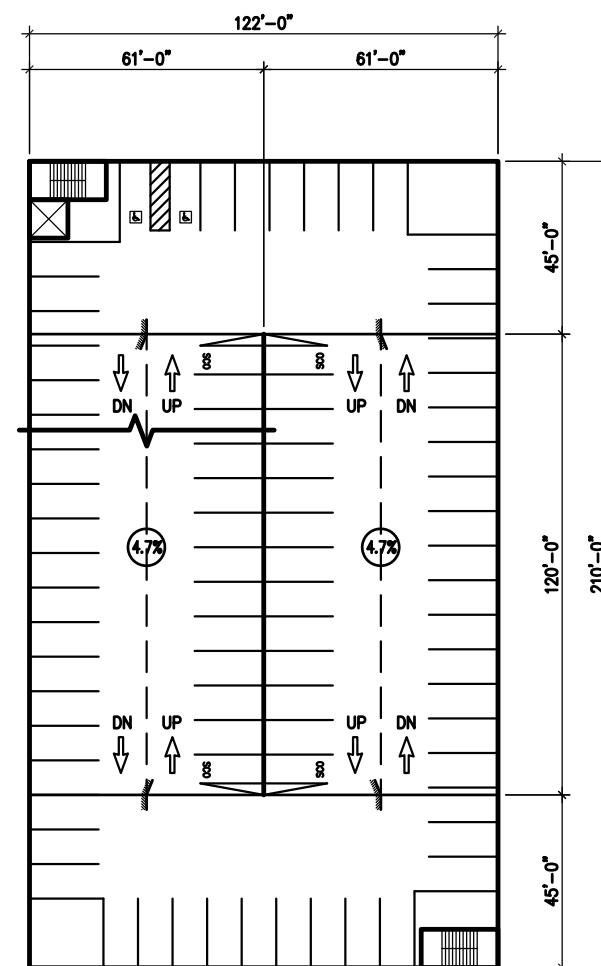
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C1

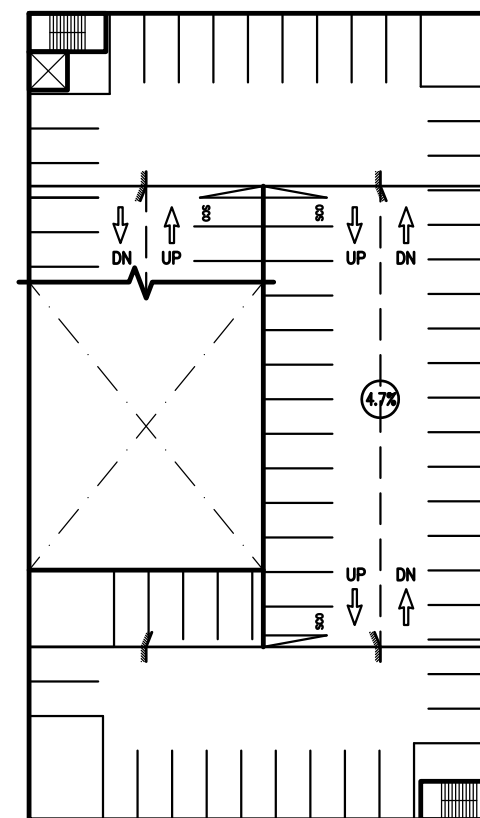
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NUMBER



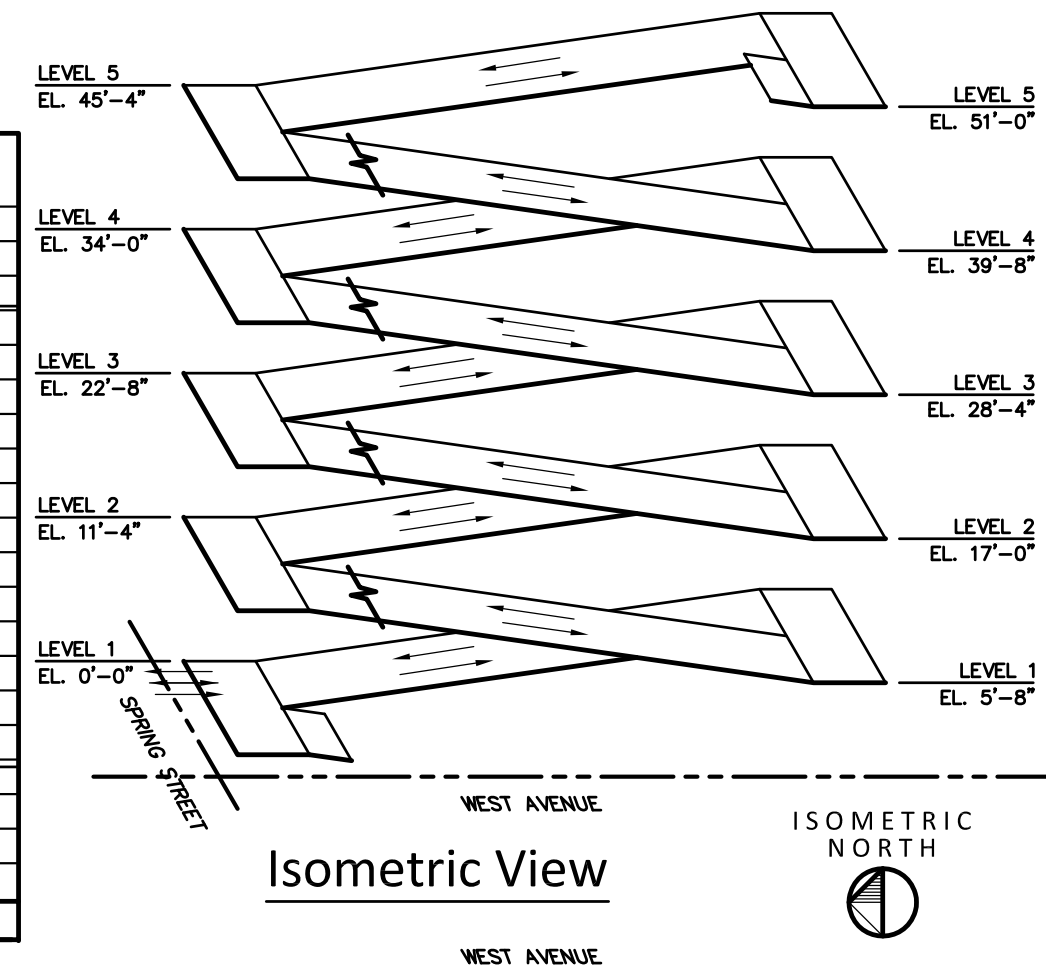
Site and Level 1 Plan



Typical Level Plan



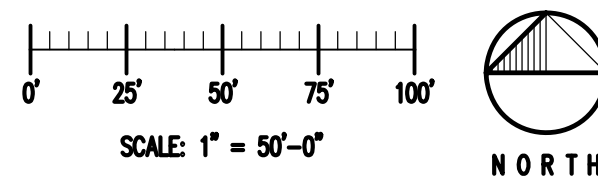
Level 5 Plan



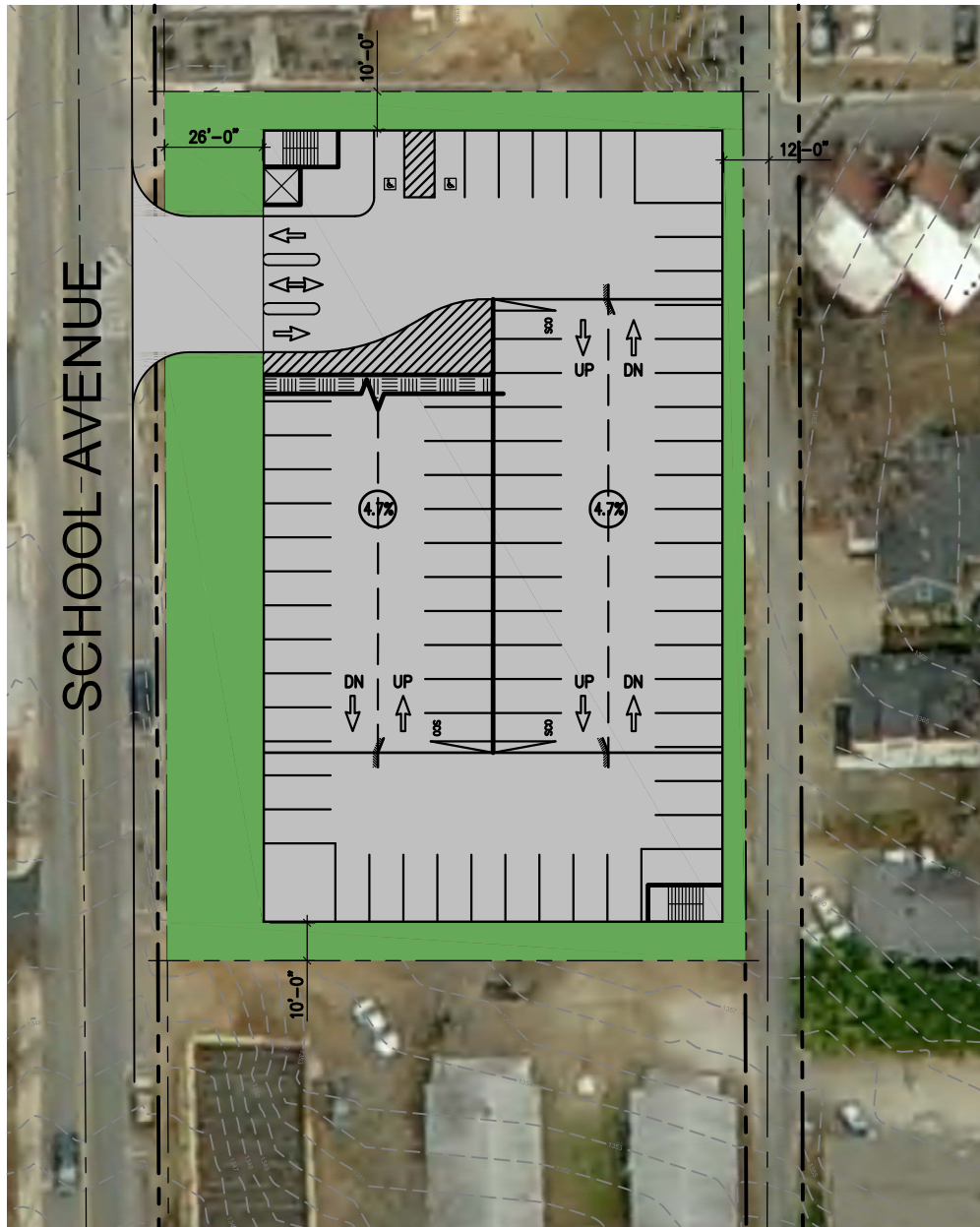
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	61	3	0	64
LEVEL 4	78	4	0	82
LEVEL 3	78	4	0	82
LEVEL 2	75	4	2	81
LEVEL 1	61	3	6	70
GARAGE TOTAL	353	18	8	379
SPACES LOST	68	0	0	68
NET GAIN	285	18	8	311

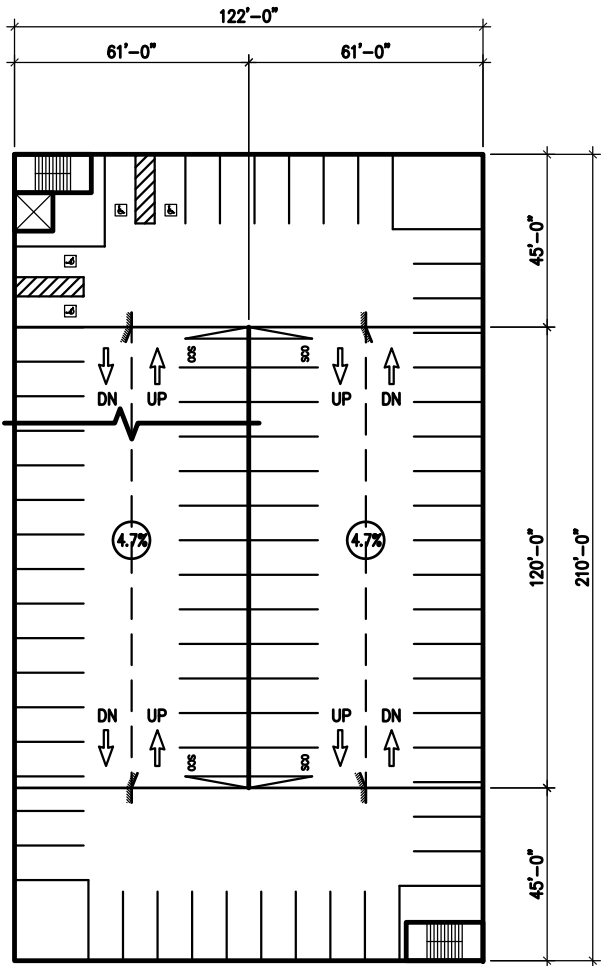
March 26, 2012



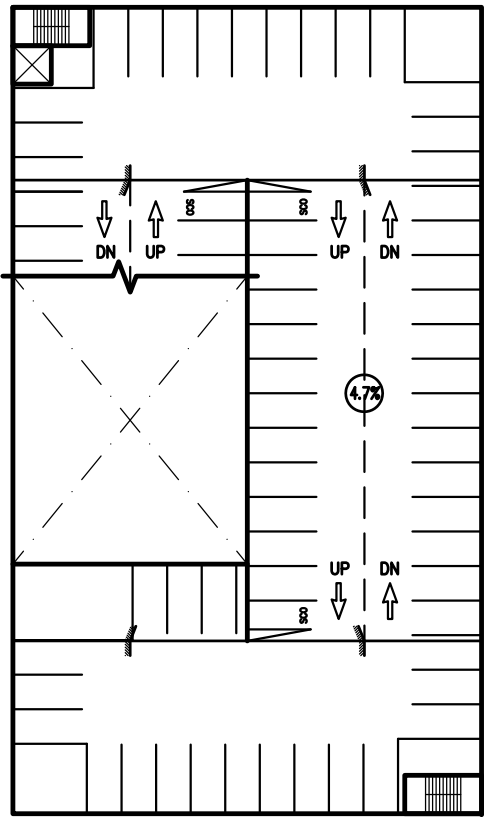
Spring Street - South Site



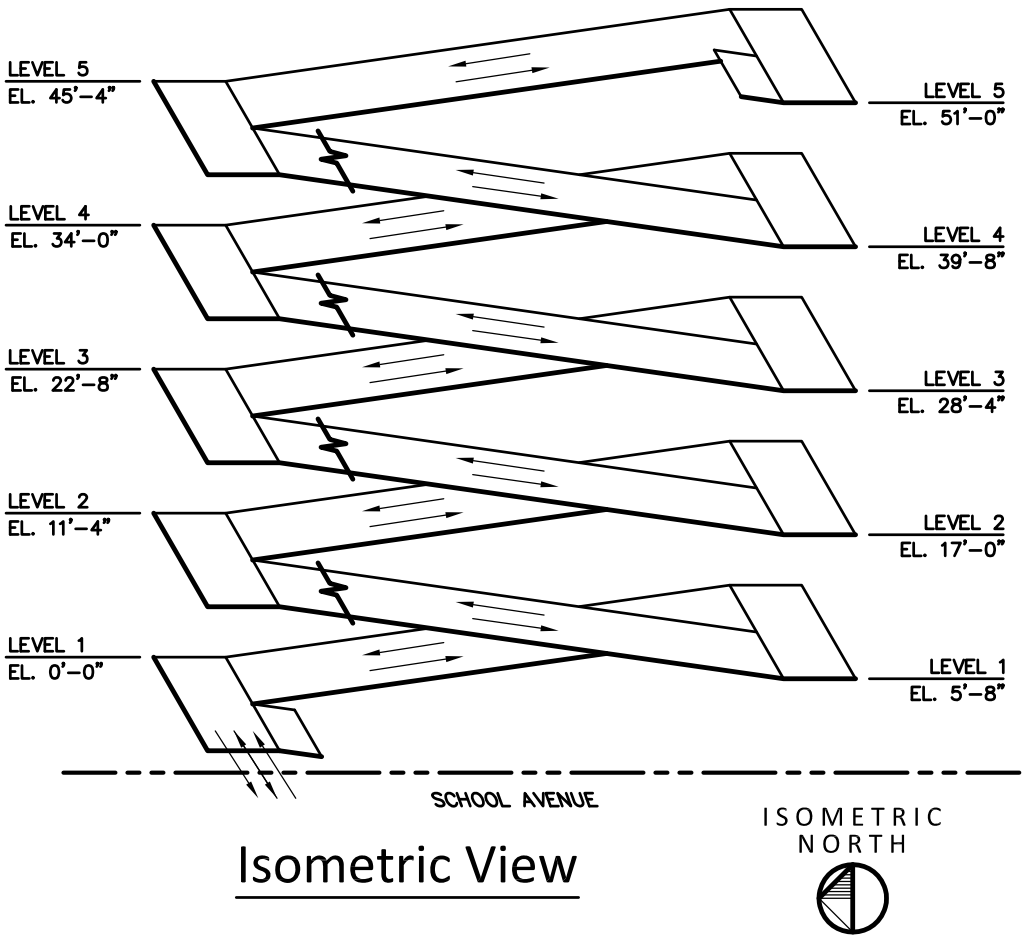
Site and Level 1 Plan



Typical Level Plan



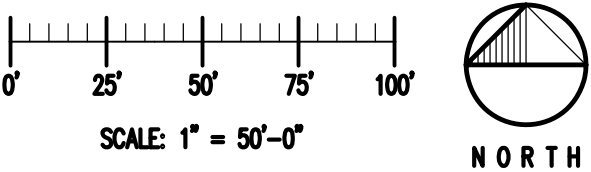
Level 5 Plan



Isometric View

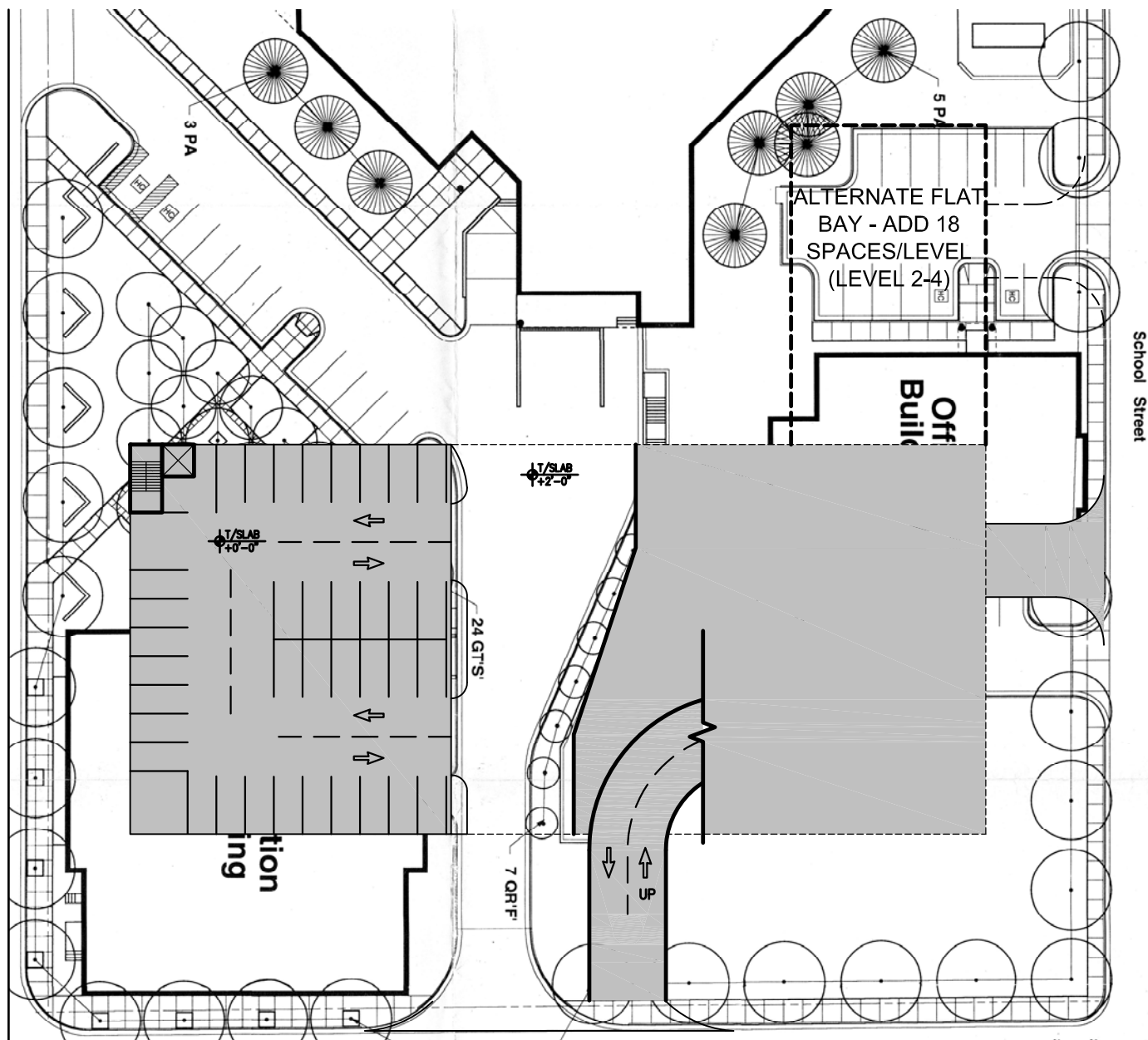
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	61	3	0	64
LEVEL 4	78	4	0	82
LEVEL 3	75	4	2	81
LEVEL 2	72	4	4	80
LEVEL 1	66	3	2	71
GARAGE TOTAL	352	18	8	378
SPACES LOST	60	0	0	60
NET GAIN	292	18	8	318

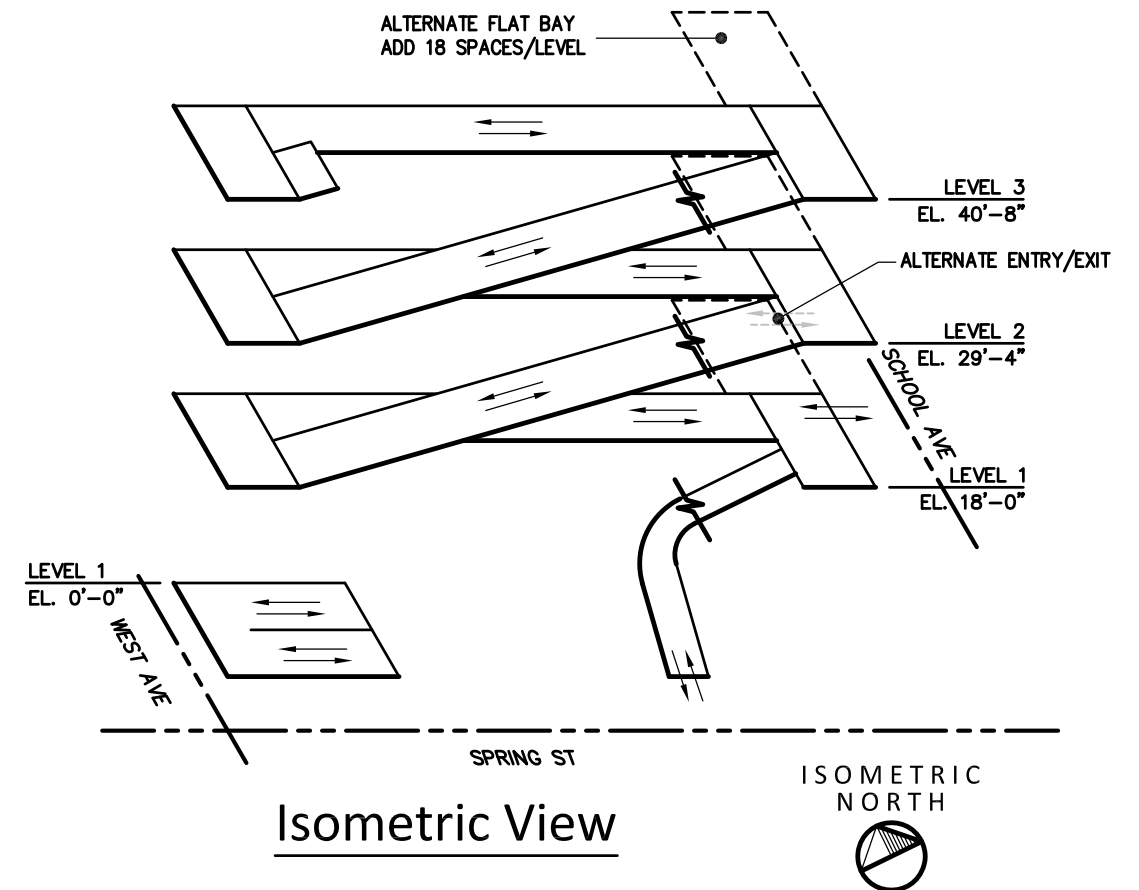


March 26, 2012

School Avenue - East Site



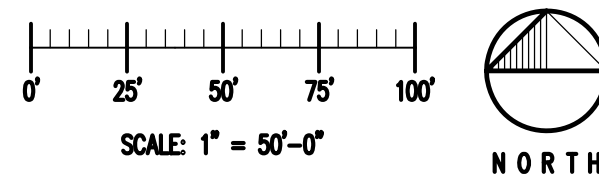
Site and Level 1 Plan



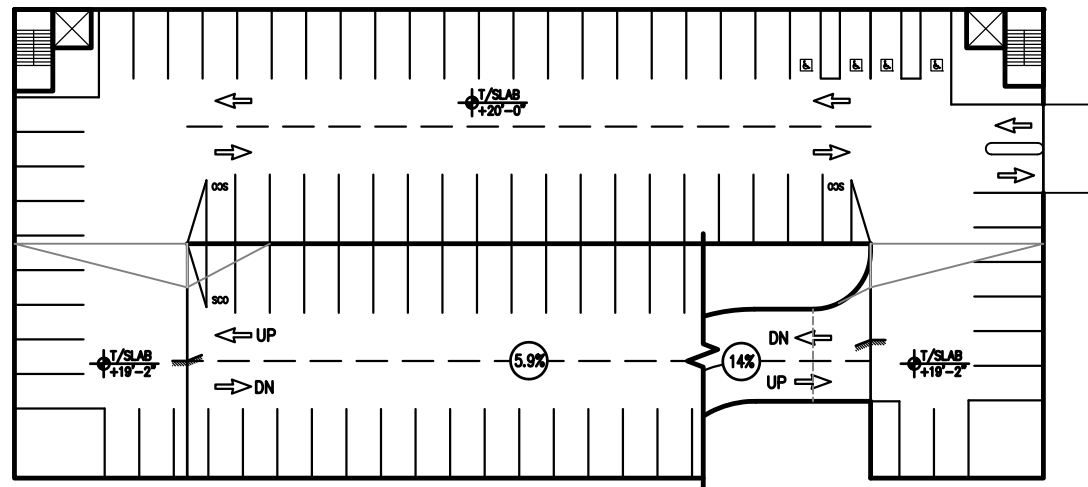
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	78	3	4	85
LEVEL 3	96	4	4	104
LEVEL 2	84	3	4	91
LEVEL 1	38	0	0	38
GARAGE TOTAL	296	10	12	318
SPACES LOST	10	0	0	10
NET GAIN	286	10	12	308

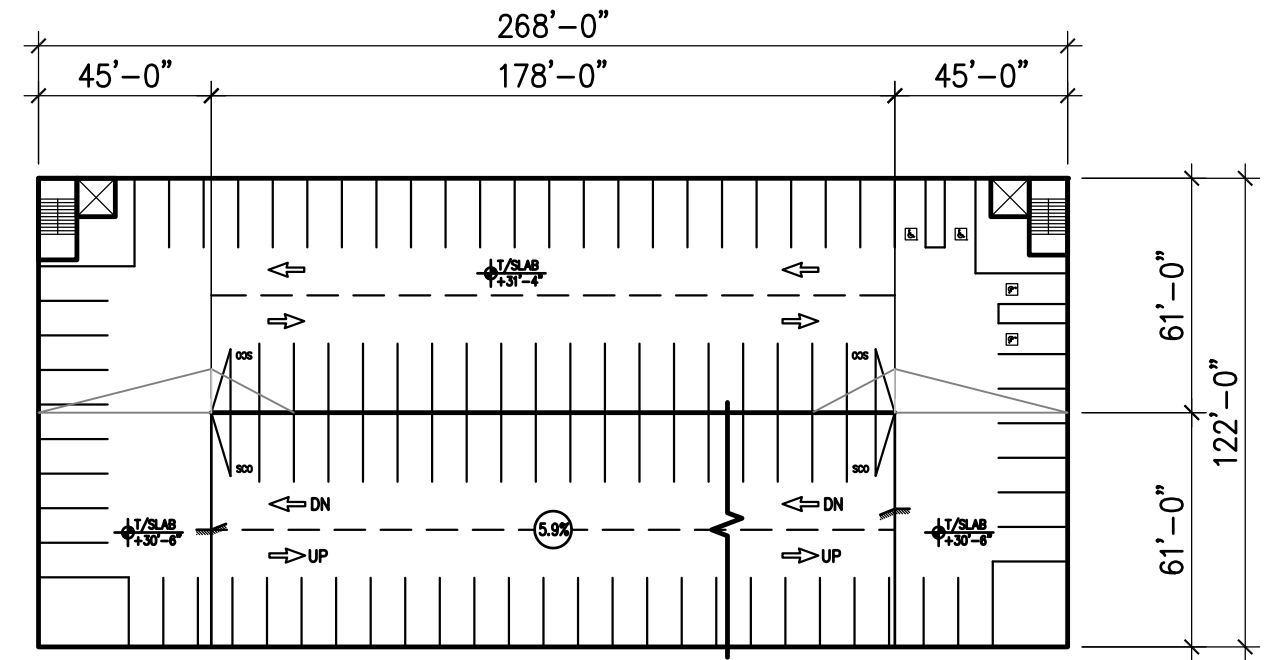
May 21, 2012



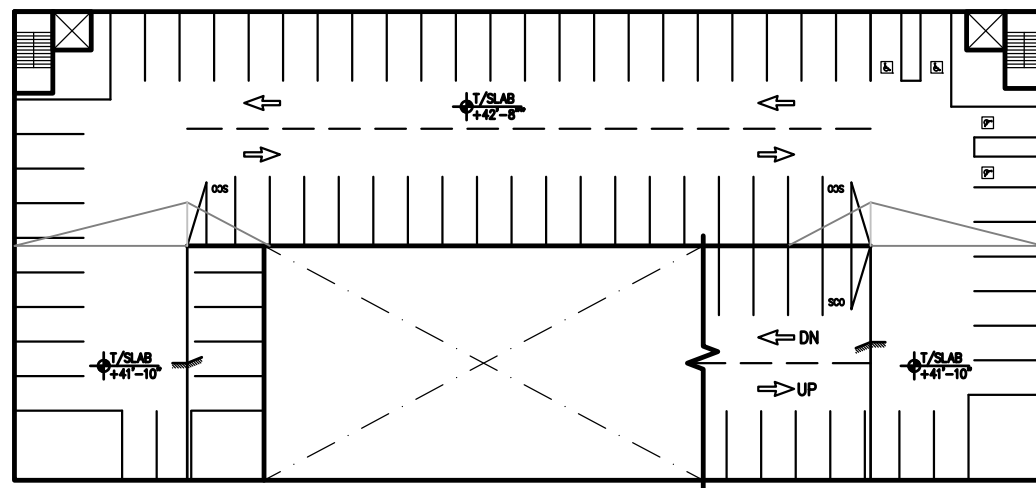
Theater Site - Option A - Sheet 1



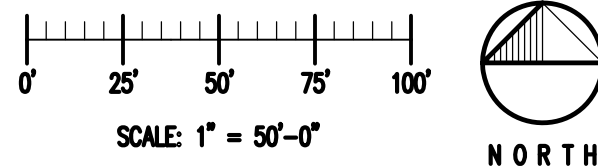
Level 2 Plan



Level 3 Plan



Level 4 Plan



May 21, 2012

Theater Site - Option A - Sheet 2

Carl Walker
Parking
Planning Engineering Restoration

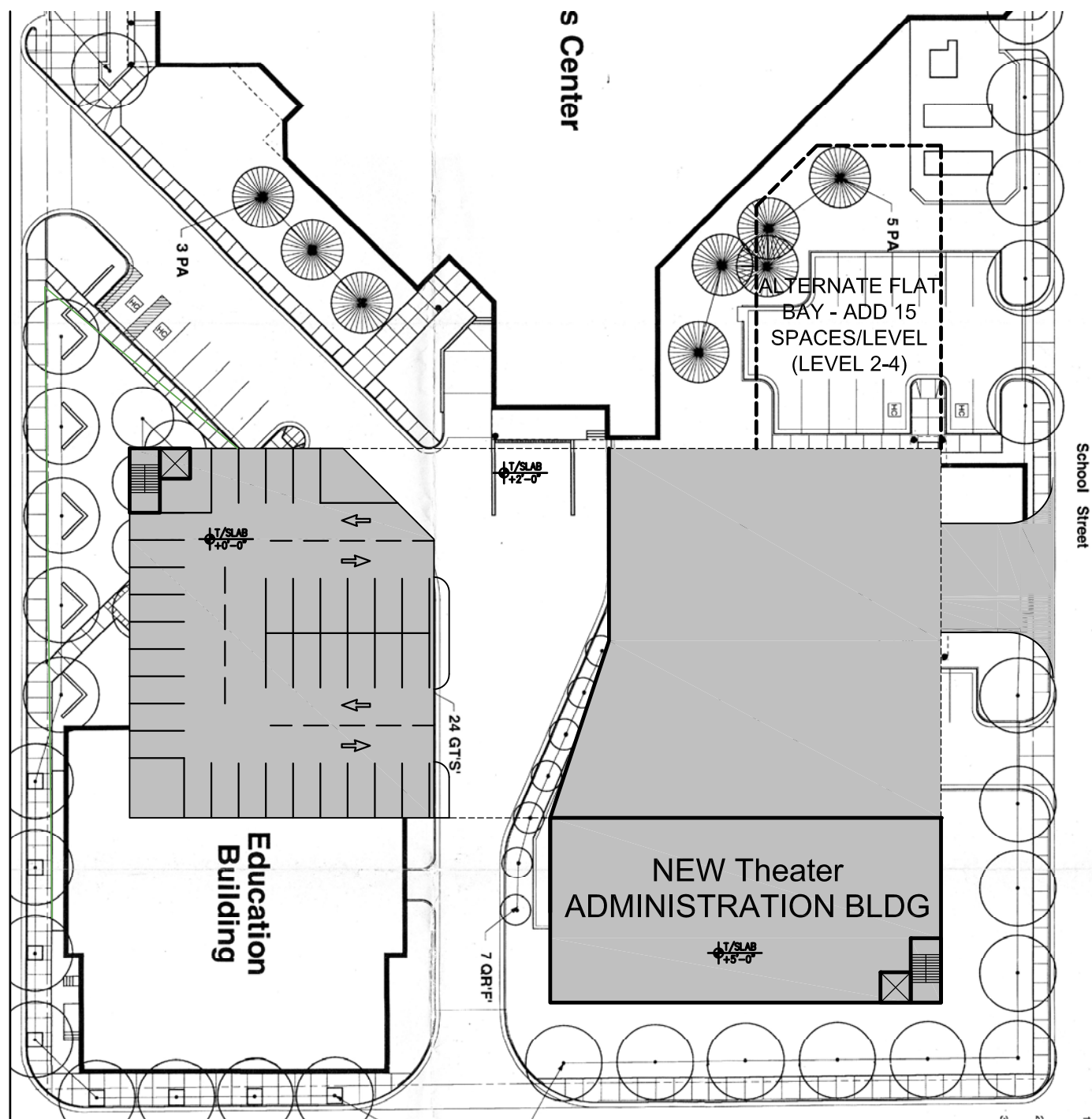
ATLANTA
CHARLOTTE
CHICAGO
CLEVELAND
DALLAS
DENVER
INDIANAPOLIS
KALAMAZOO
PHILADELPHIA
PHOENIX

Carl Walker, Inc.
2801 Network Blvd.
Suite 101
Frisco, TX 75034
P - 214.619.0700
F - 214.619.0705

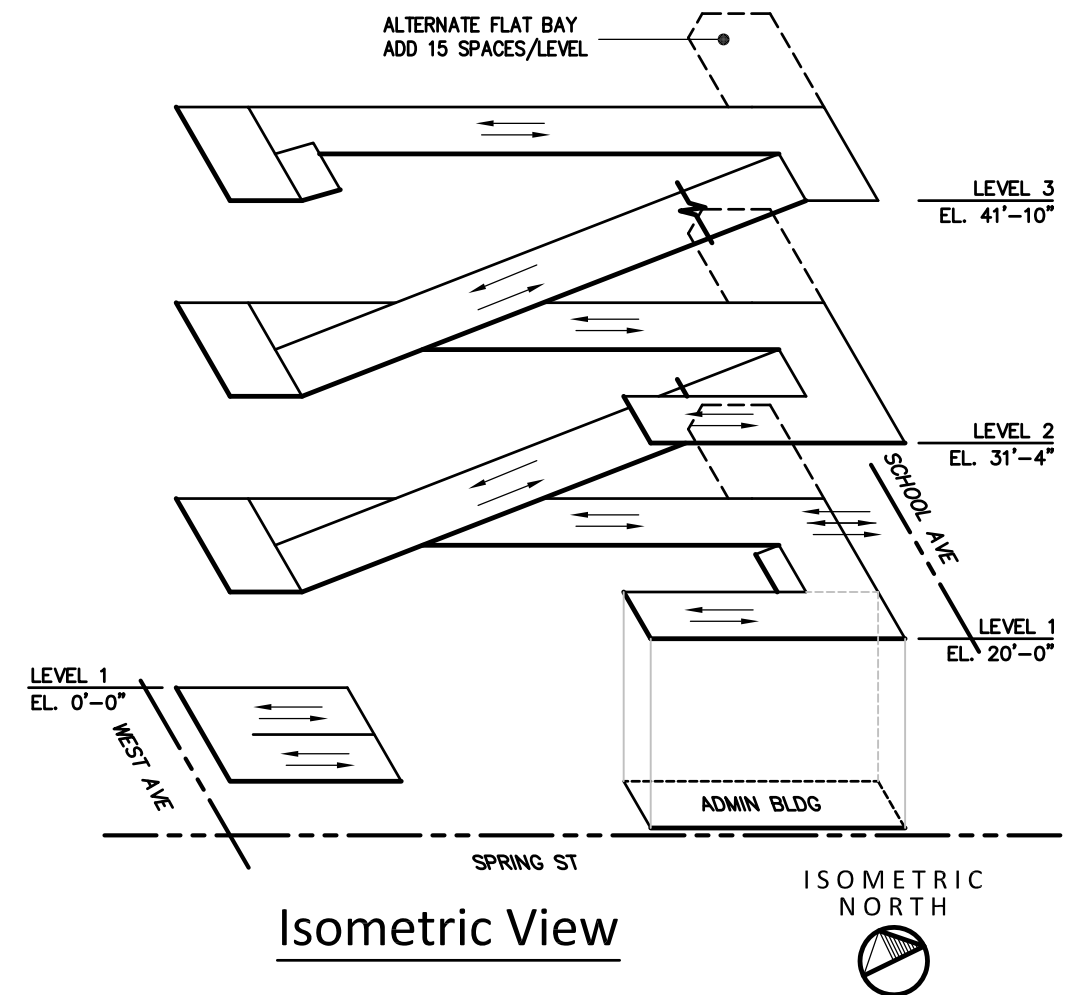
City of Fayetteville Parking Structure

Exhibit C4

Site Selection Study
Fayetteville, Arkansas



Site and Level 1 Plan

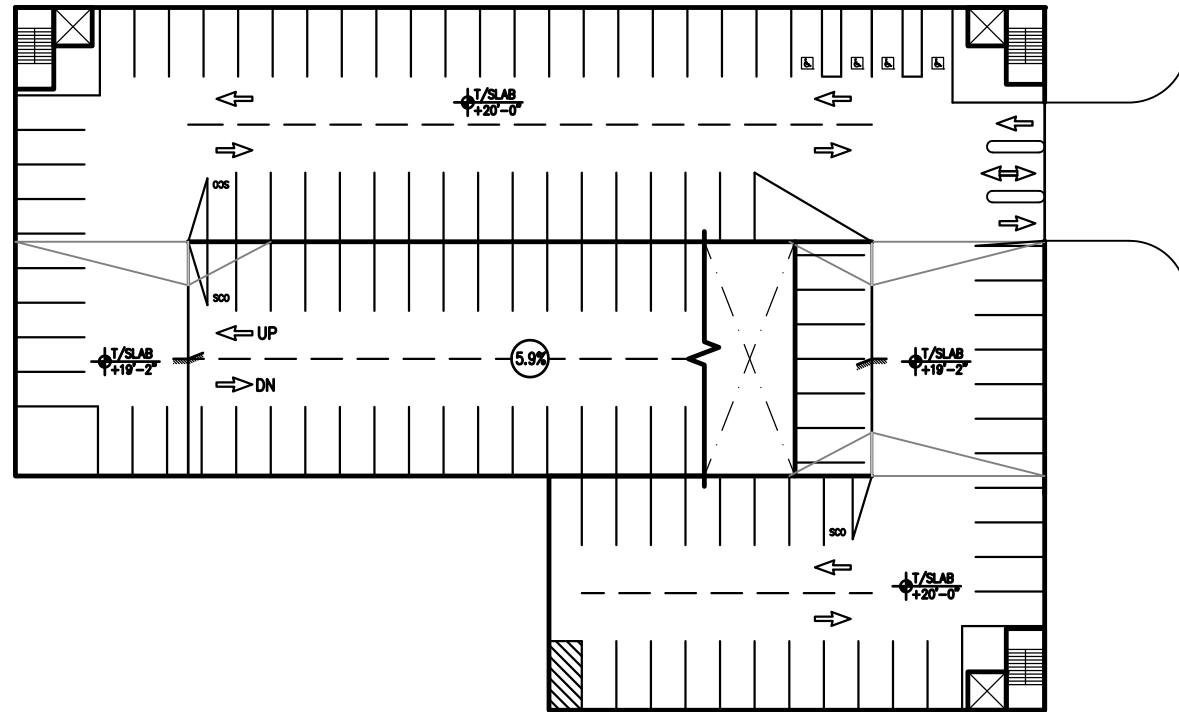


Parking Summary

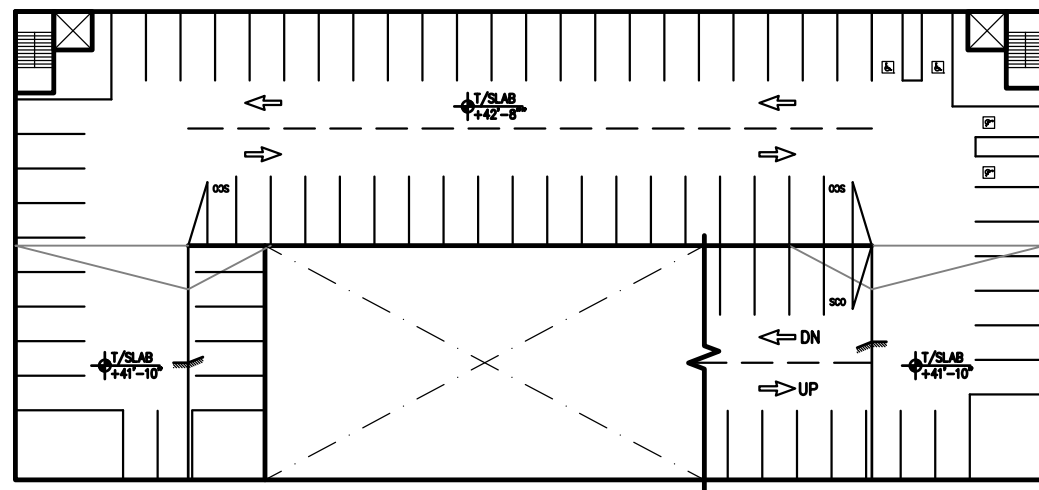
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	72	3	4	79
LEVEL 3	118	6	4	128
LEVEL 2	110	3	4	117
LEVEL 1	34	0	0	38
GARAGE TOTAL	334	12	12	358
SPACES LOST	17	0	0	17
NET GAIN	317	12	12	341

May 21, 2012

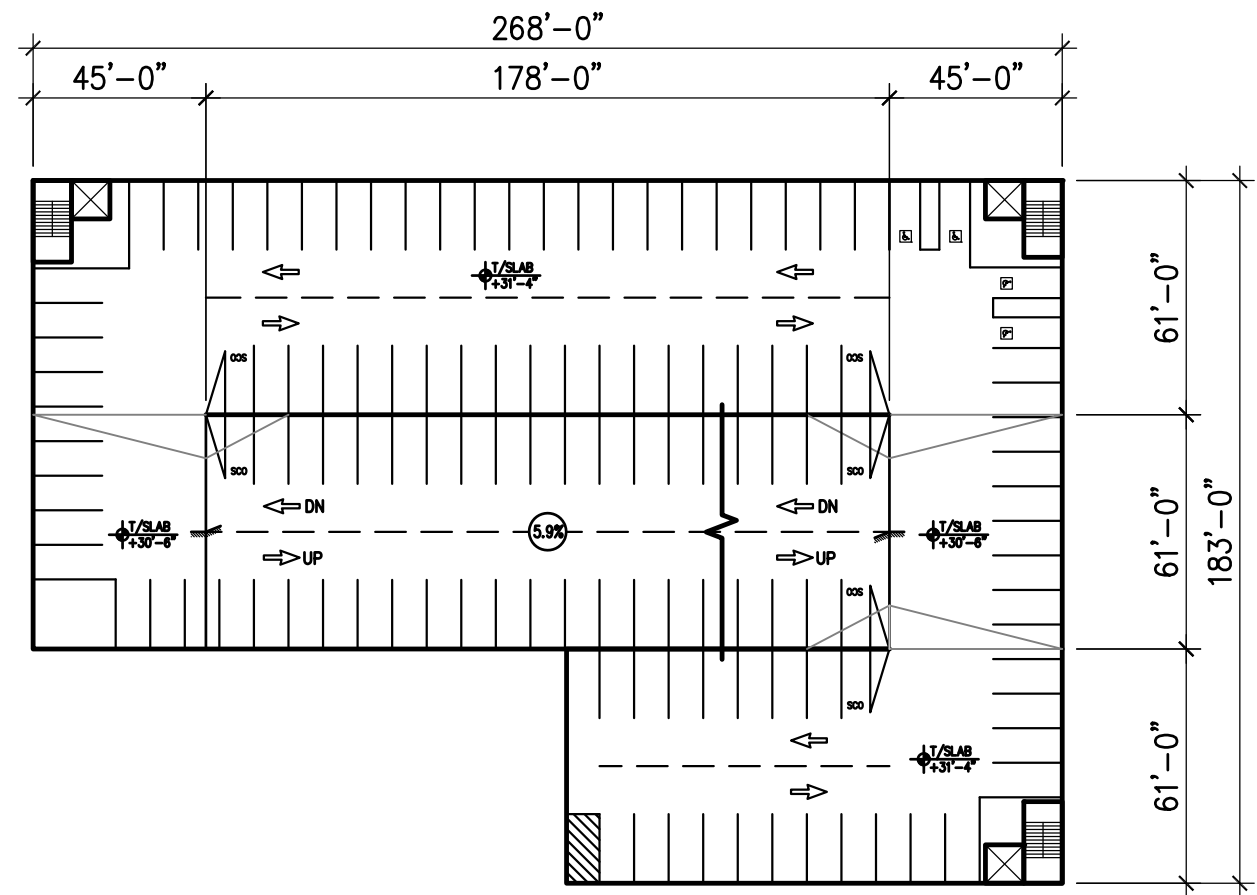
Theater Site - Option A.1 - Sheet 1



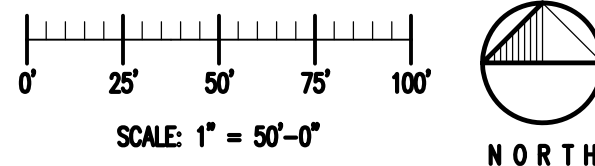
Level 2 Plan



Level 4 Plan

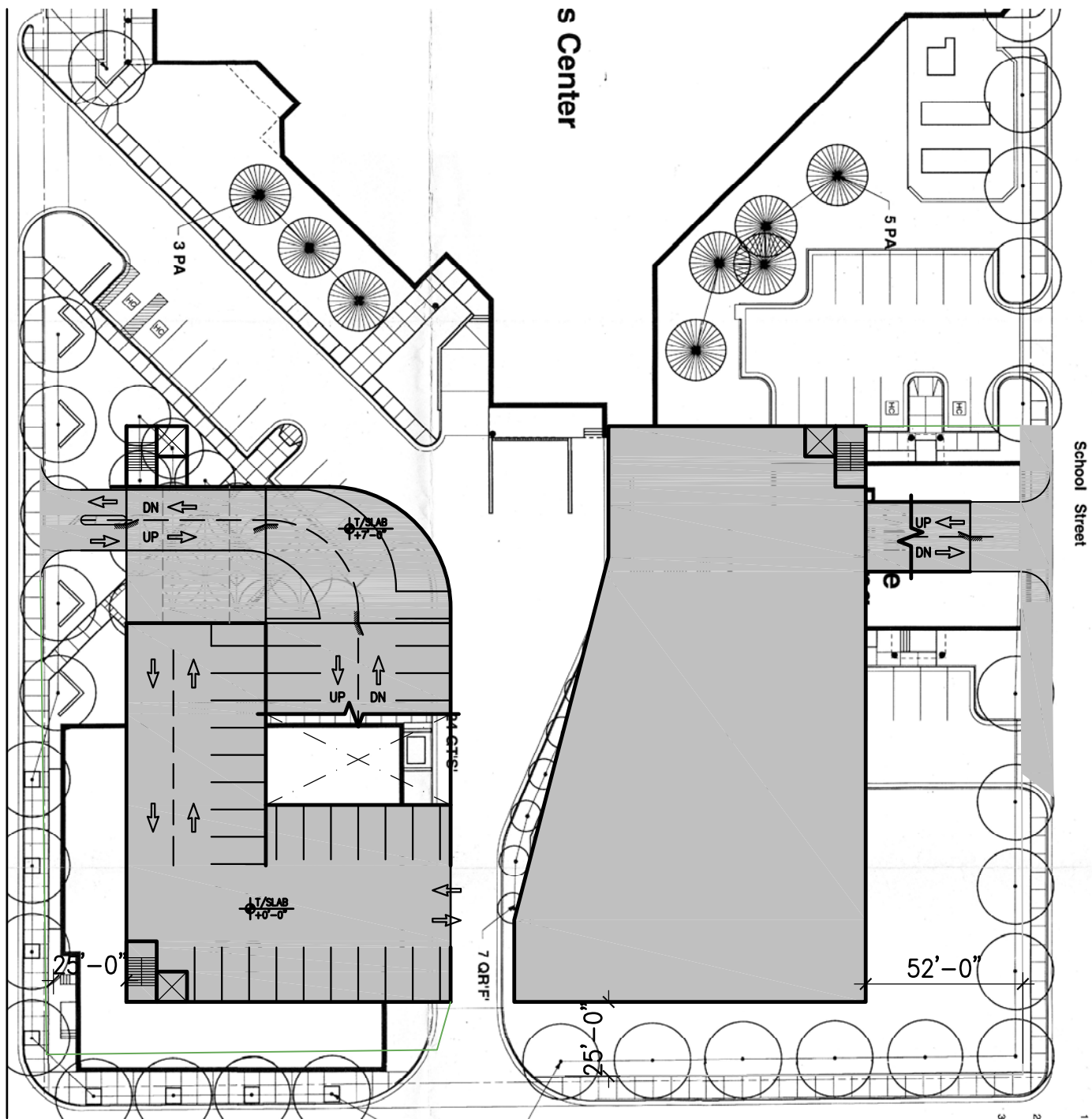


Level 3 Plan

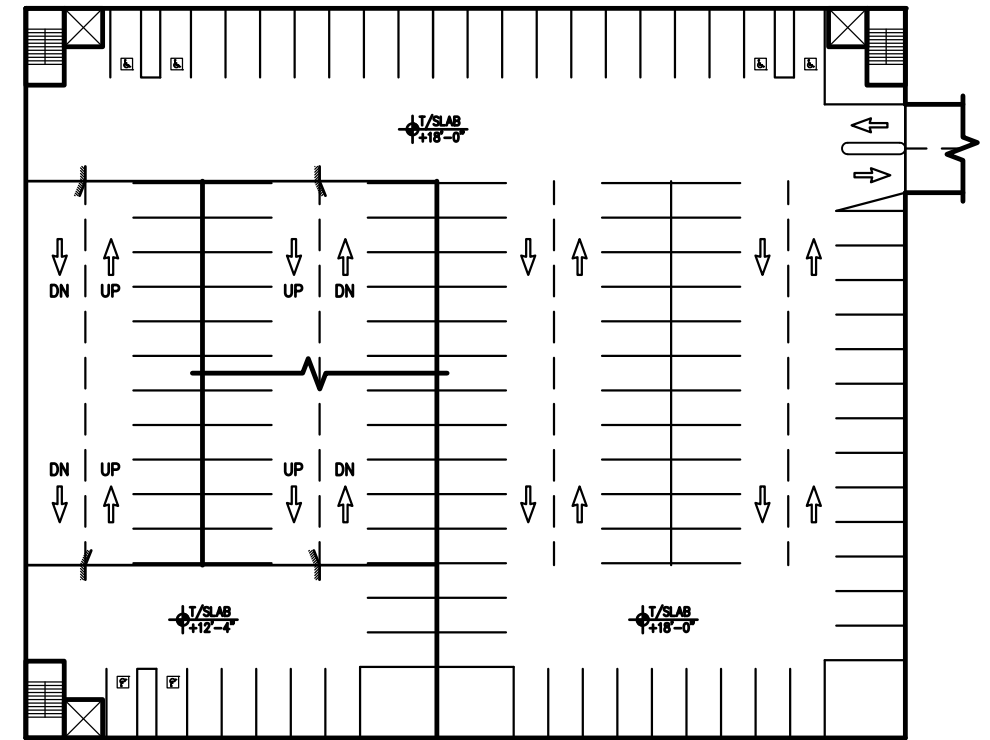


May 21, 2012

Theater Site - Option A.1 - Sheet 2



Site and Level 1 Plan

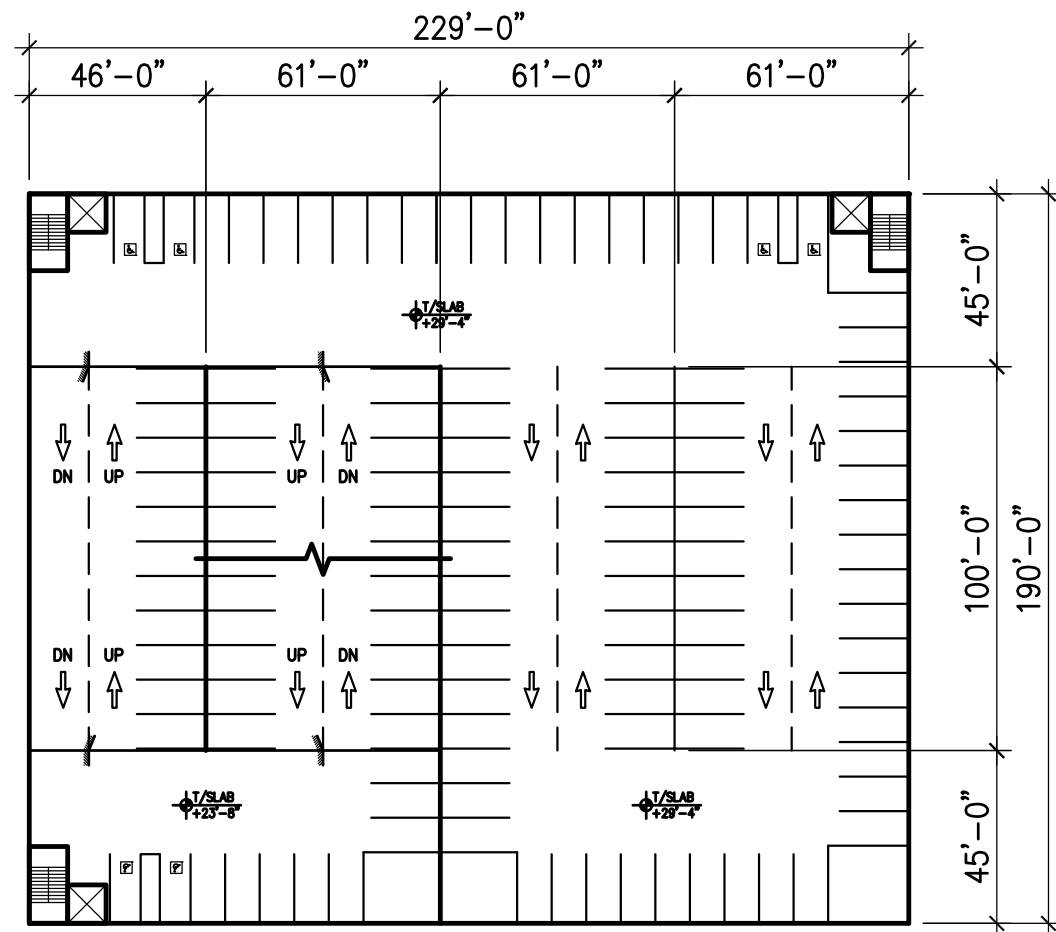


Level 2 Plan

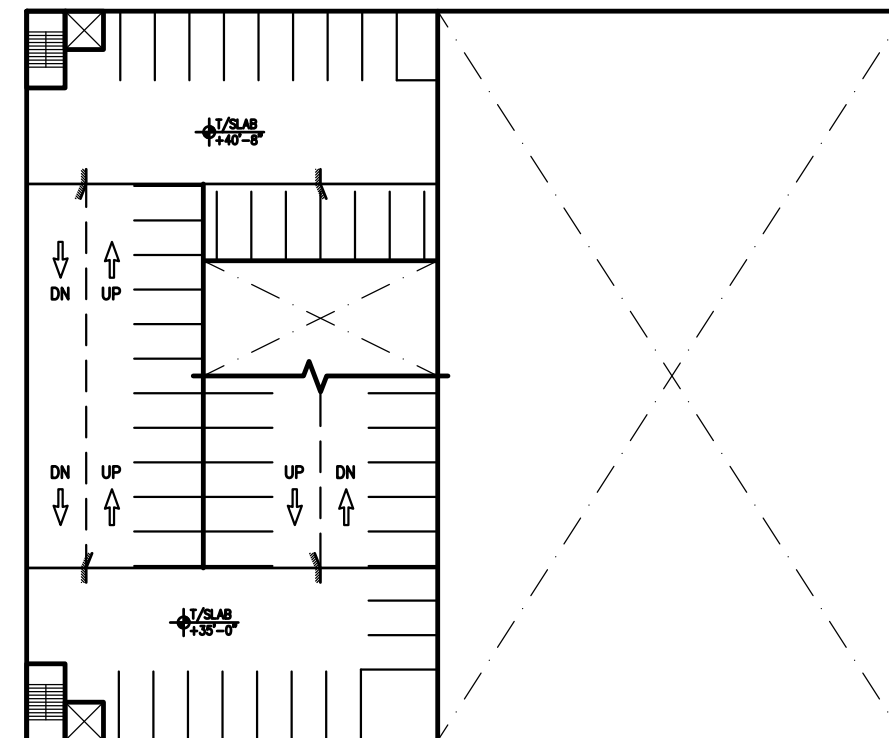
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	45	0	0	45
LEVEL 3	118	0	6	124
LEVEL 2	115	0	6	121
LEVEL 1	32	0	0	32
GARAGE TOTAL	310	0	12	322
SPACES LOST	17	0	0	17
NET GAIN	293	0	12	305

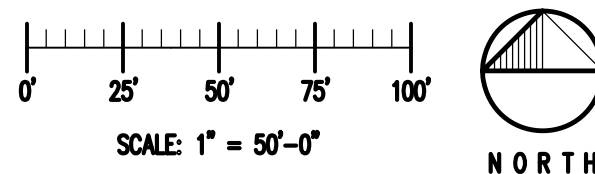
May 21, 2012



Level 3 Plan

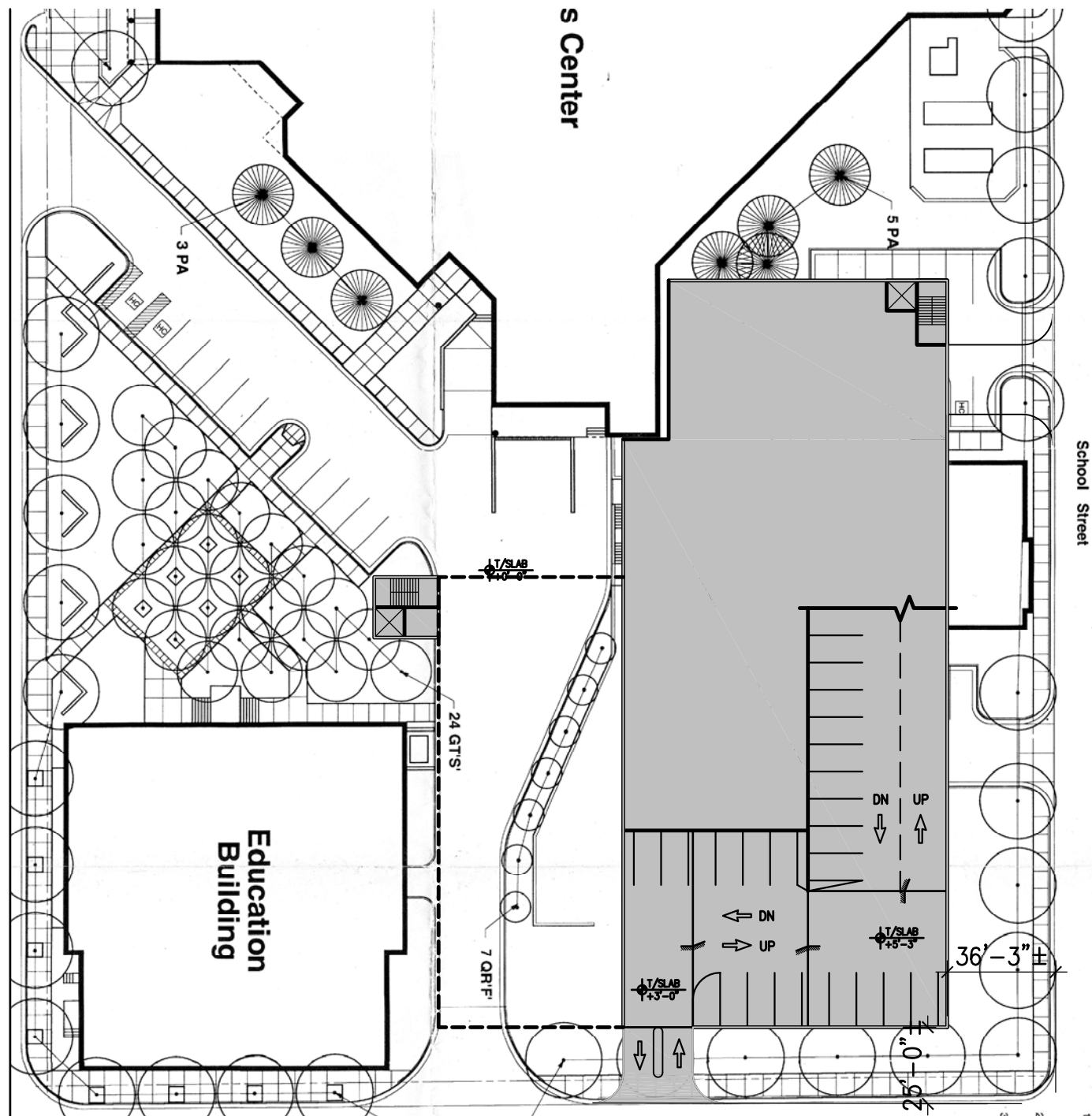


Level 4 Plan



May 21, 2012

Theater Site - Option B - Sheet 2



Site and Level 1 Plan

May 21, 2012

Carl Walker
Parking
Planning Engineering Restoration

ATLANTA
CHARLOTTE
CHICAGO
CLEVELAND
DALLAS
DENVER
INDIANAPOLIS
KALAMAZOO
PHILADELPHIA
PHOENIX

Carl Walker, Inc.
2801 Network Blvd.
Suite 101
Frisco, TX 75034
P - 214.619.0700
F - 214.619.0705

Parking Summary

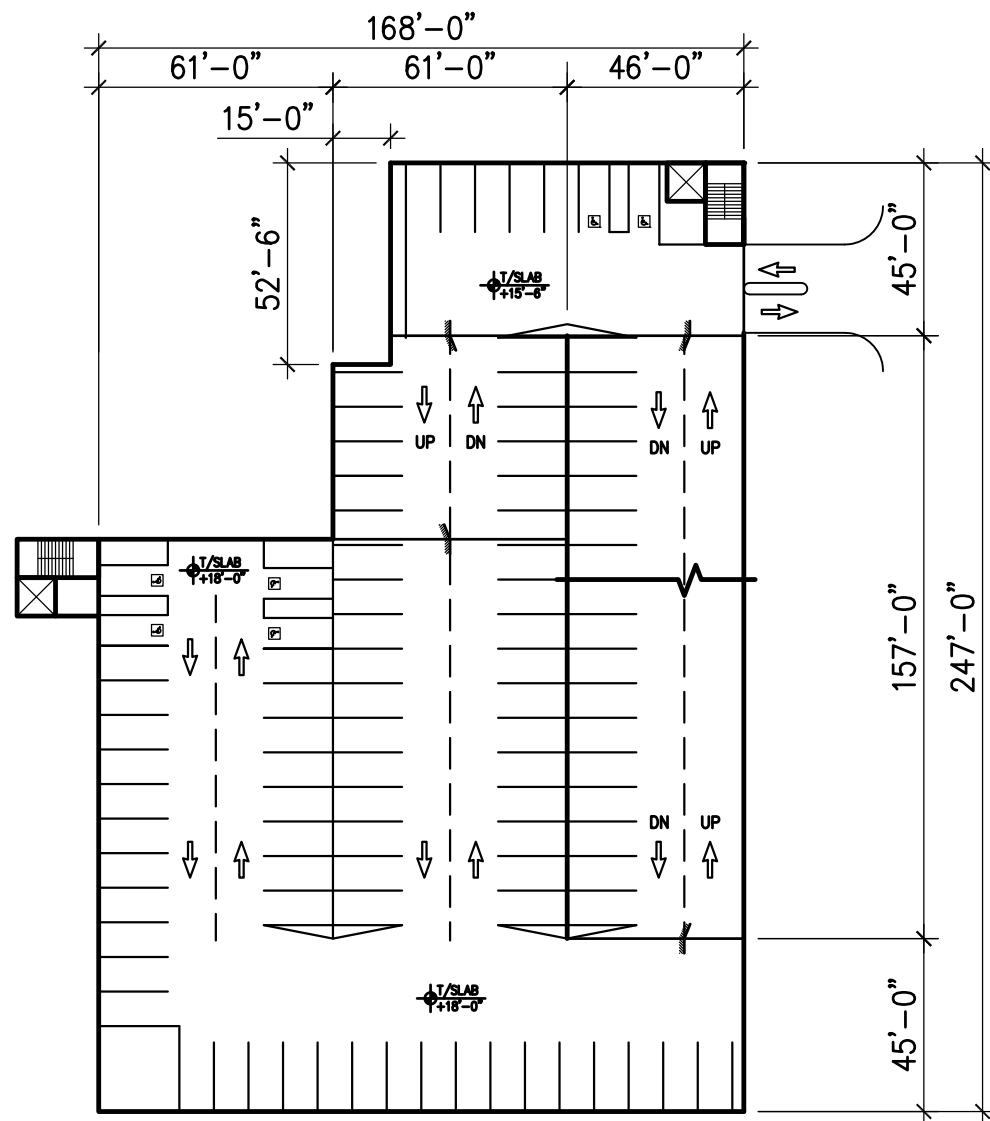
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	18	0	0	18
LEVEL 4	97	0	0	97
LEVEL 3	90	0	6	96
LEVEL 2	90	0	6	96
LEVEL 1	24	0	0	24
GARAGE TOTAL	319	0	12	331
SPACES LOST	28	0	0	28
NET GAIN	291	0	12	303

Theater Site - Option C - Sheet 1

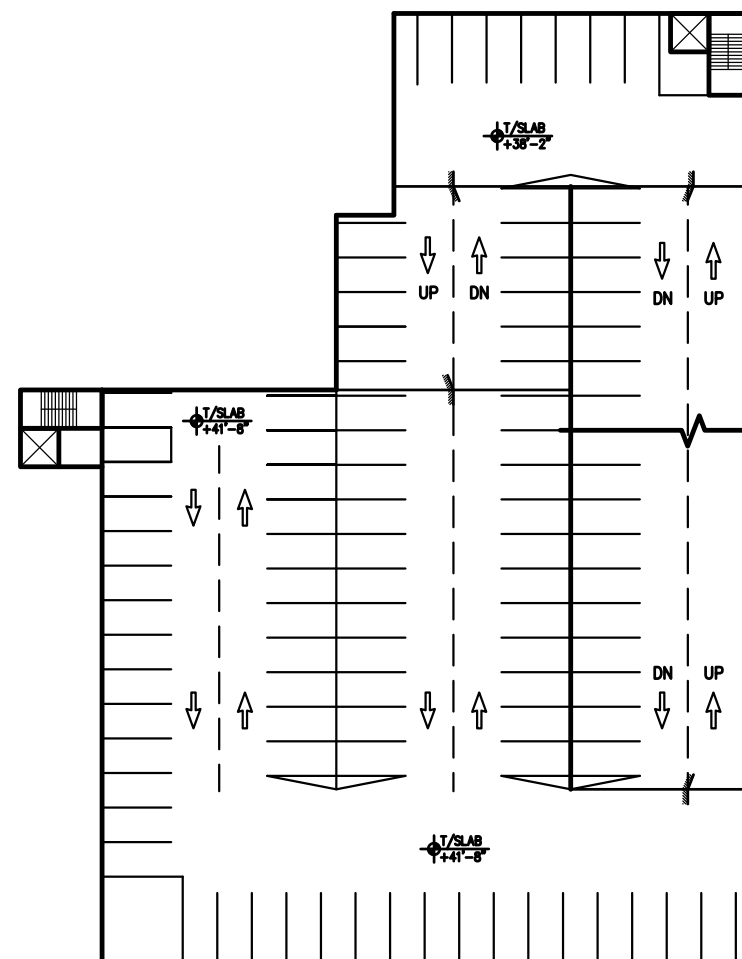
City of Fayetteville Parking Structure

Exhibit C7

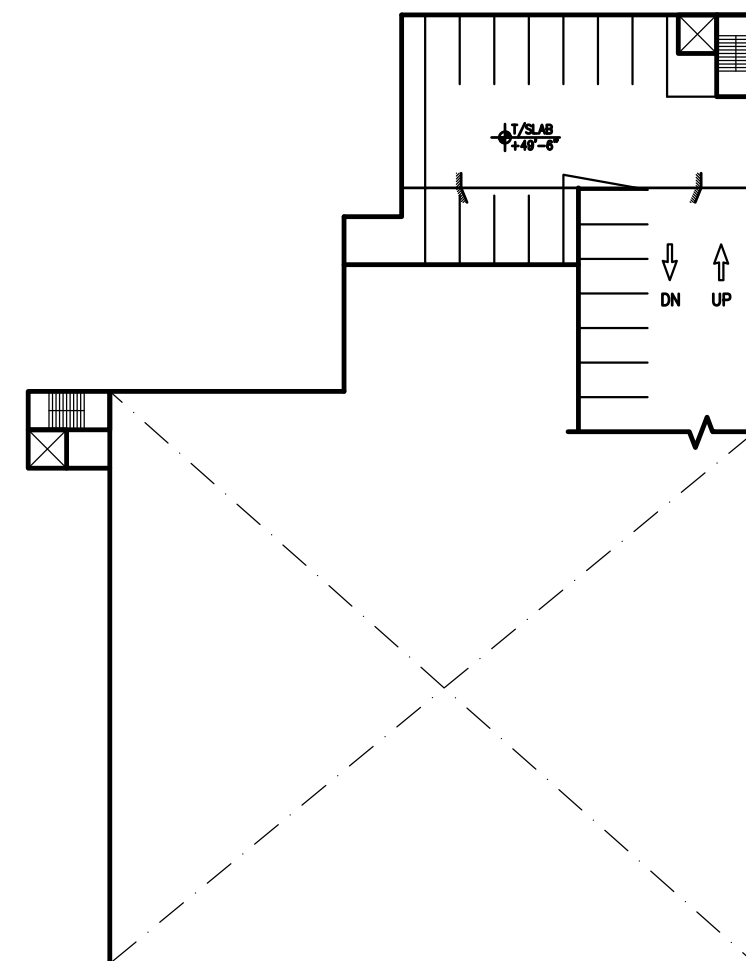
Site Selection Study
Fayetteville, Arkansas



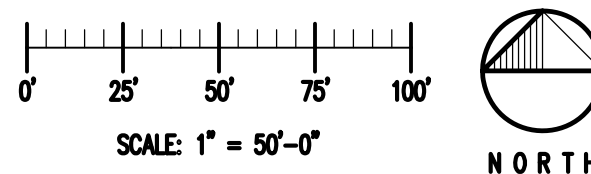
Level 2 & 3(Similar) Plan



Level 4 Plan

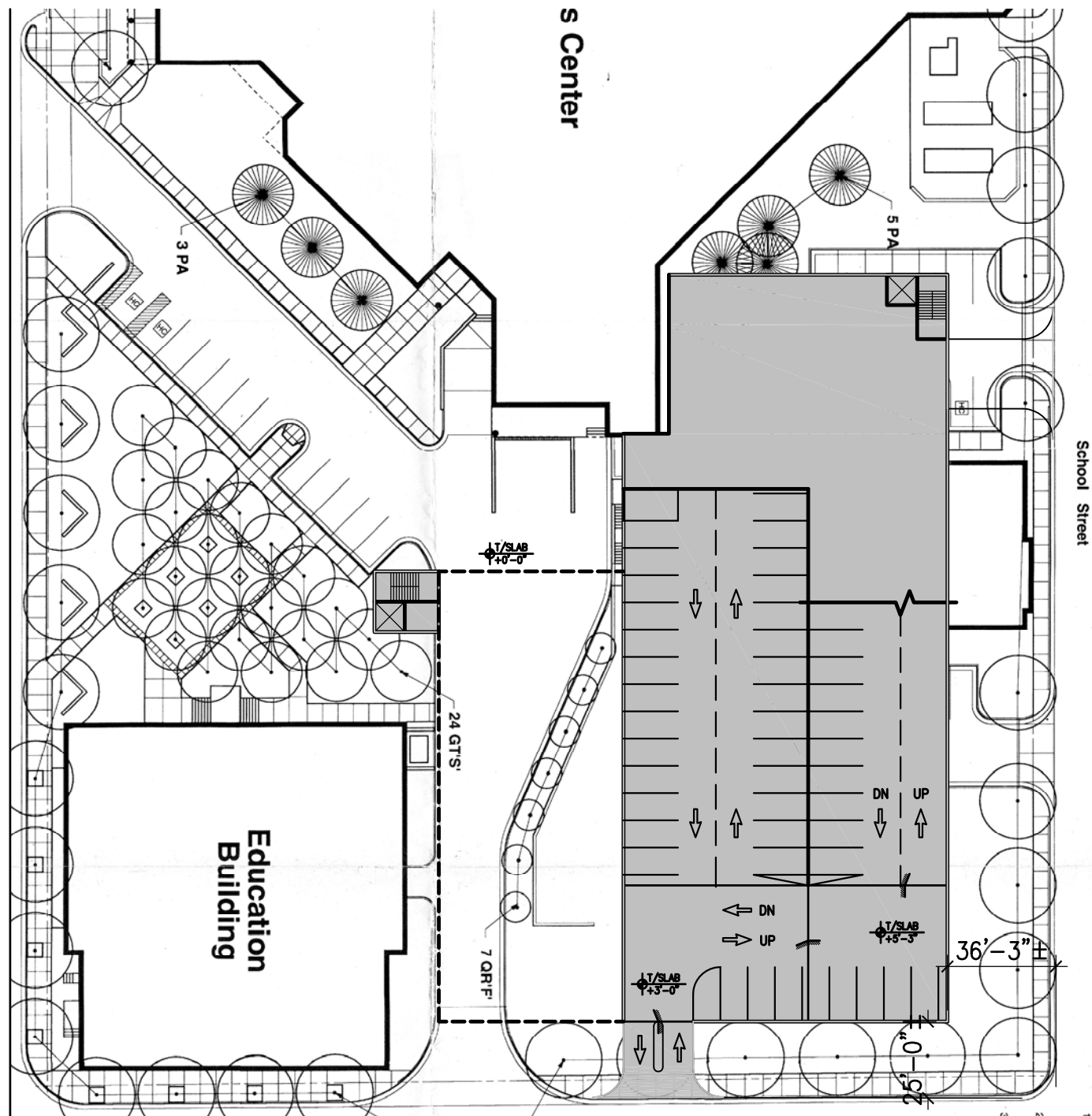


Level 5 Plan



May 21, 2012

Theater Site - Option C - Sheet 2



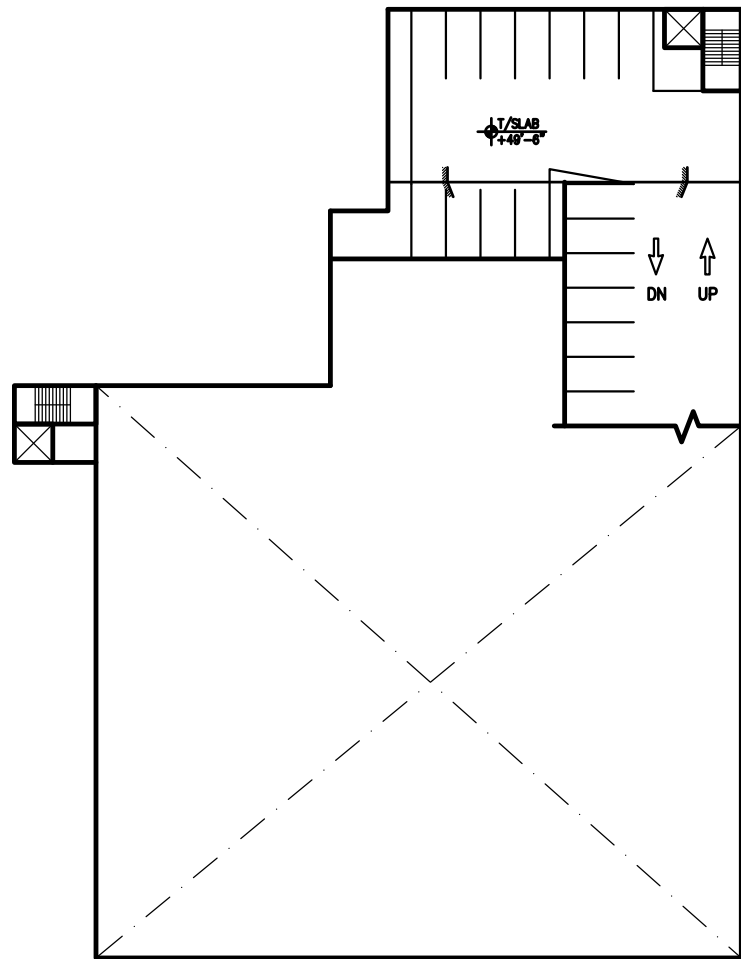
Site and Level 1 Plan

Parking Summary

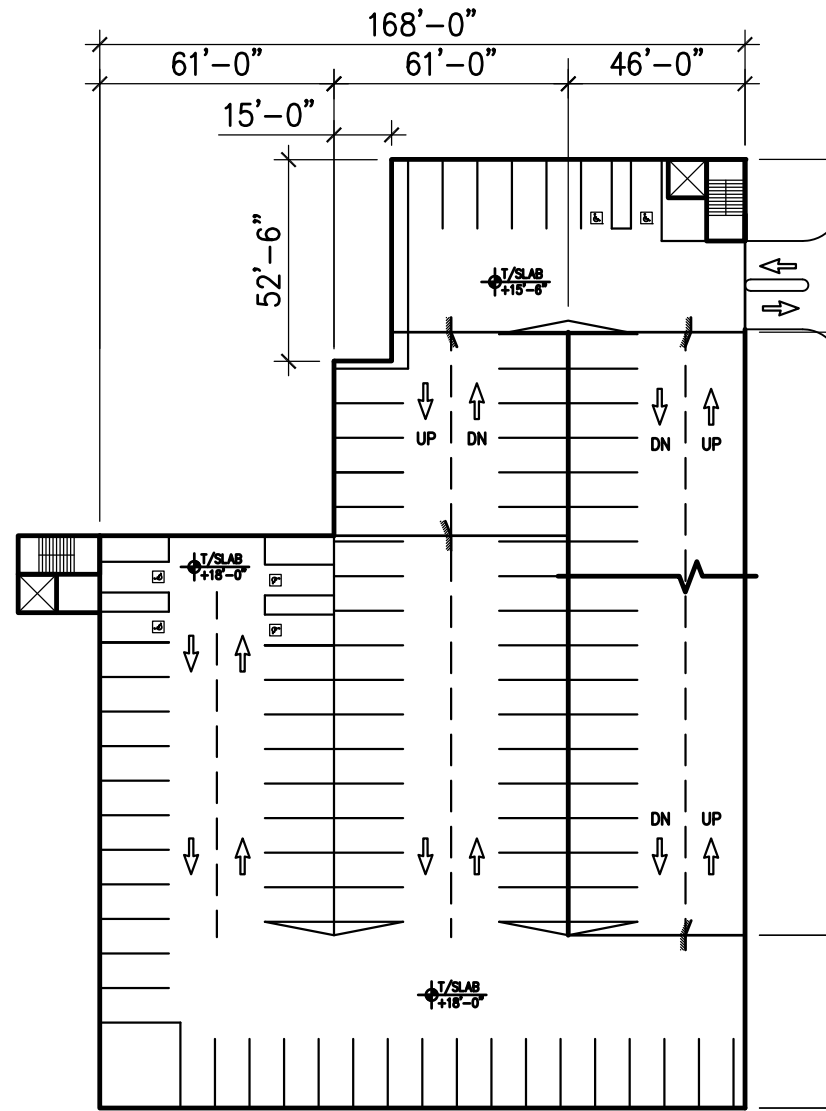
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	91	0	0	91
LEVEL 3	90	0	6	96
LEVEL 2	90	0	6	96
LEVEL 1	45	0	0	45
GARAGE TOTAL	316	0	12	328
SPACES LOST	28	0	0	28
NET GAIN	288	0	12	300

May 21, 2012

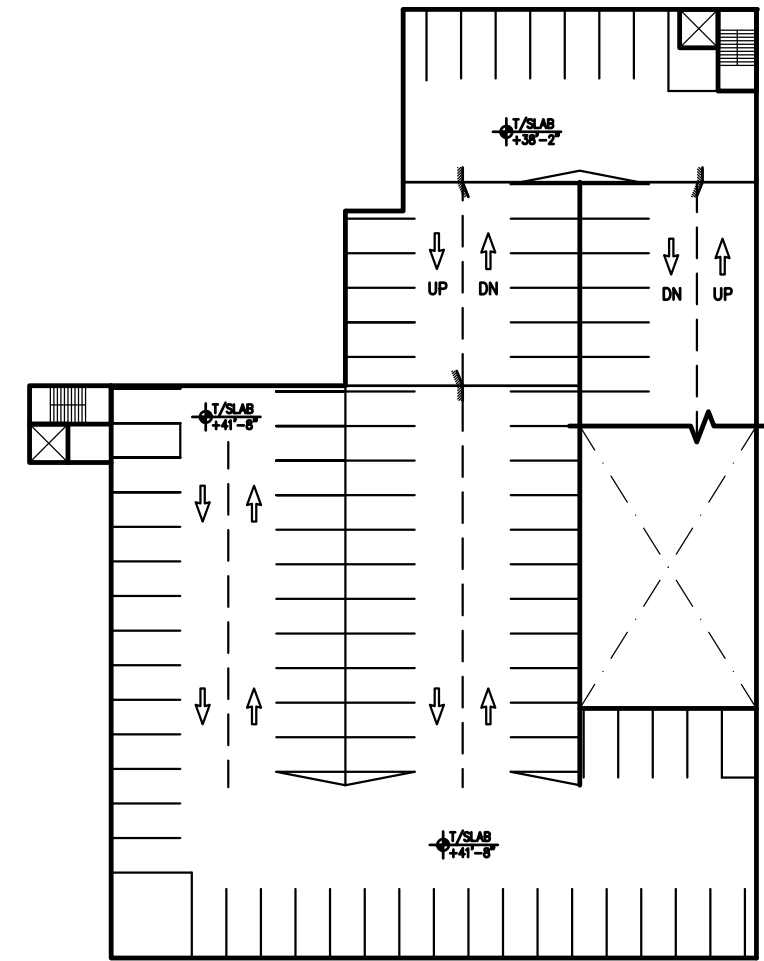
Theater Site - Option C.1 - Sheet 1



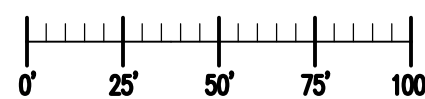
Level 2 Plan



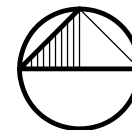
Level 3 Plan



Level 4 Plan



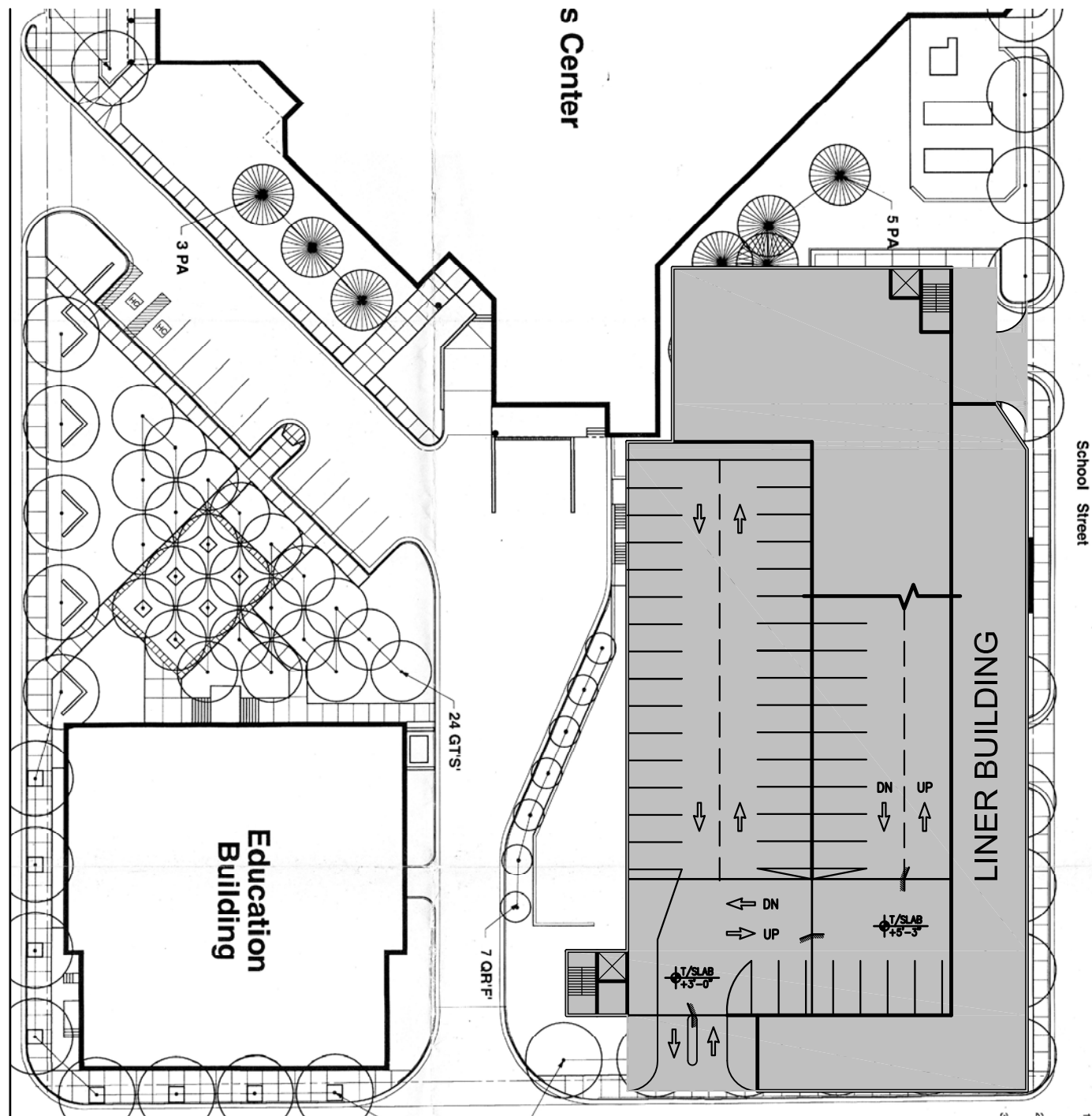
SCALE: 1" = 50'-0"



NORTH

May 21, 2012

Theater Site - Option C.1 - Sheet 2



Site and Level 1 Plan

May 21, 2012

Parking Summary

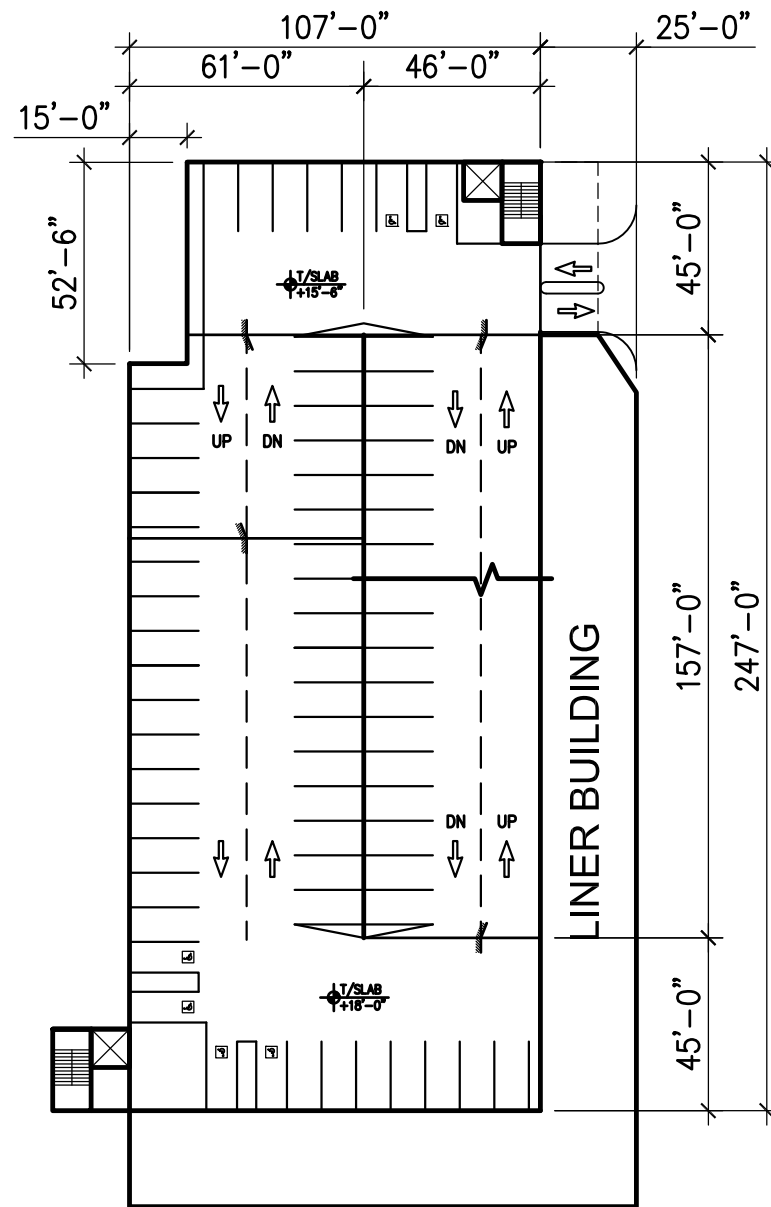
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	34	0	0	34
LEVEL 4	92	0	0	92
LEVEL 3	85	0	6	91
LEVEL 2	62	0	6	68
LEVEL 1	47	0	0	47
GARAGE TOTAL	320	0	12	332
SPACES LOST	28	0	0	28
NET GAIN	292	0	12	304

Theater Site - Option C.2 - Sheet 1

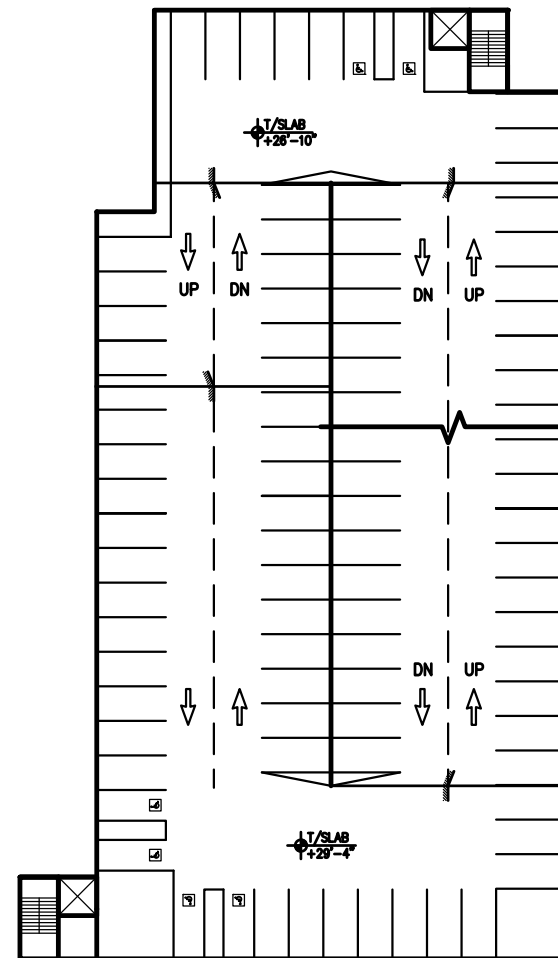
City of Fayetteville Parking Structure

Exhibit C9

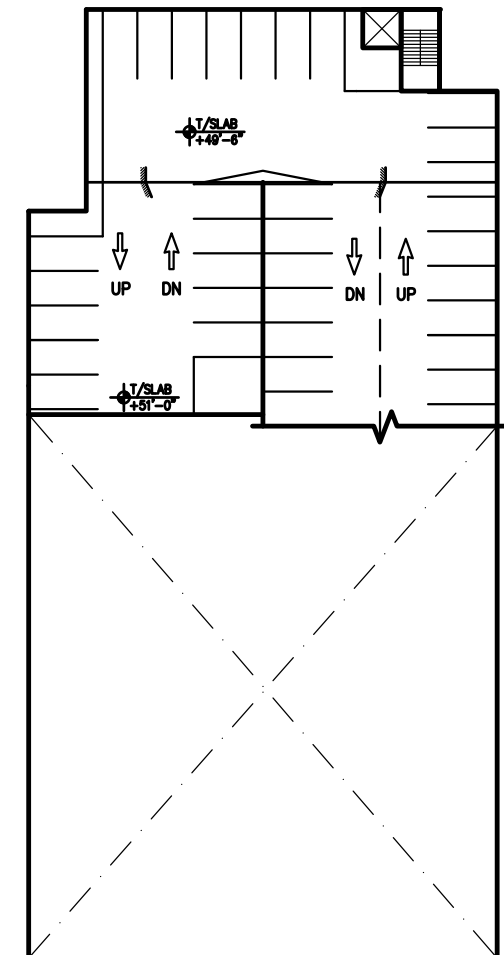
Site Selection Study
Fayetteville, Arkansas



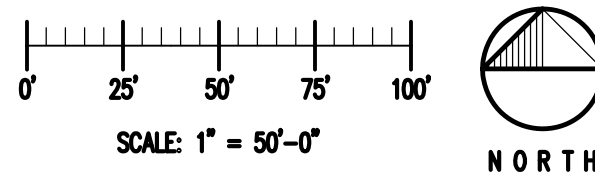
Level 2 Plan



Level 3 & 4 Plan

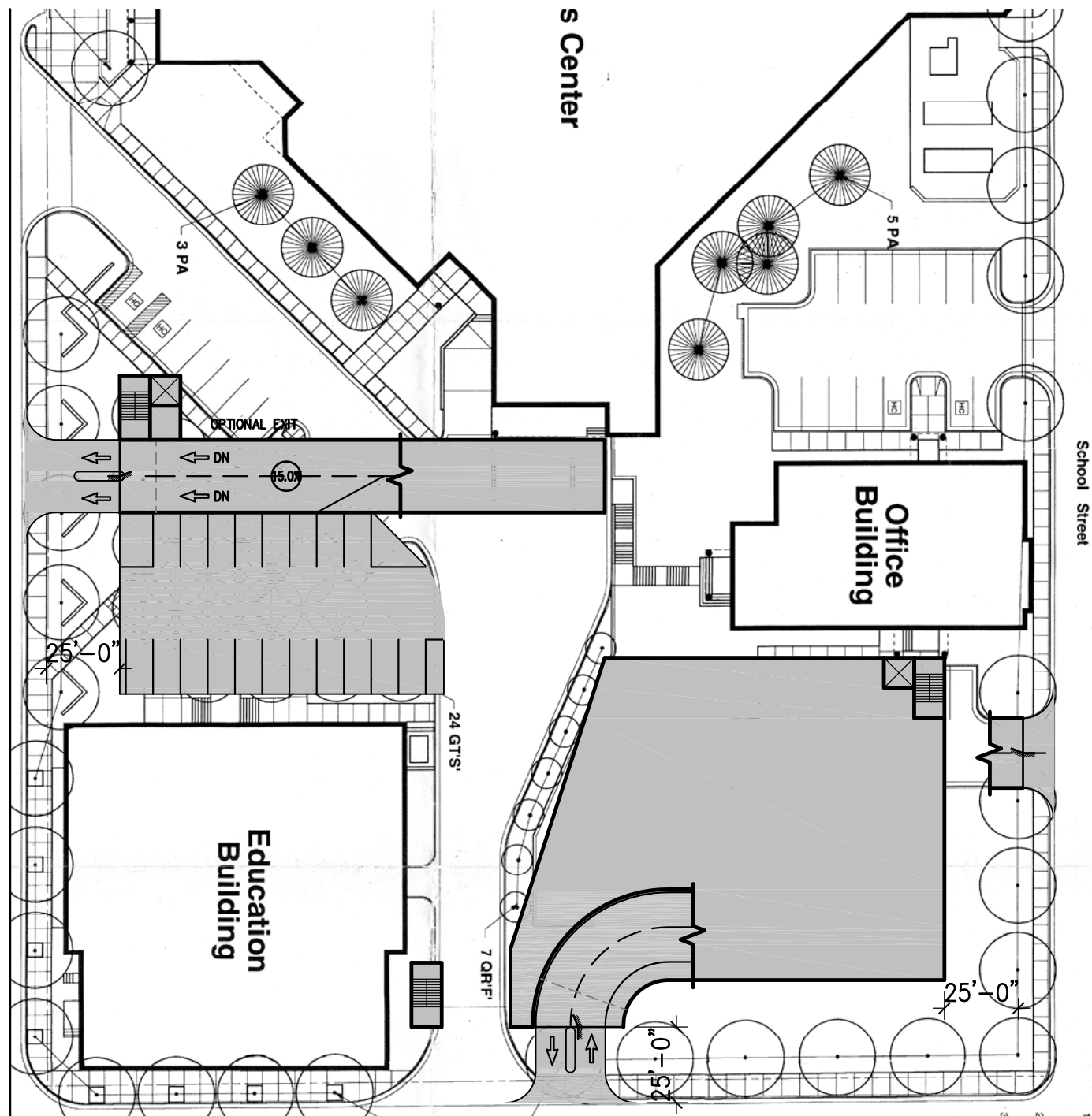


Level 5 Plan

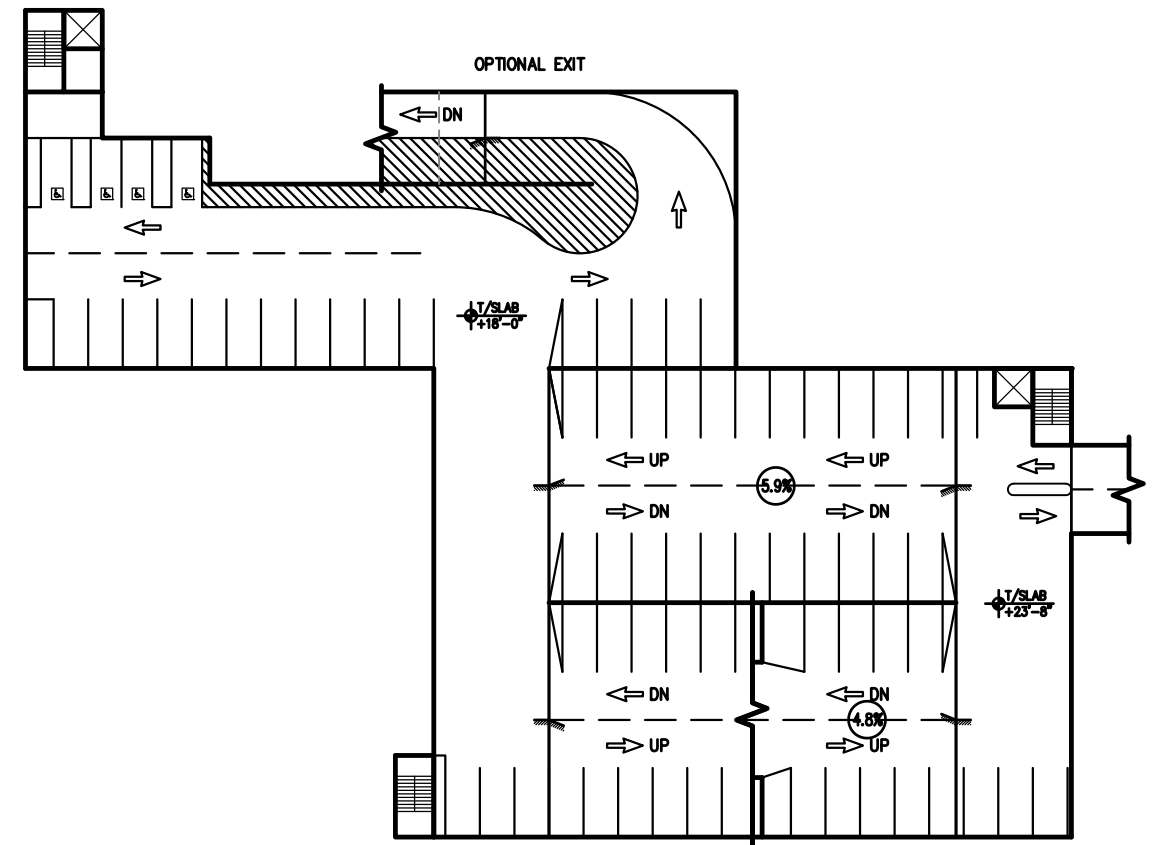


May 21, 2012

Theater Site - Option C.2 - Sheet 2



Site and Level 1 Plan



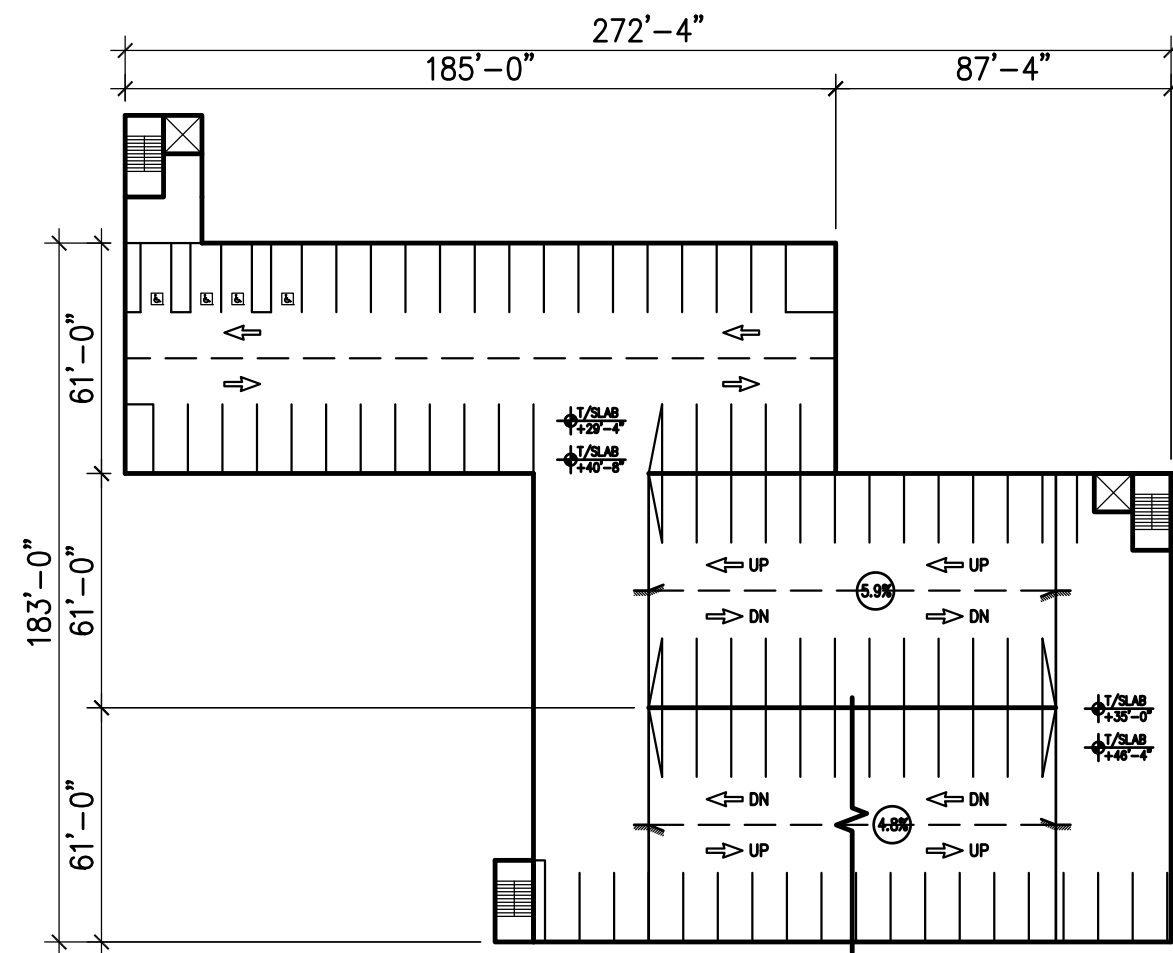
Level 2 Plan

Parking Summary

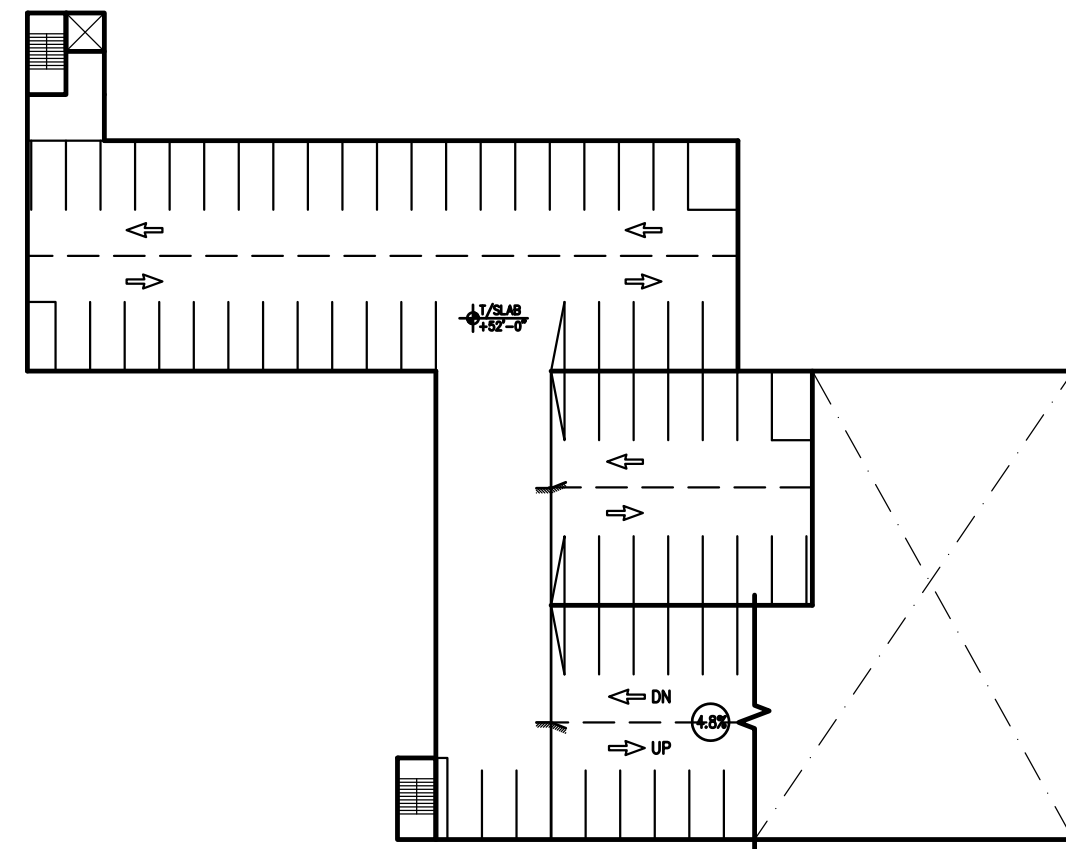
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	63	0	0	63
LEVEL 4	82	0	4	86
LEVEL 3	82	0	4	86
LEVEL 2	66	0	4	70
LEVEL 1	19	0	0	19
GARAGE TOTAL	312	0	12	324
SPACES LOST	17	0	0	17
NET GAIN	295	0	12	307

May 21, 2012

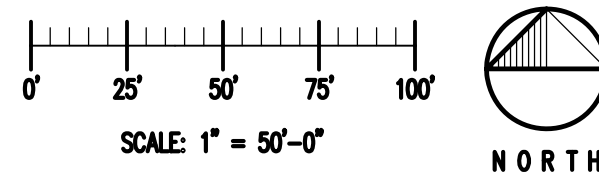
Theater Site - Option D - Sheet 1



Level 3 & 4 Plan

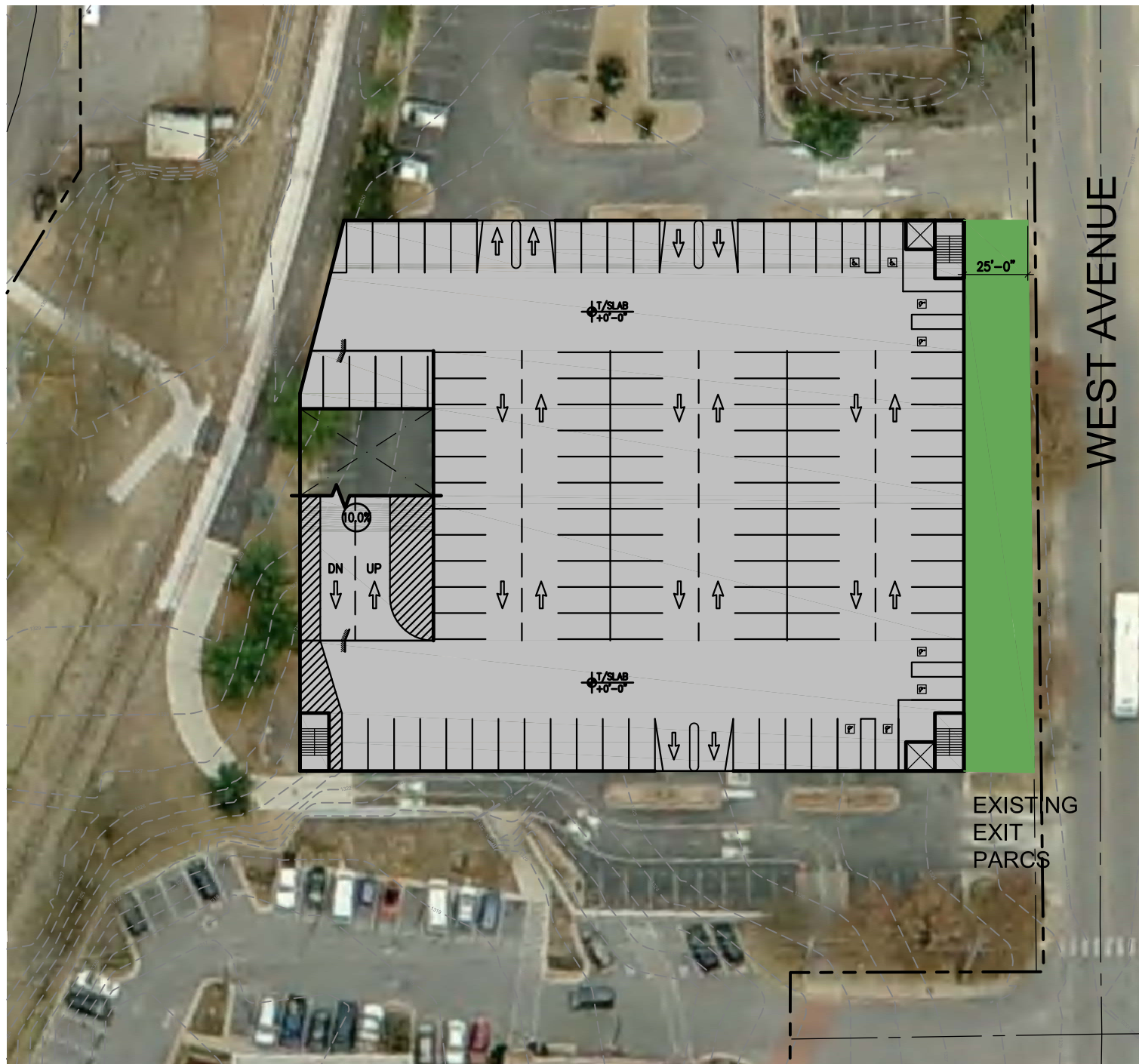


Level 5 Plan

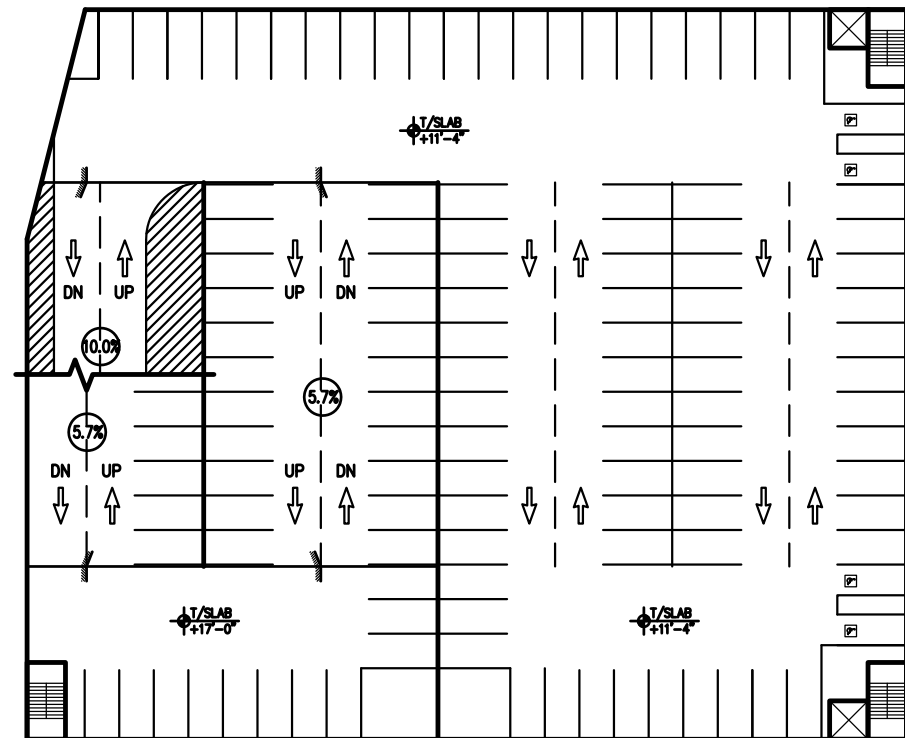


May 21, 2012

Theater Site - Option D - Sheet 2



Site and Level 1 Plan

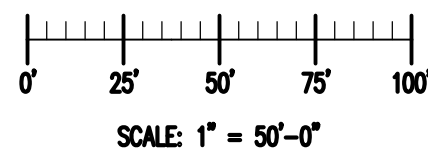


Level 2 Plan

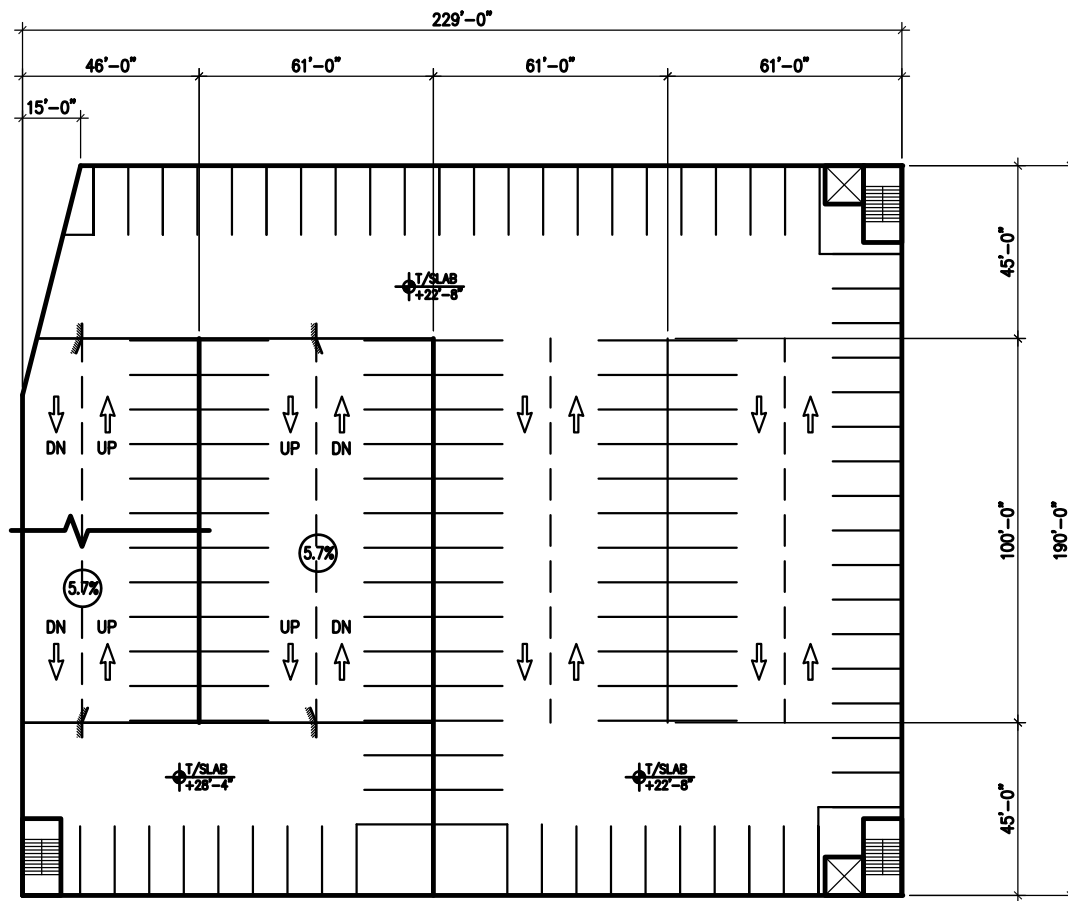
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	124	0	0	124
LEVEL 3	126	0	0	126
LEVEL 2	116	0	4	120
LEVEL 1	100	0	8	108
GARAGE TOTAL	466	0	12	478
SPACES LOST	164	0	0	164
NET GAIN	302	0	12	314

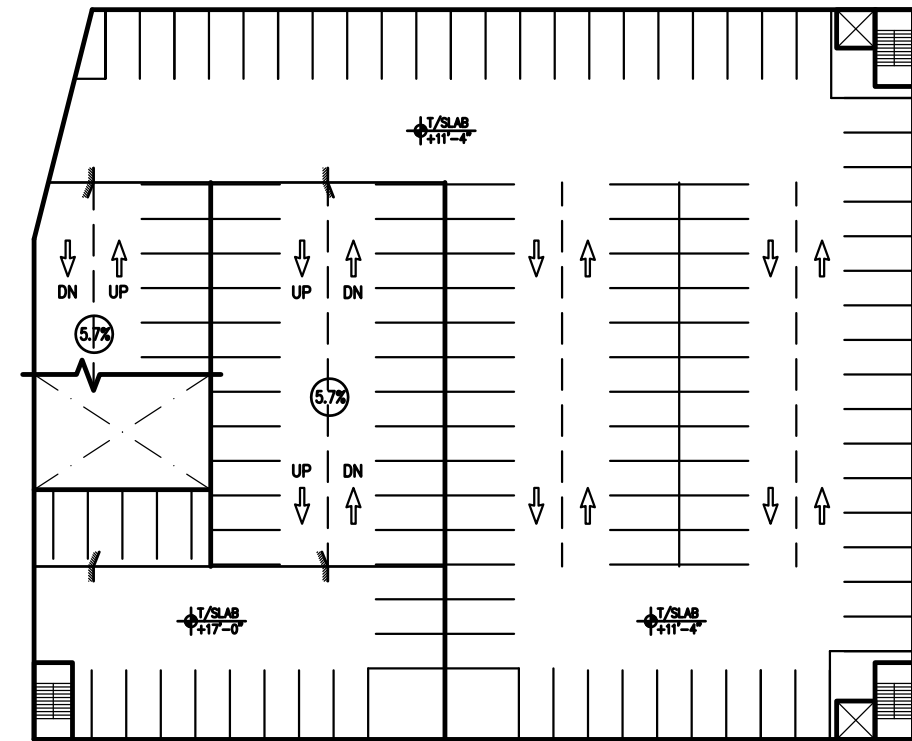
April 20, 2012



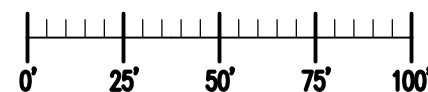
WAC Lot Site - Option A - Sheet 1



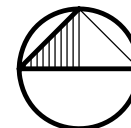
Level 3 Plan



Level 4 Plan



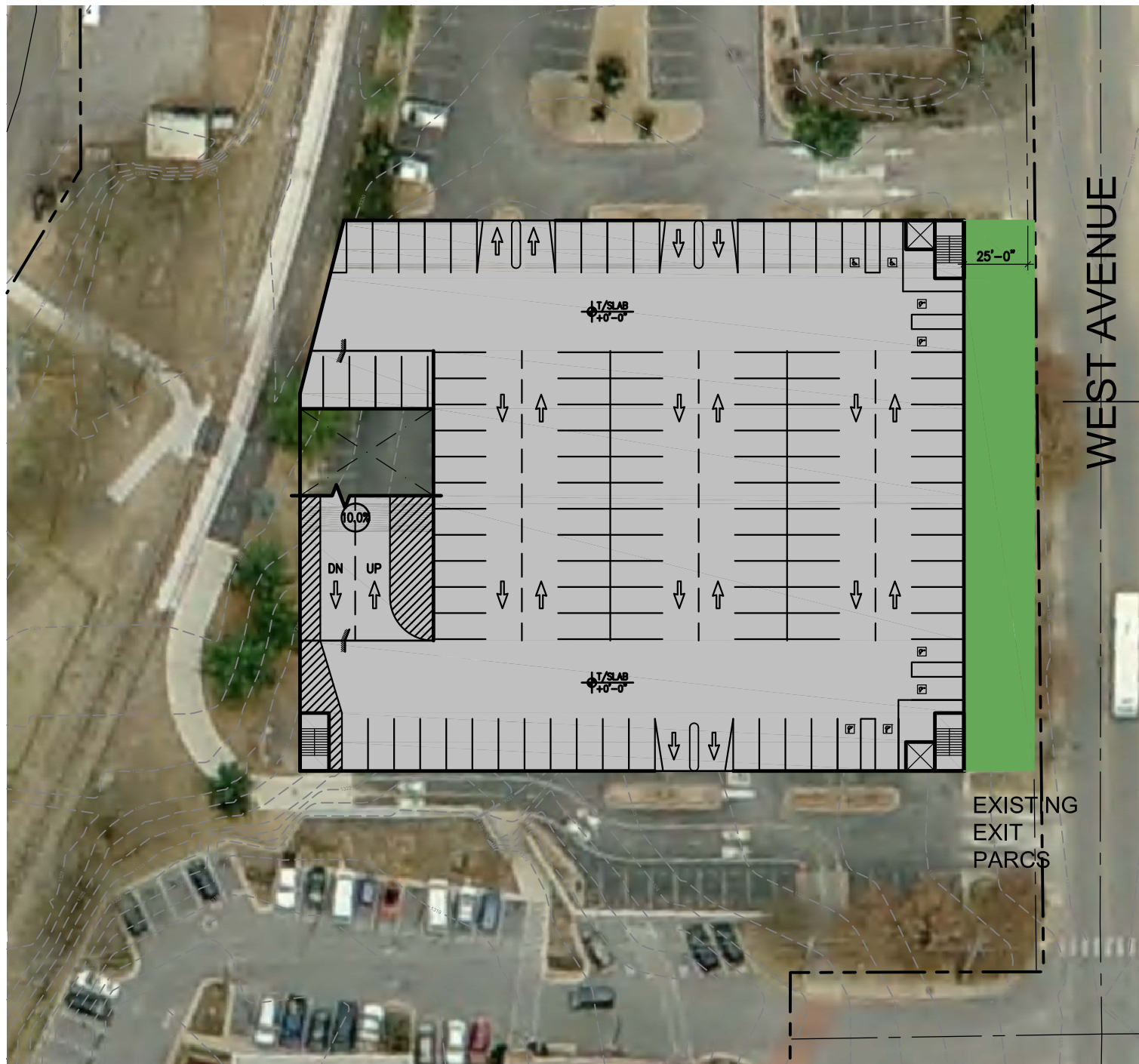
SCALE: 1" = 50'-0"



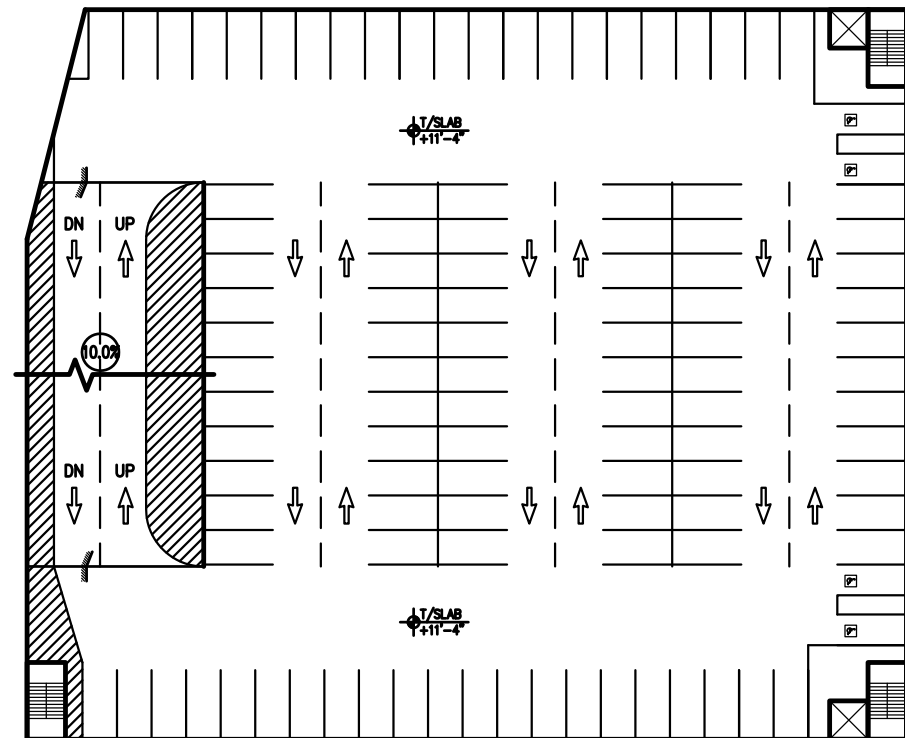
NORTH

April 20, 2012

WAC Lot Site - Option A - Sheet 2



Site and Level 1 Plan

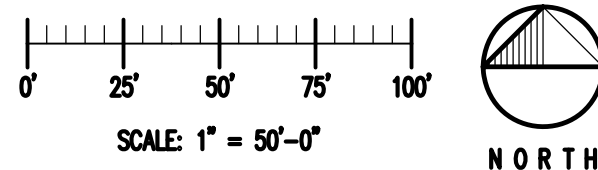


Level 2 Plan

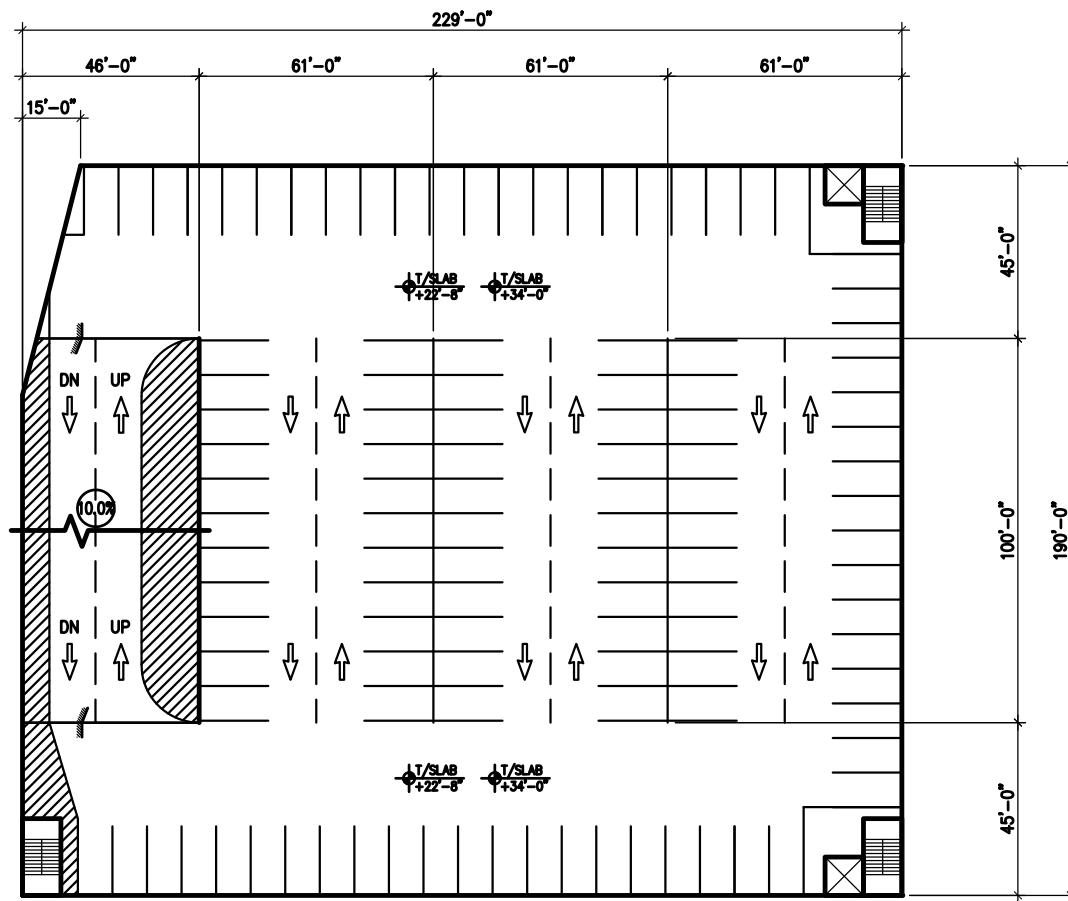
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	48	0	0	48
LEVEL 4	113	0	0	113
LEVEL 3	113	0	0	113
LEVEL 2	108	0	4	112
LEVEL 1	100	0	8	108
GARAGE TOTAL	482	0	12	494
SPACES LOST	164	0	0	164
NET GAIN	318	0	12	330

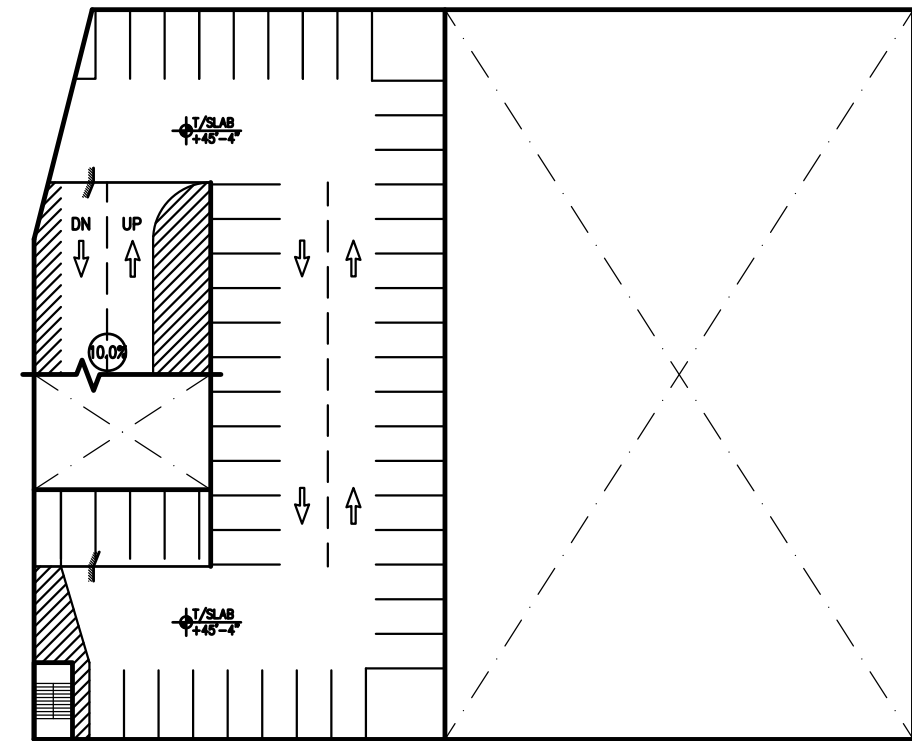
April 20, 2012



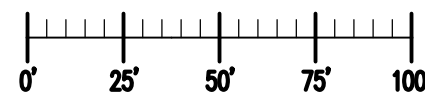
WAC Lot Site - Option A.1 - Sheet 1



Level 3 & 4 Plan



Level 5 Plan



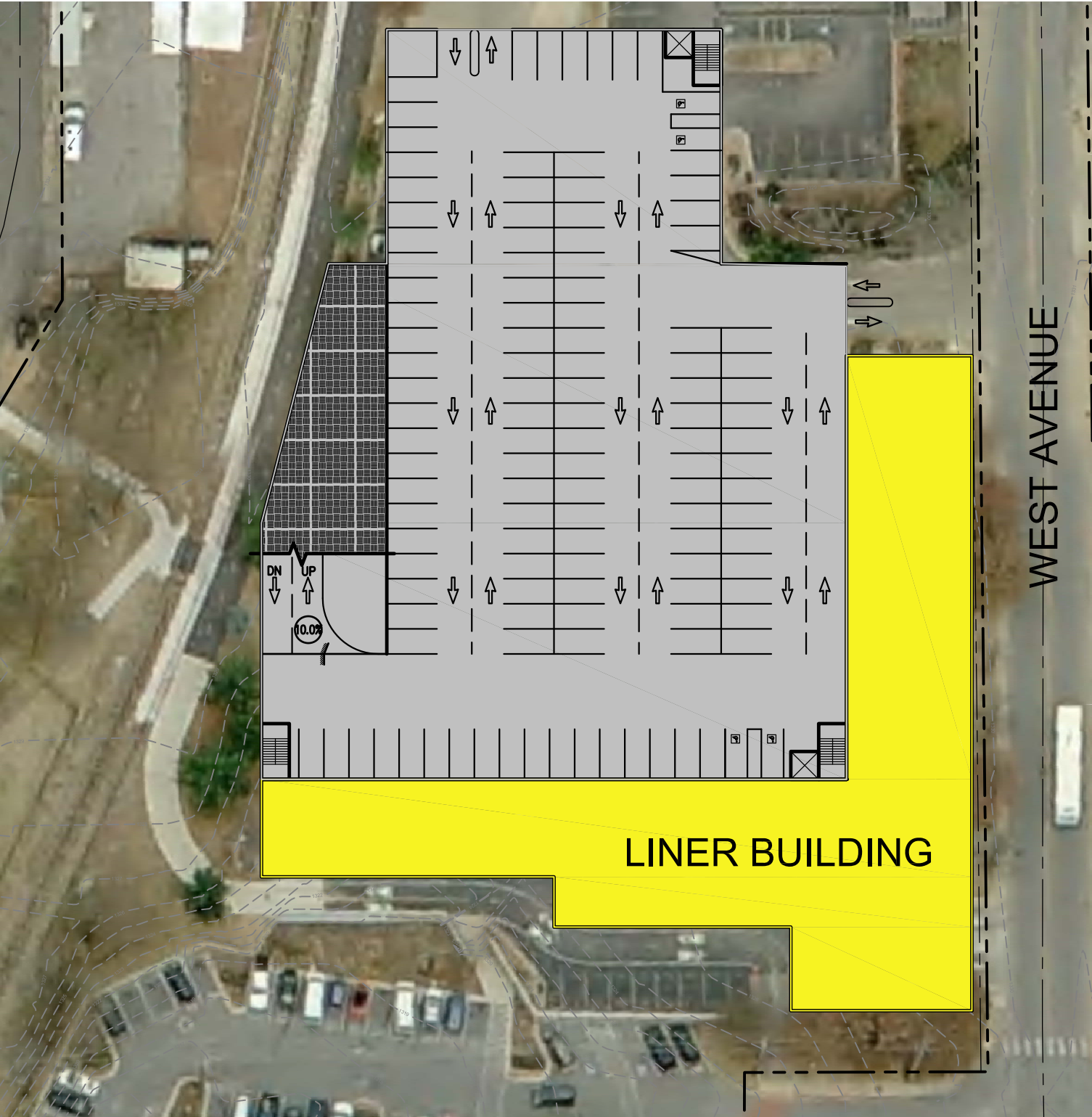
SCALE: 1" = 50'-0"



NORTH

April 20, 2012

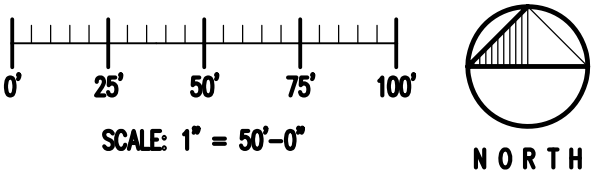
WAC Lot Site - Option A.1 - Sheet 2



Parking Summary

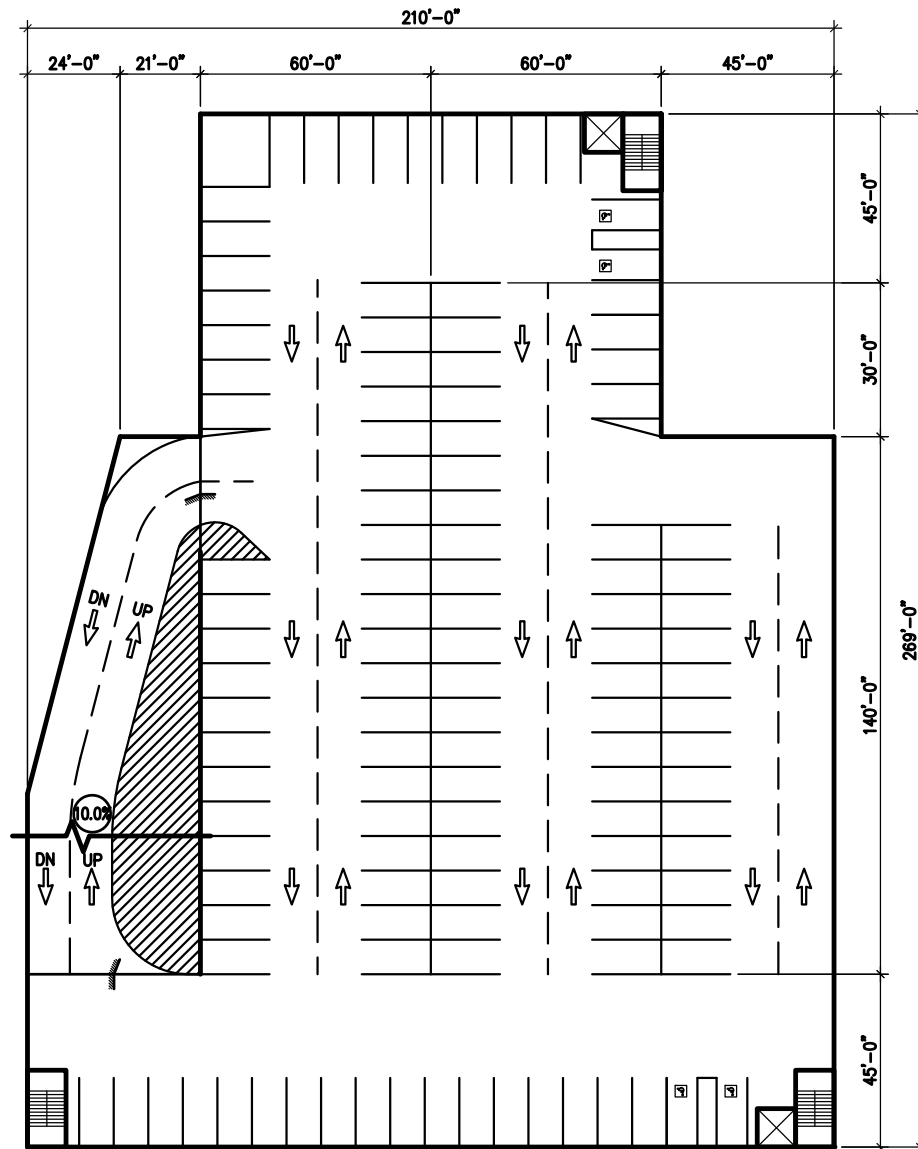
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	124	0	0	124
LEVEL 3	115	0	4	119
LEVEL 2	115	0	4	119
LEVEL 1	116	0	4	120
GARAGE TOTAL	470	0	12	482
SPACES LOST	180	0	0	180
NET GAIN	290	0	12	302

Site and Level 1 Plan

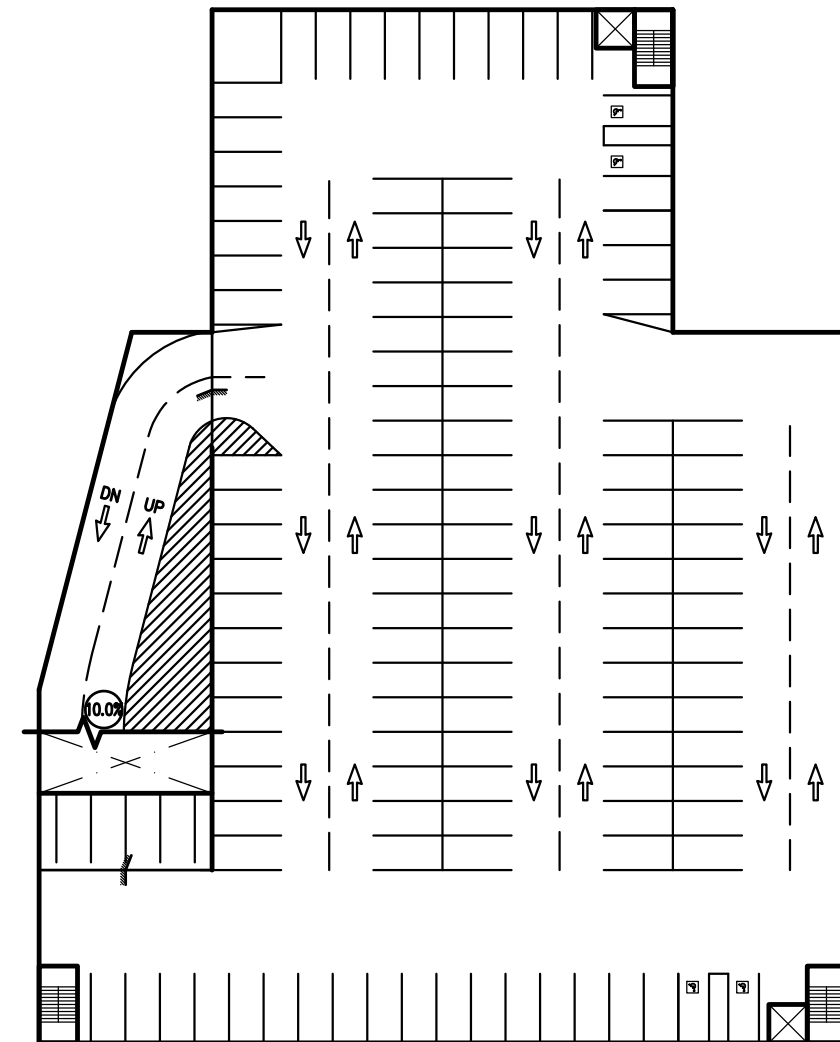


May 8, 2012

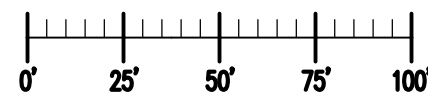
WAC Lot Site - Option A.2 - Sheet 1



Level 2 & 3 Plan



Level 4 Plan



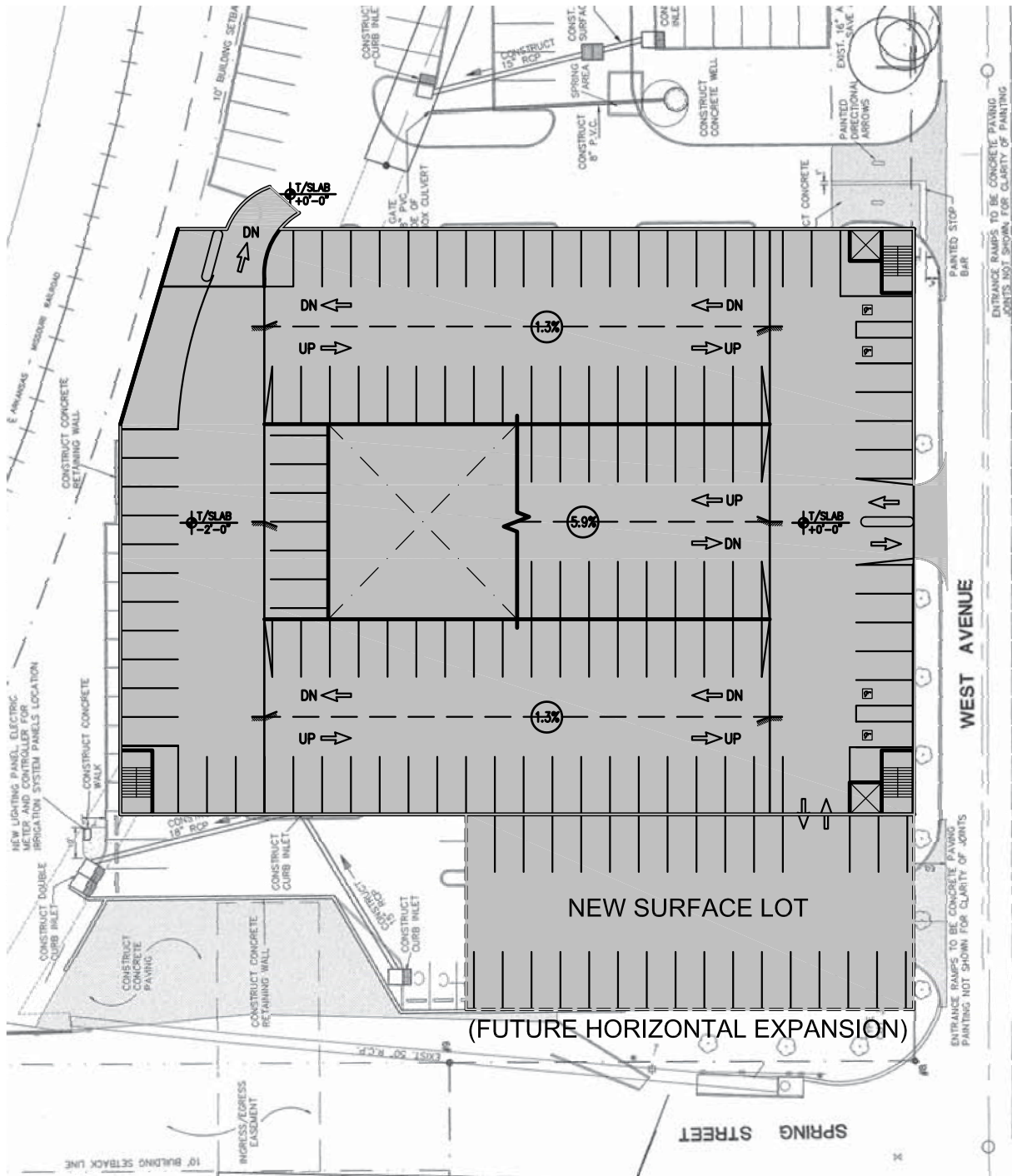
SCALE: 1" = 50'-0"



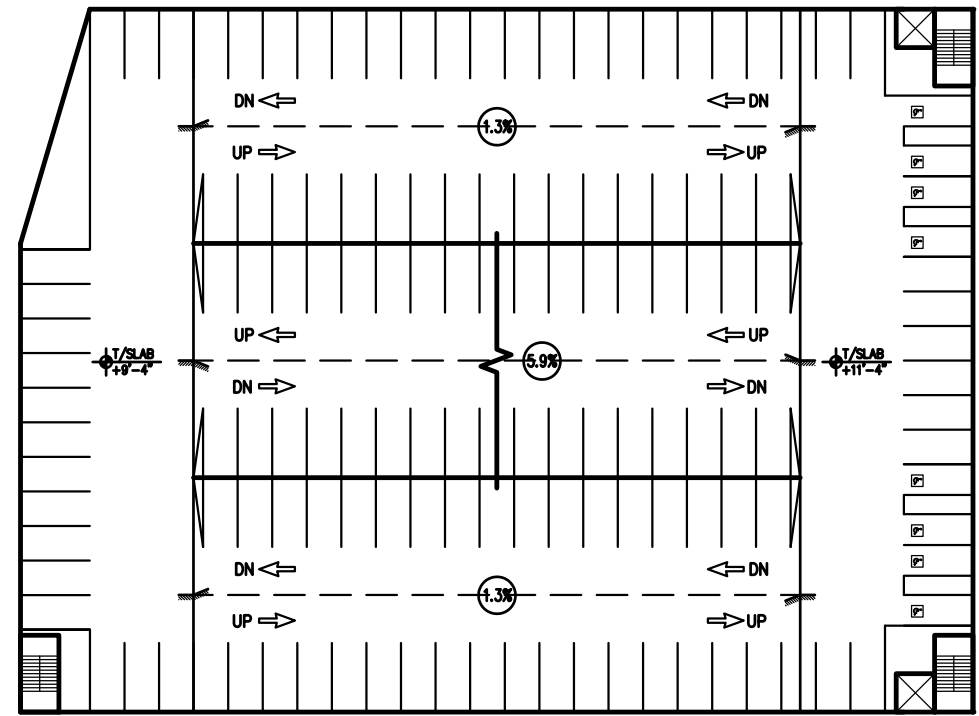
NORTH

May 8, 2012

WAC Lot Site - Option A.2 - Sheet 2



Site and Level 1 Plan

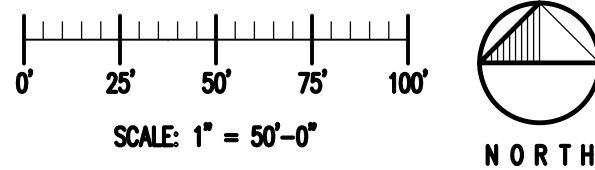


Level 2 Plan

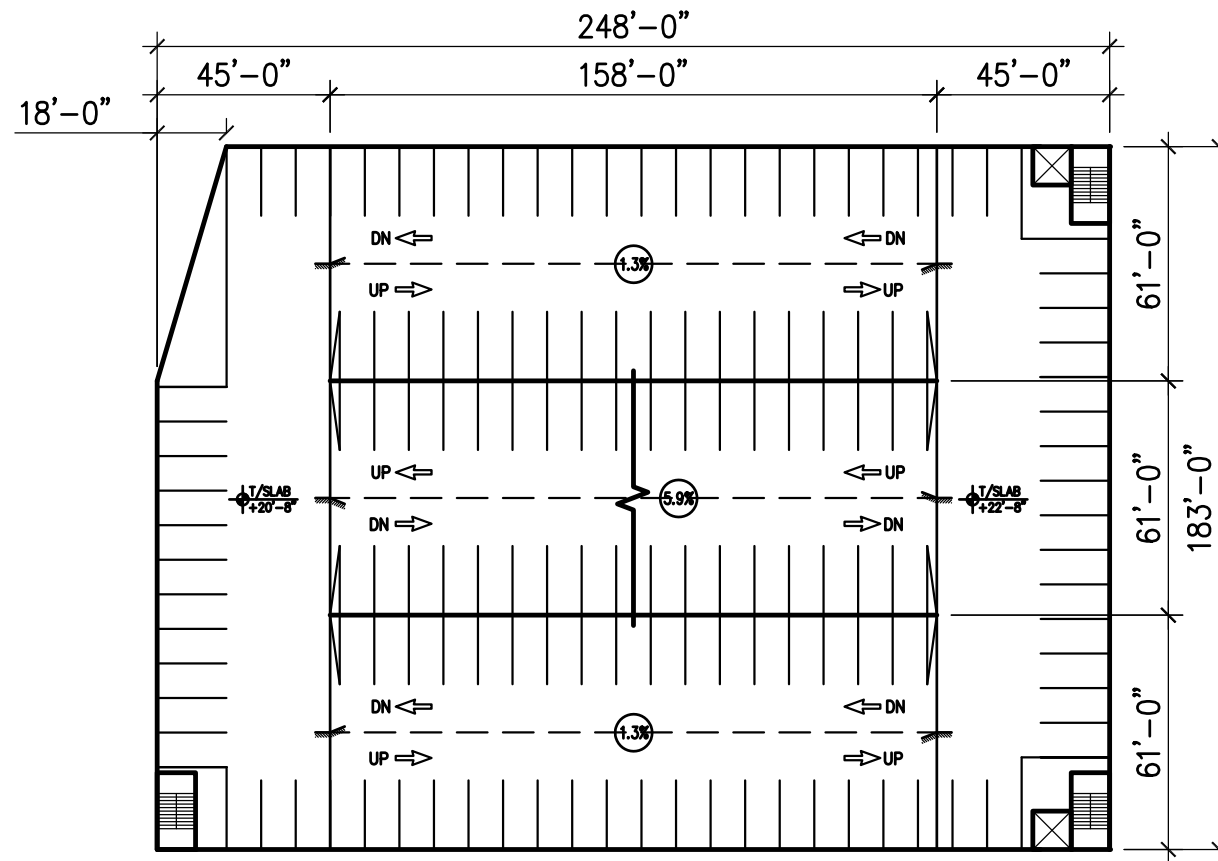
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	124	0	0	124
LEVEL 3	126	0	0	126
LEVEL 2	116	0	4	120
LEVEL 1	100	0	8	108
GARAGE TOTAL	466	0	12	478
NEW SURFACE LOT	28	0	0	28
SPACES LOST	164	0	0	164
NET GAIN	330	0	12	342

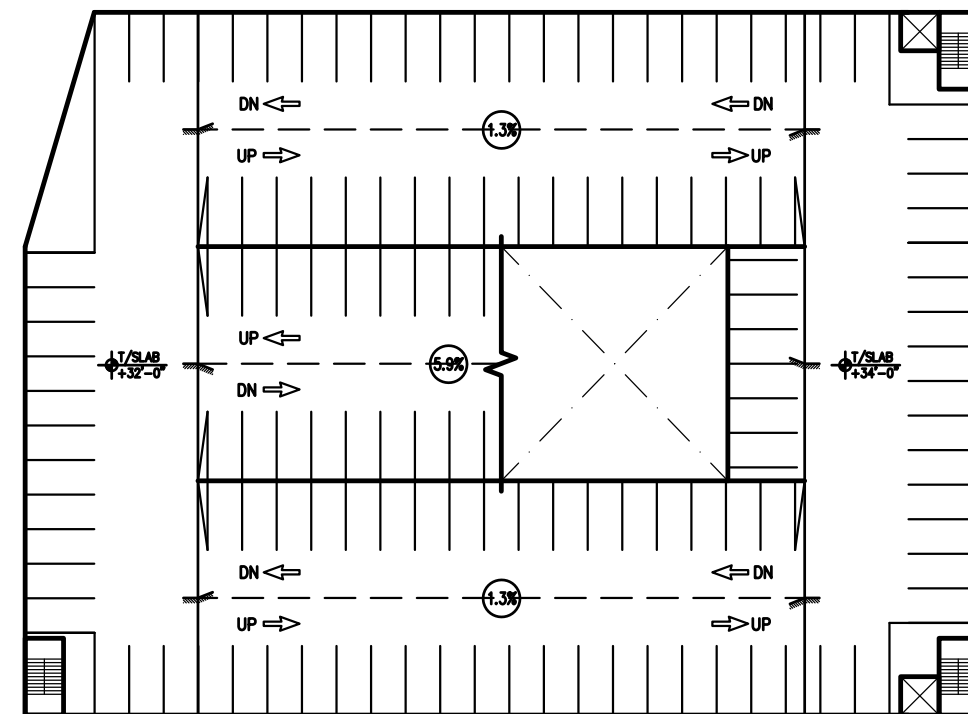
June 20, 2012



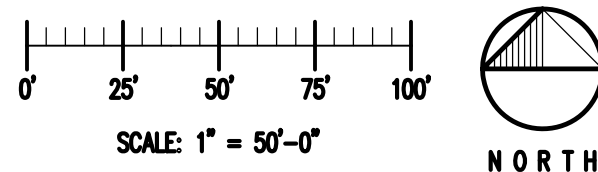
WAC Lot Site - Option B - Sheet 1



Level 3 Plan

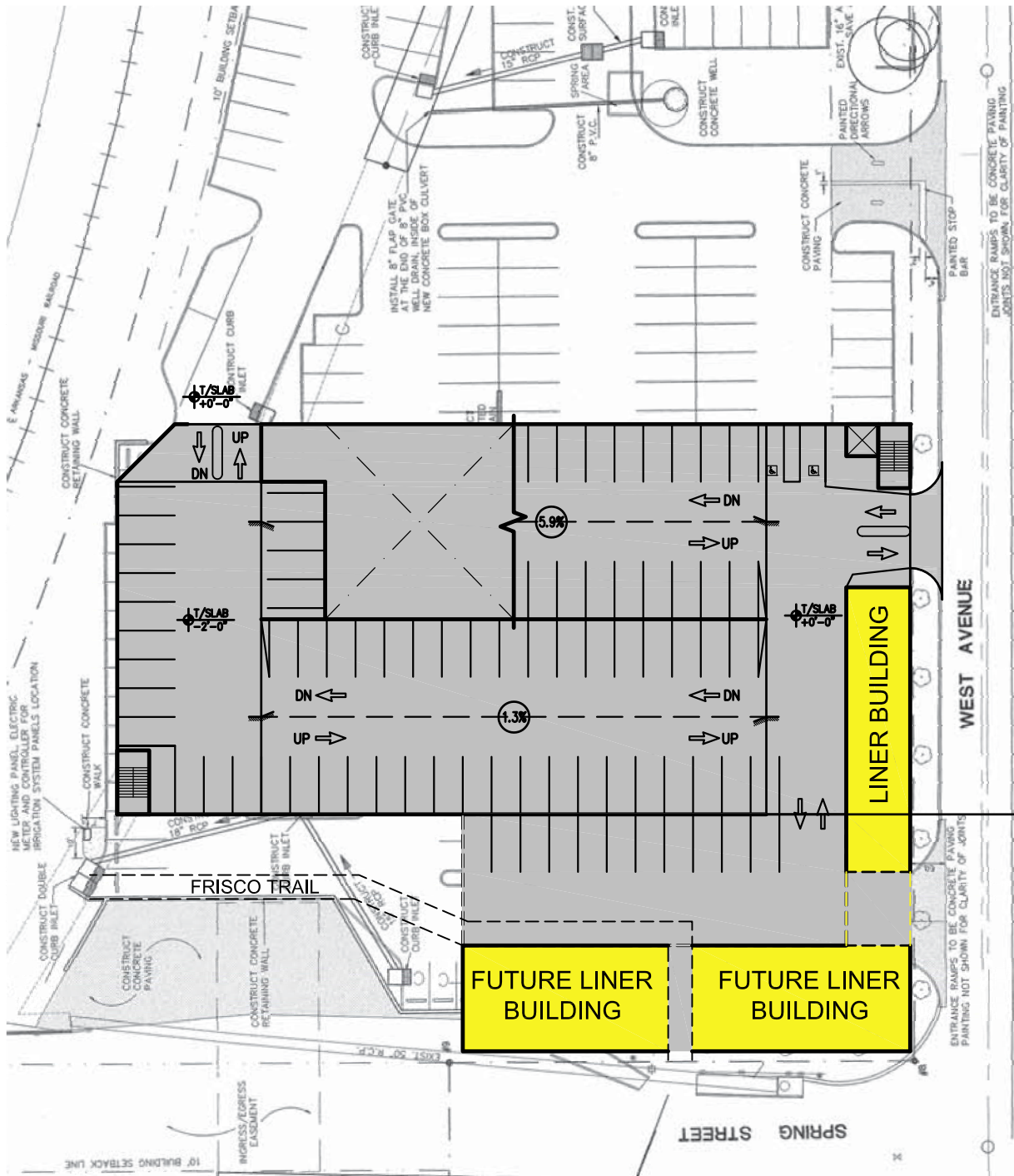


Level 4 Plan

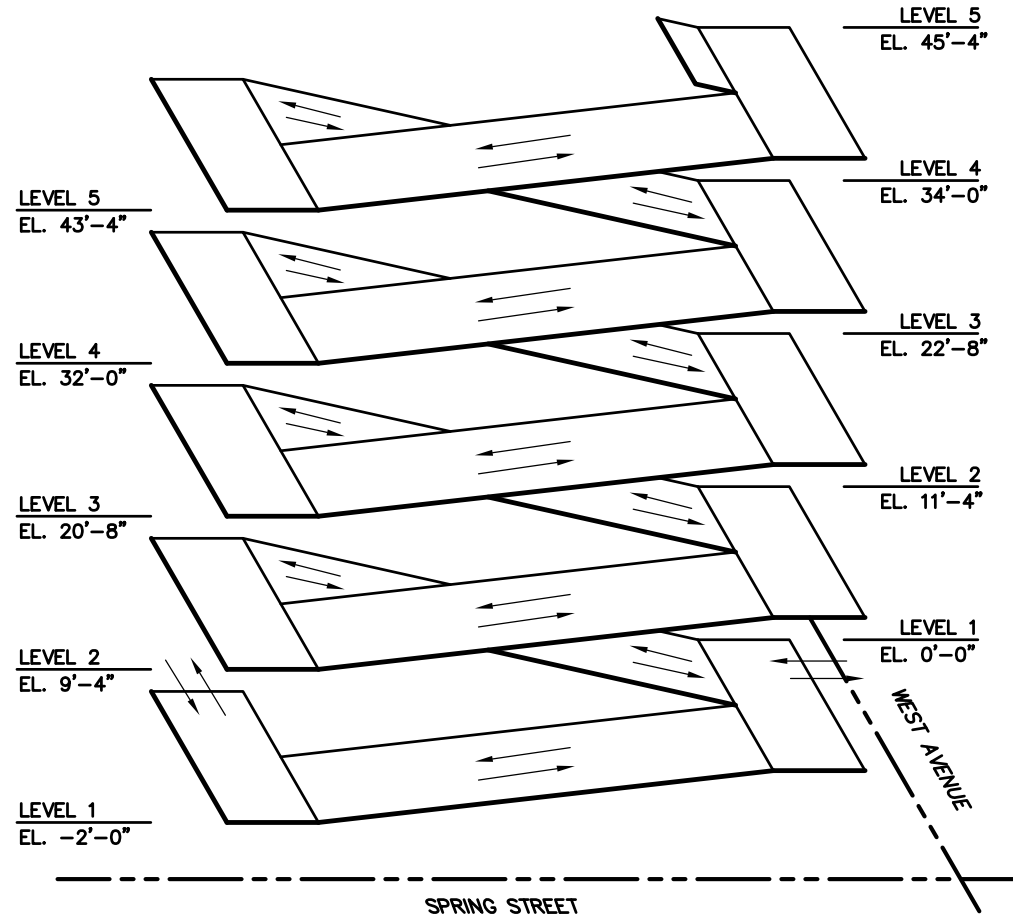
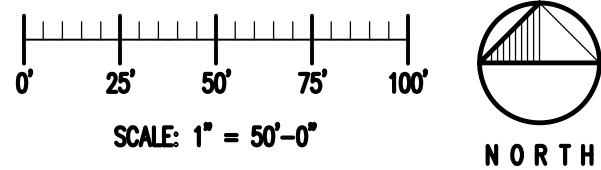


June 20, 2012

WAC Lot Site - Option B - Sheet 2



Site and Level 1 Plan



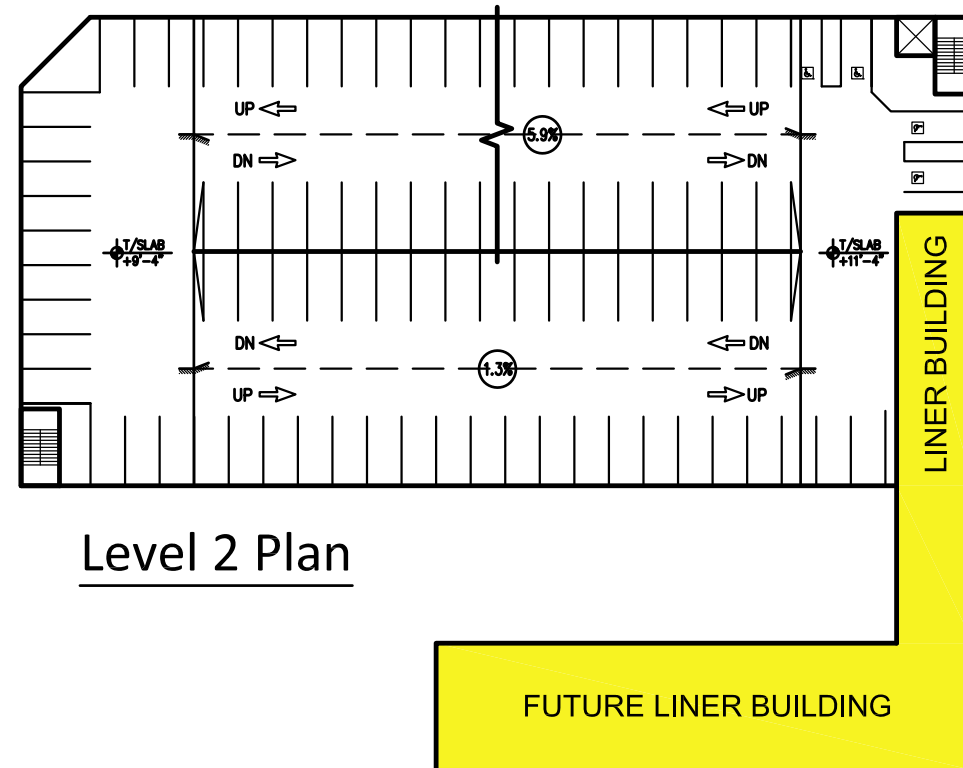
Isometric View

Parking Summary

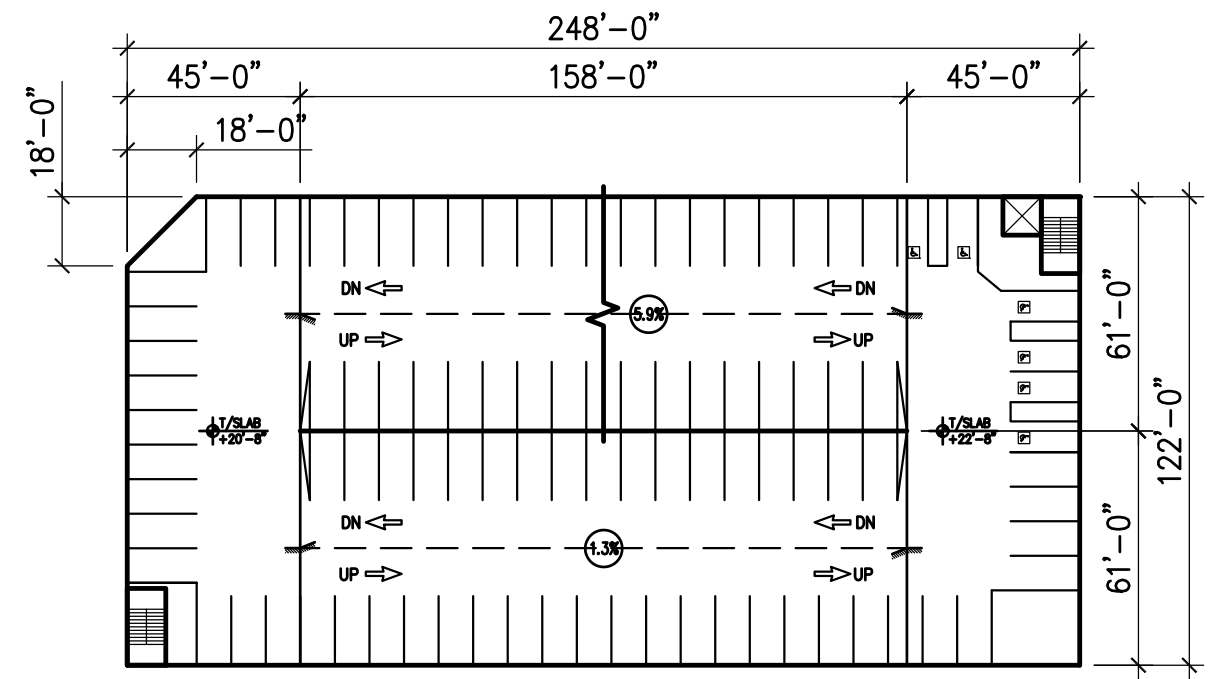
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	83	0	0	83
LEVEL 4	98	0	0	98
LEVEL 3	90	0	6	96
LEVEL 2	86	0	4	90
LEVEL 1	69	0	2	71
GARAGE TOTAL	426	0	12	438
NEW SURFACE LOT	11	0	0	11
SPACES LOST	132	0	0	132
NET GAIN	305	0	12	317

August 2, 2012

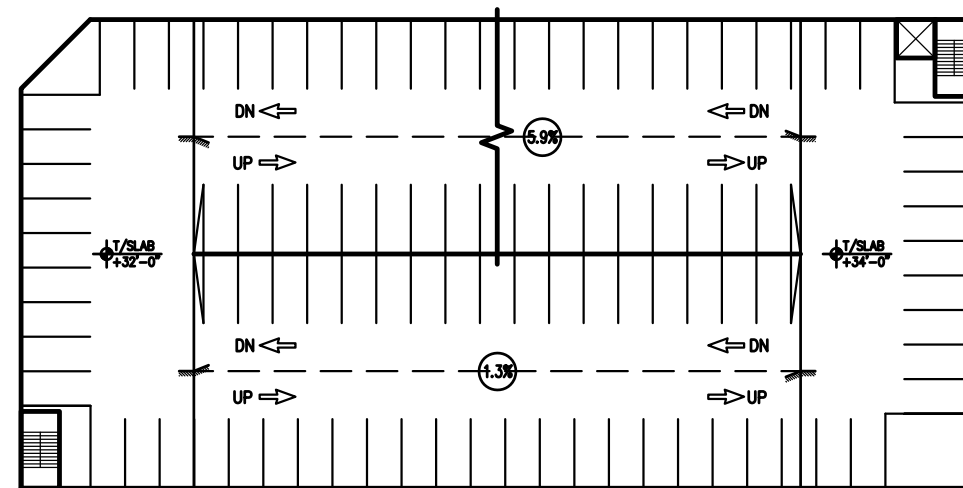
WAC Lot Site - Option B.1 - Sheet 1



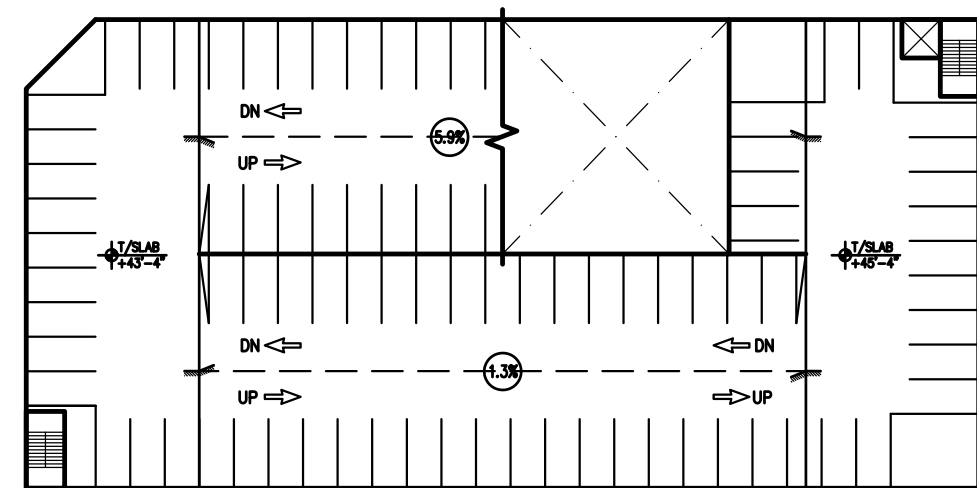
Level 2 Plan



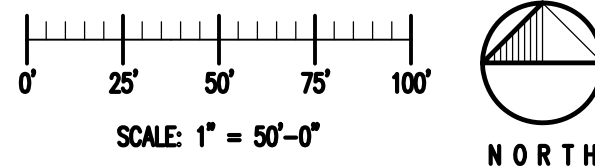
Level 3 Plan



Level 4 Plan

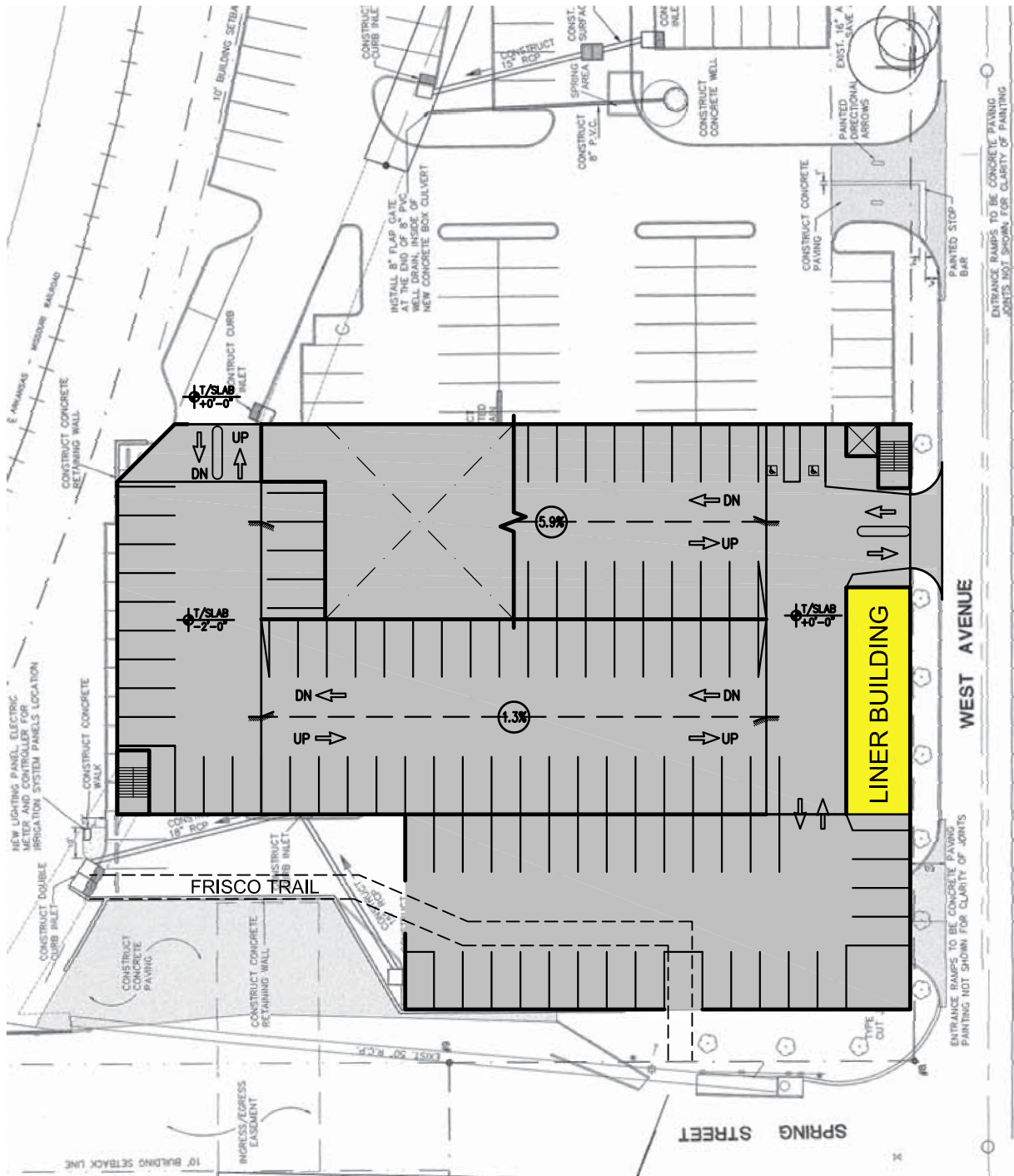


Level 5 Plan



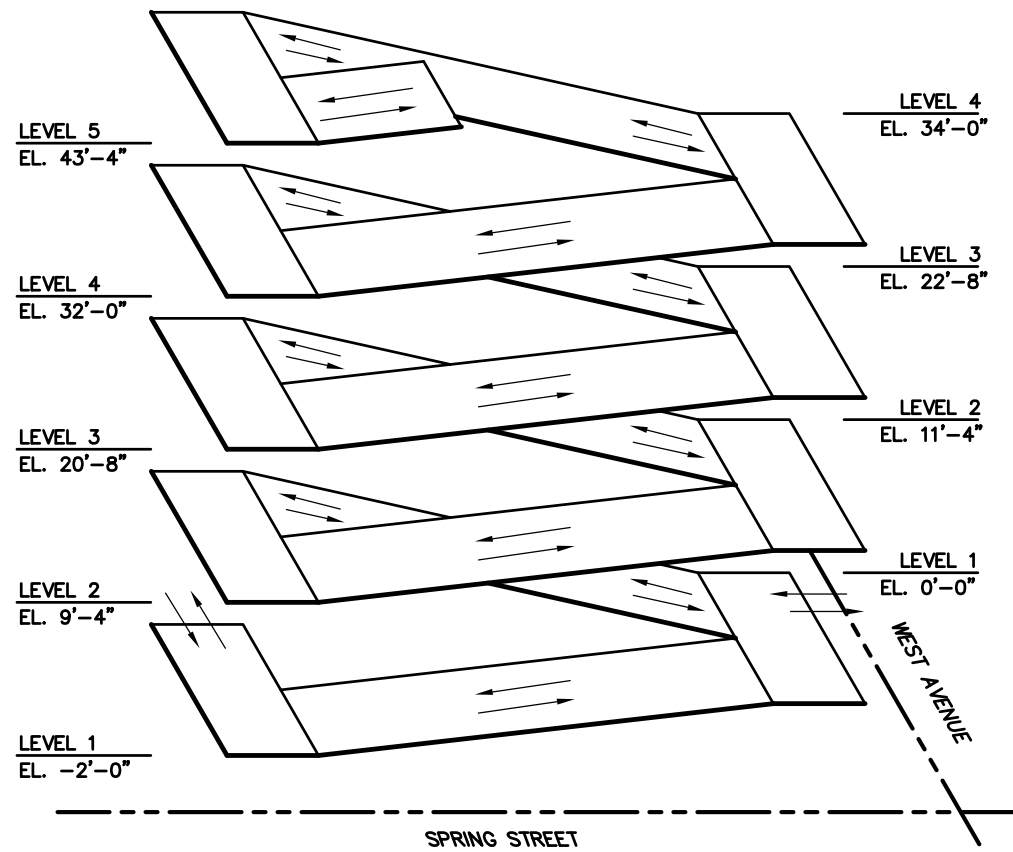
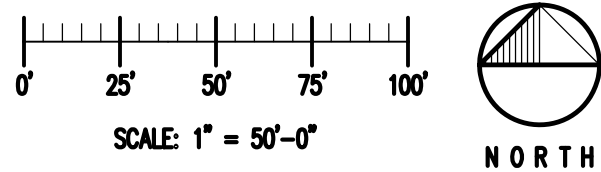
August 2, 2012

WAC Lot Site - Option B.1 - Sheet 2



Site and Level 1 Plan

August 14, 2012

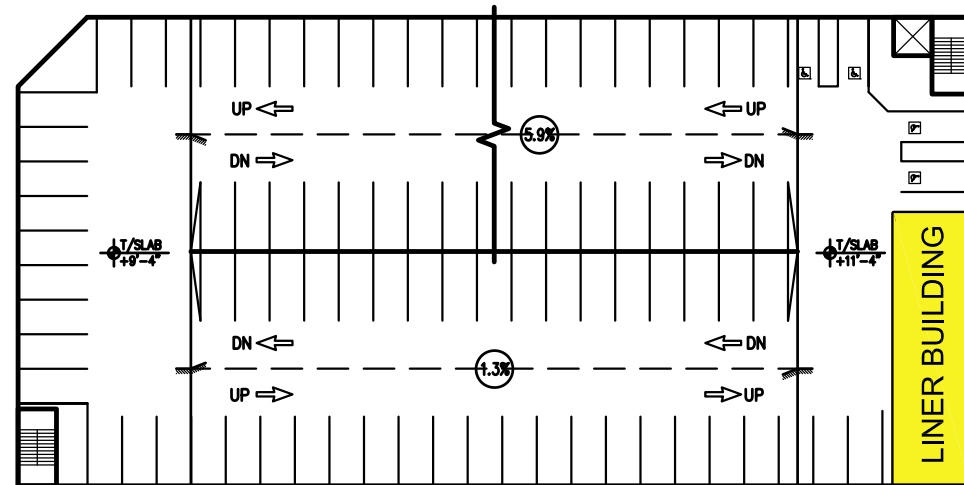


Isometric View

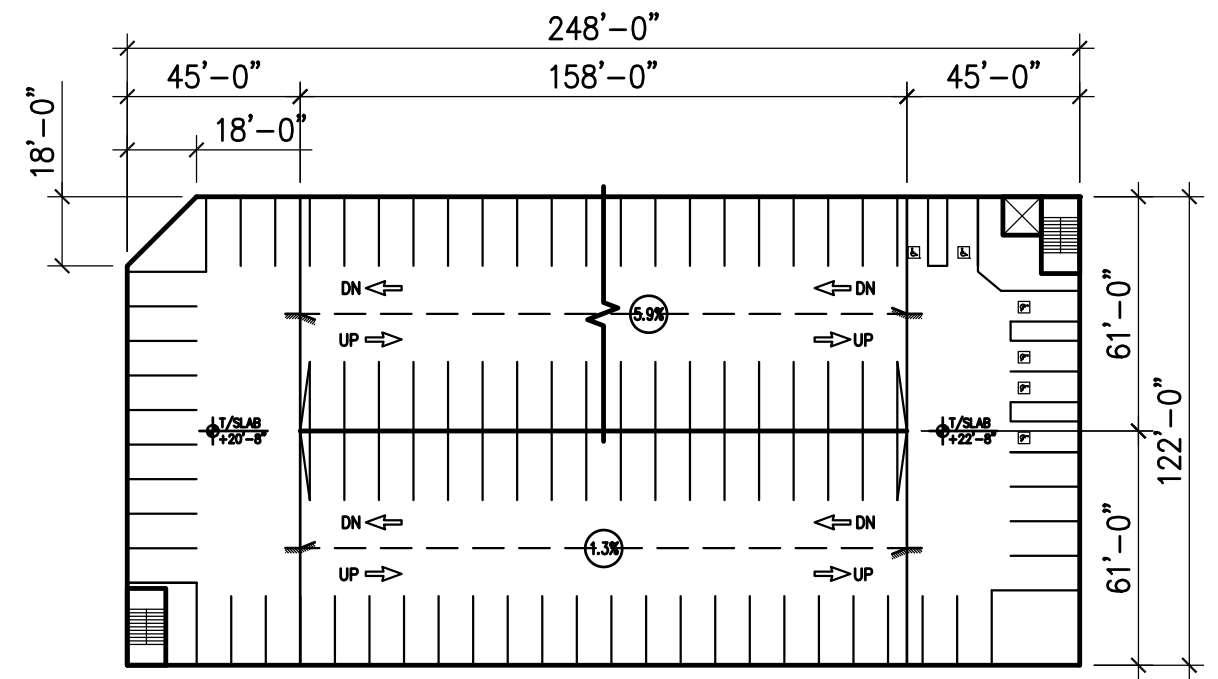
Parking Summary

DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	42	0	0	42
LEVEL 4	98	0	0	98
LEVEL 3	90	0	6	96
LEVEL 2	86	0	4	90
LEVEL 1	69	0	2	71
GARAGE TOTAL	385	0	12	397
NEW SURFACE LOT	30	0	0	30
SPACES LOST	126	0	0	126
NET GAIN	289	0	12	301

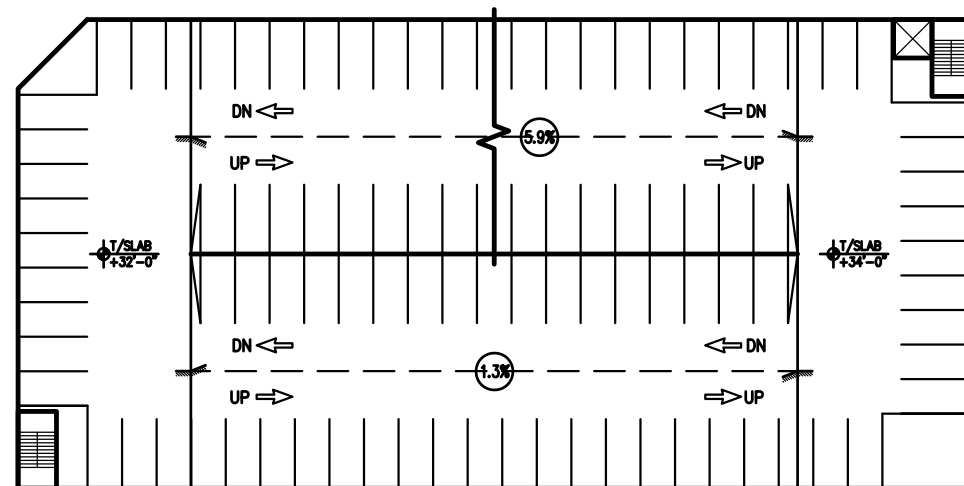
WAC Lot Site - Option B.2 - Sheet 1



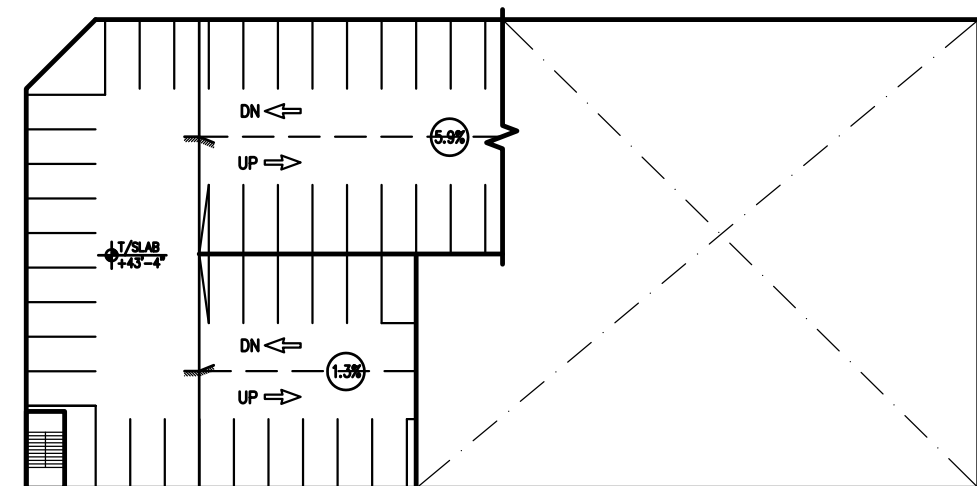
Level 2 Plan



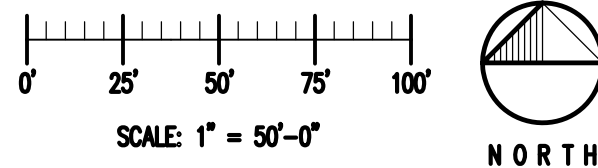
Level 3 Plan



Level 4 Plan

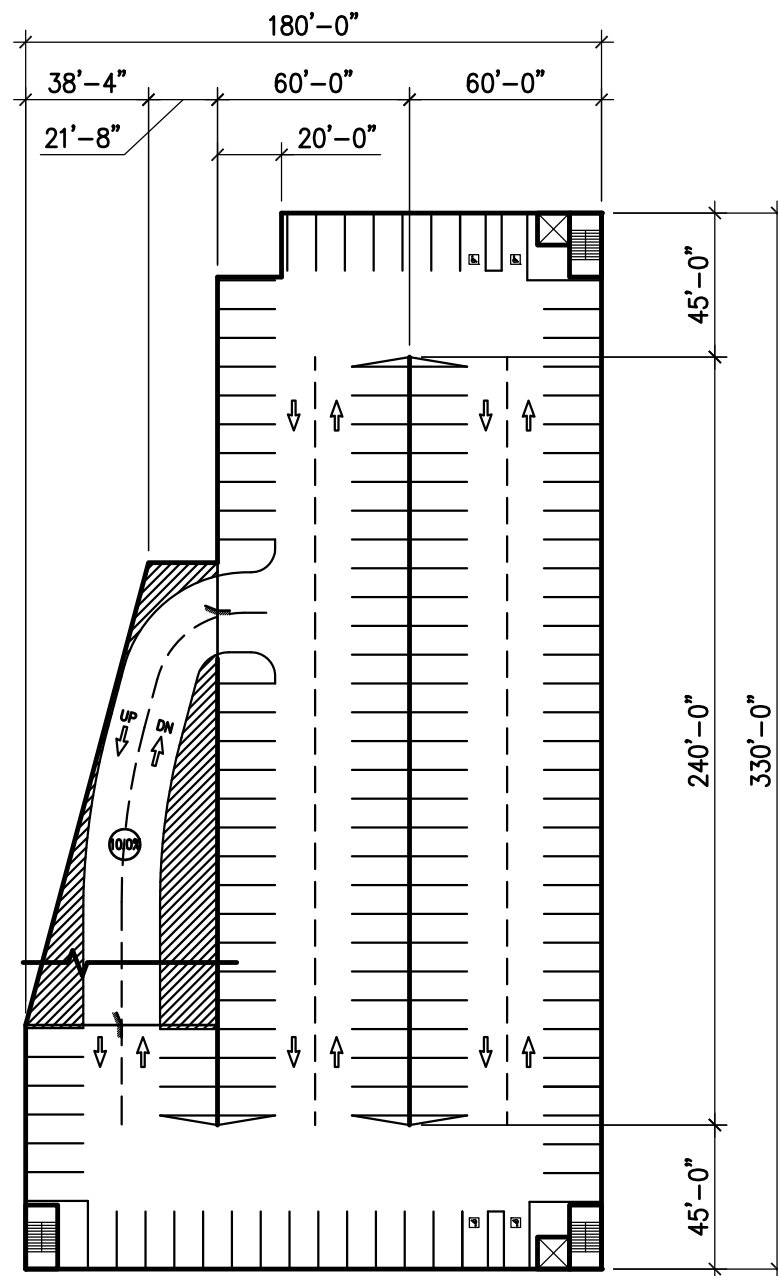


Level 5 Plan

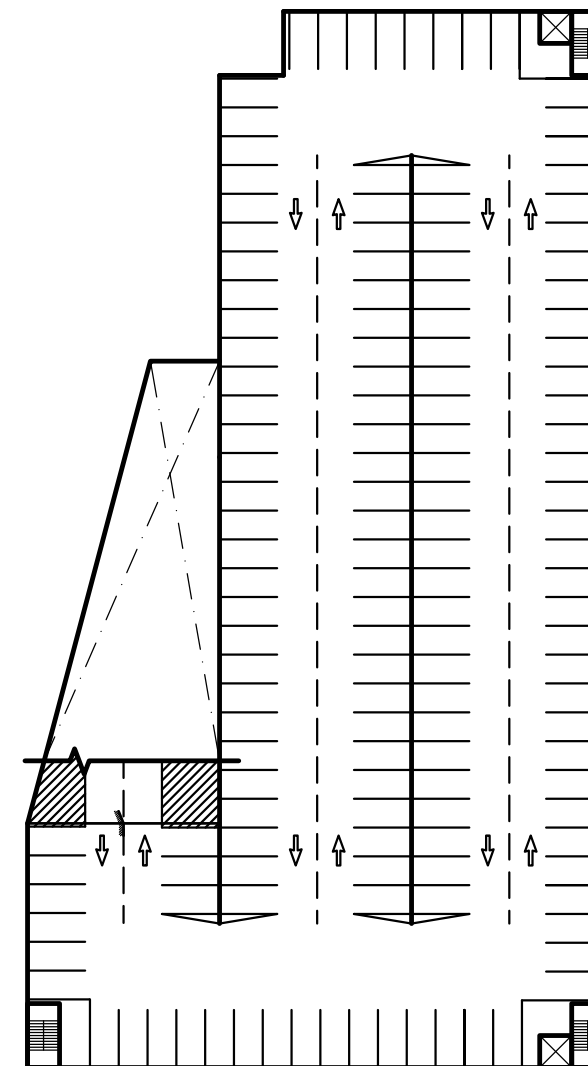


August 14, 2012

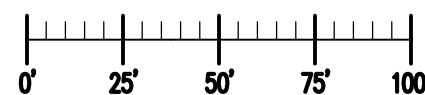
WAC Lot Site - Option B.2 - Sheet 2



Level 2 & 3 Plan



Level 4 Plan



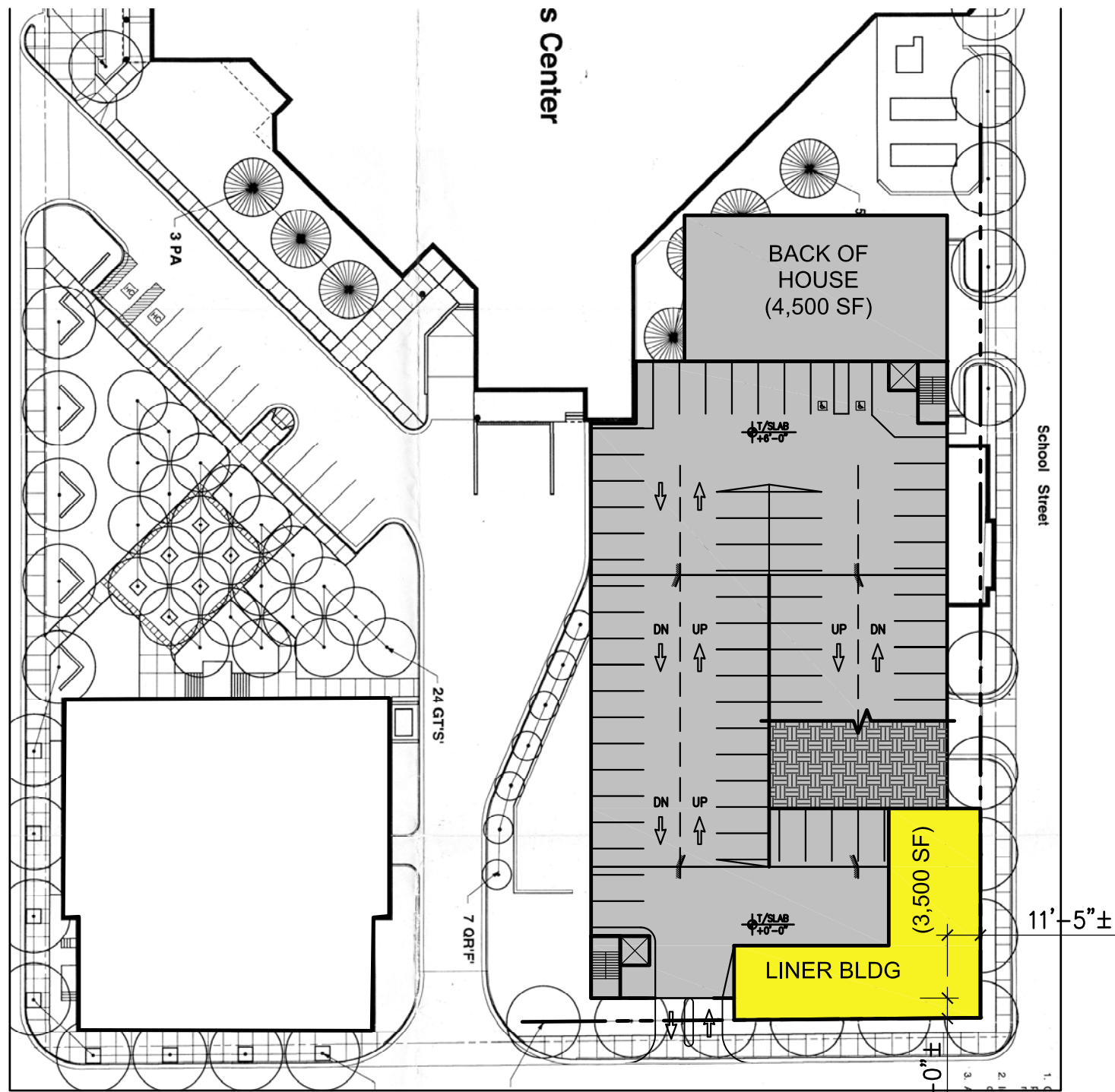
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NORTH

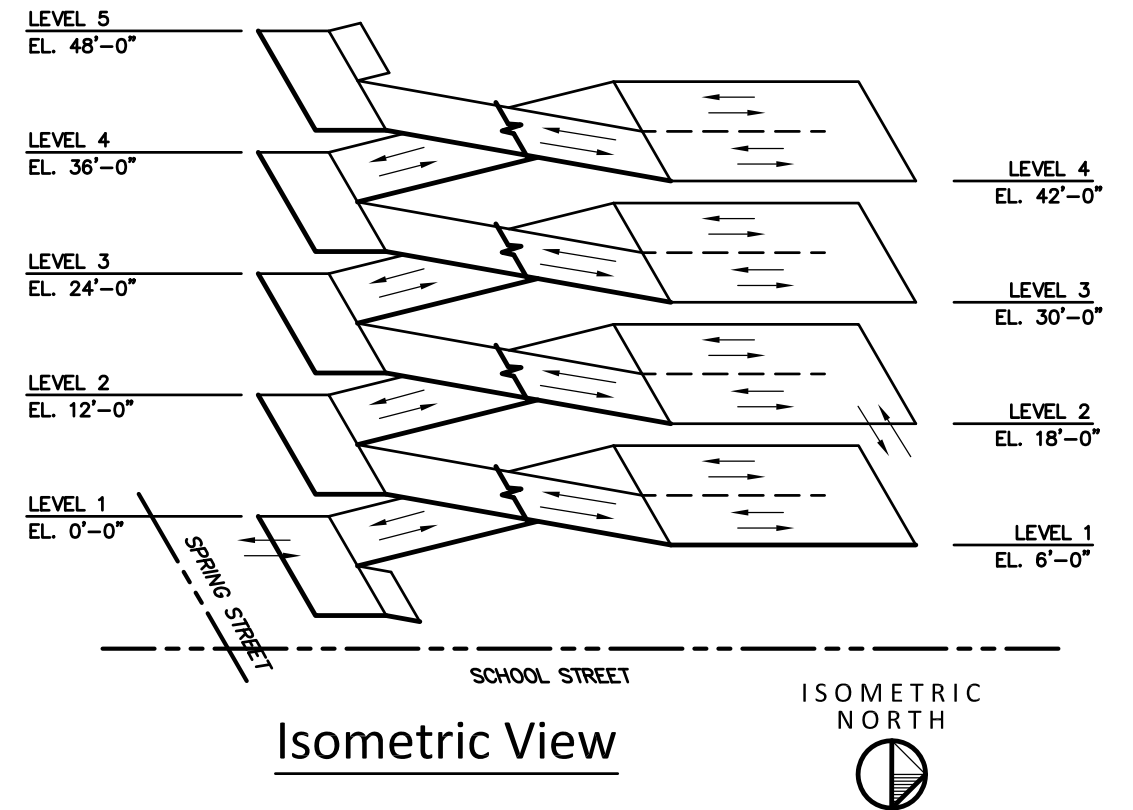
May 21, 2012

WAC Lot Site - Option C - Sheet 2



Site and Level 1 Plan

August 14, 2012



Isometric View

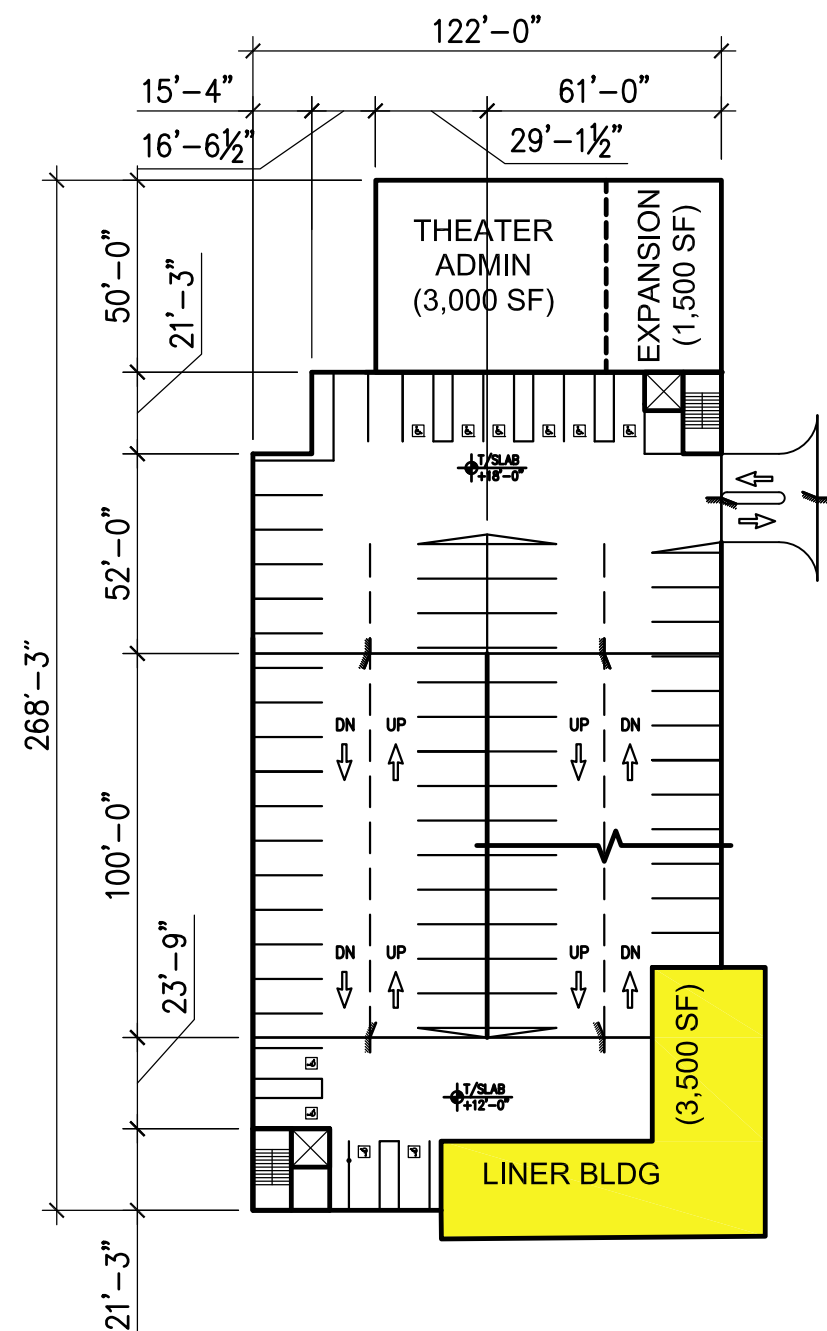
Parking Summary				
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	28	0	0	28
LEVEL 4	84	0	0	84
LEVEL 3	84	0	0	84
LEVEL 2	59	0	10	69
LEVEL 1	63	0	2	65
GARAGE TOTAL	318	0	12	330
SPACES LOST	28	0	0	28
NET GAIN	290	0	12	302

Theater Site - Recommended Option - Sheet 1

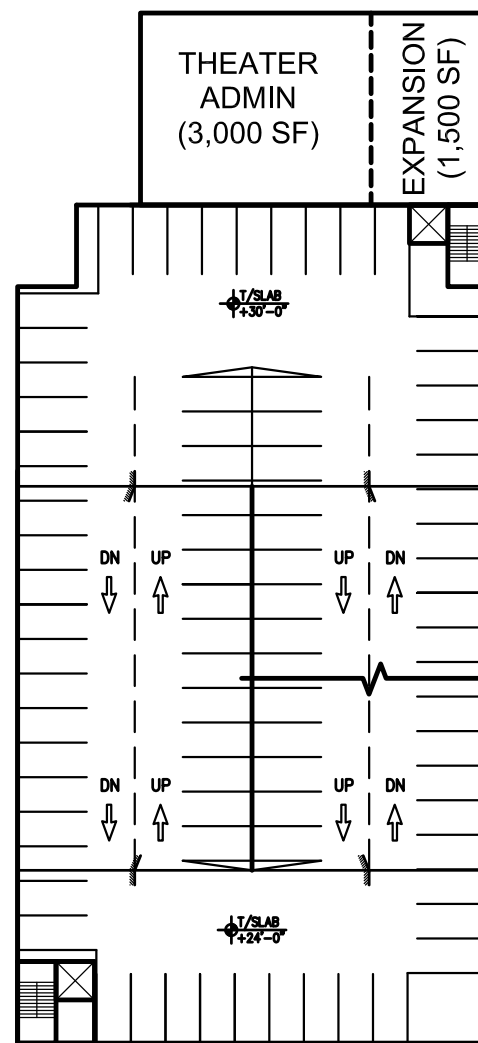
City of Fayetteville Parking Structure

Exhibit C18

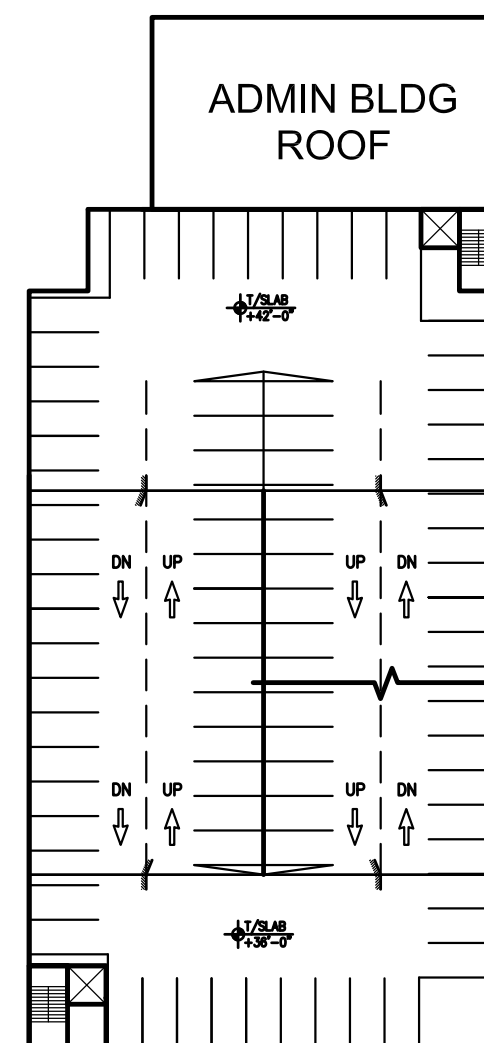
Site Selection Study
Fayetteville, Arkansas



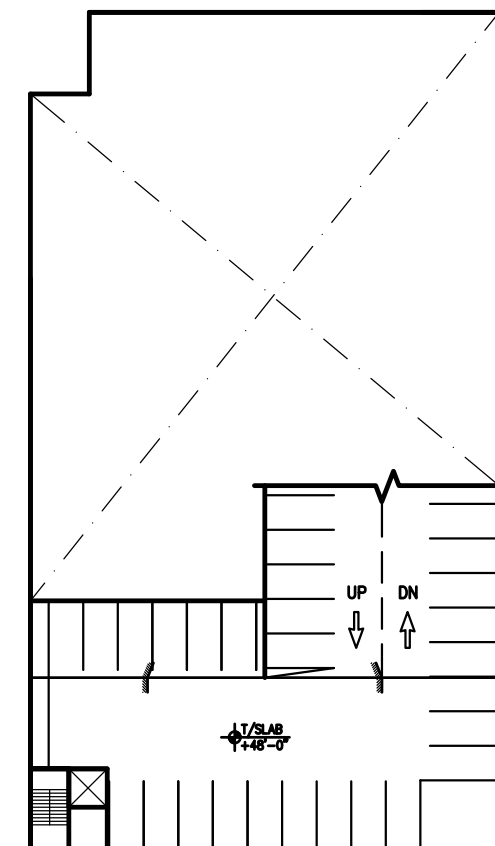
Level 2 Plan



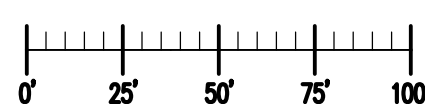
Level 3 Plan



Level 4 Plan



Level 5 Plan

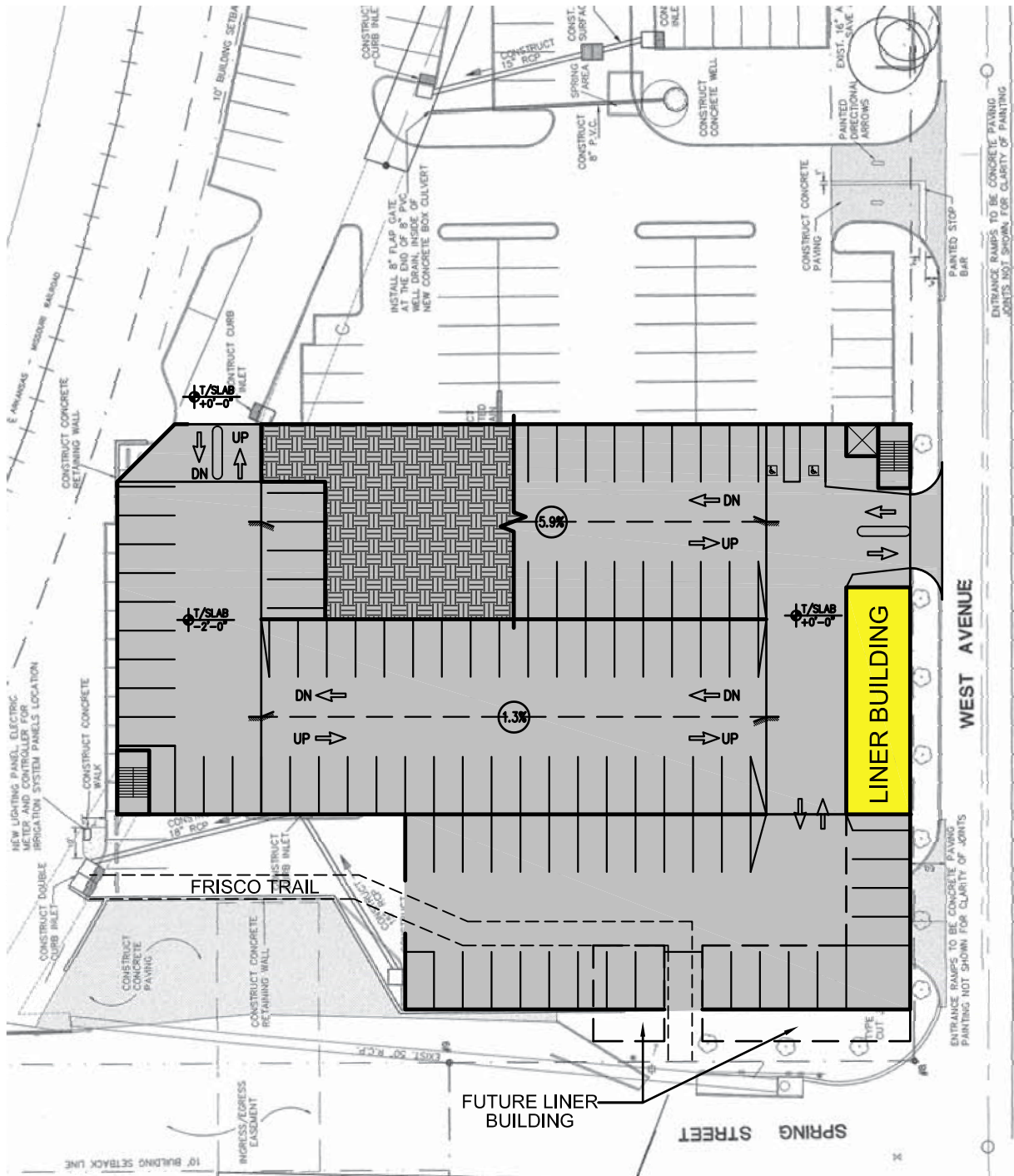


SCALE: 1" = 50'-0"

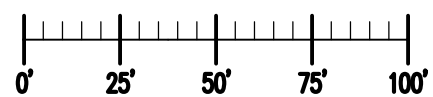


August 14, 2012

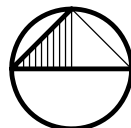
Theater Site -Recommended Option - Sheet 2



Site and Level 1 Plan



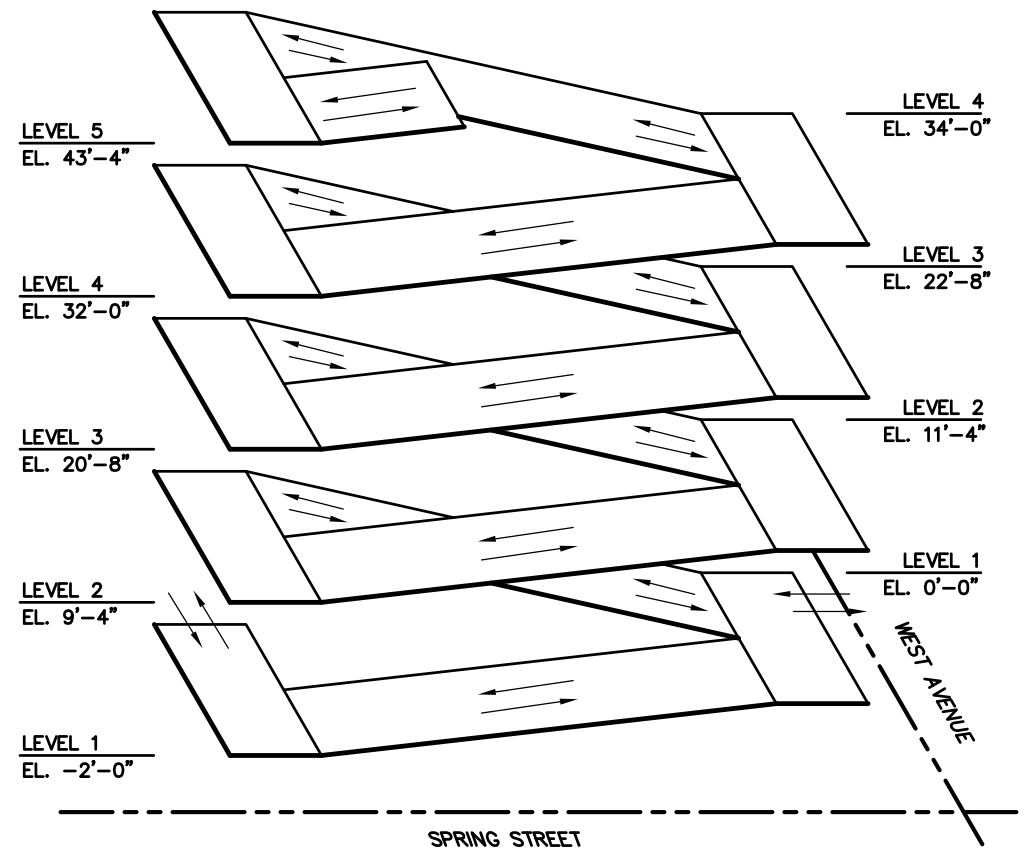
SCALE: 1" = 50'-0"



NORTH

August 14, 2012

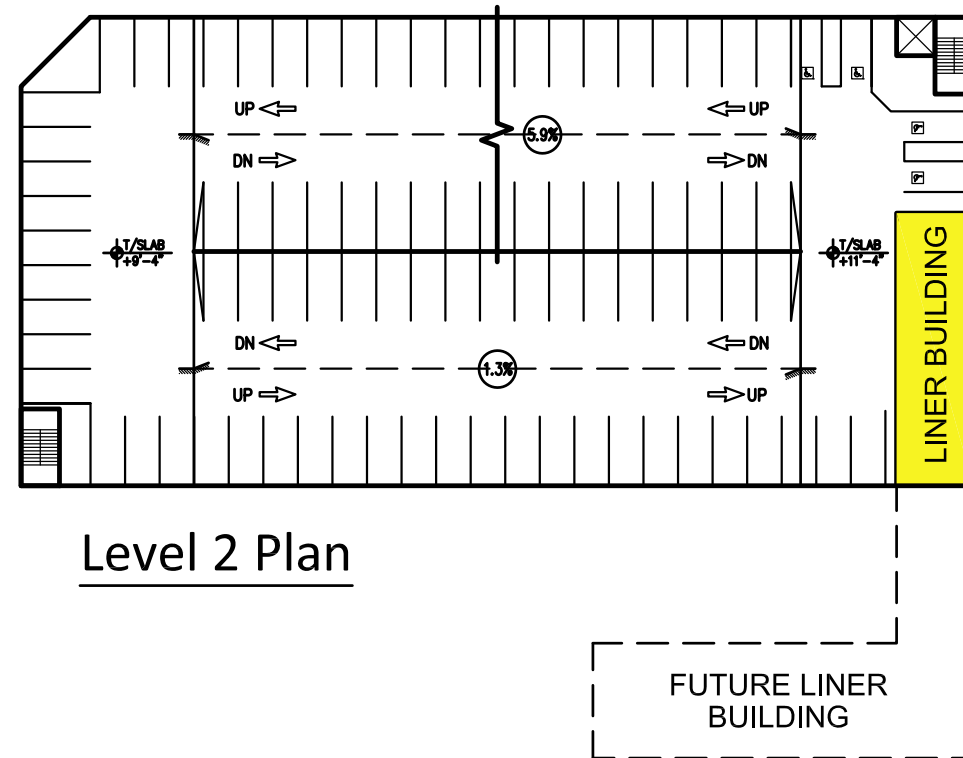
WAC Lot Site Recommended Option - Sheet 1



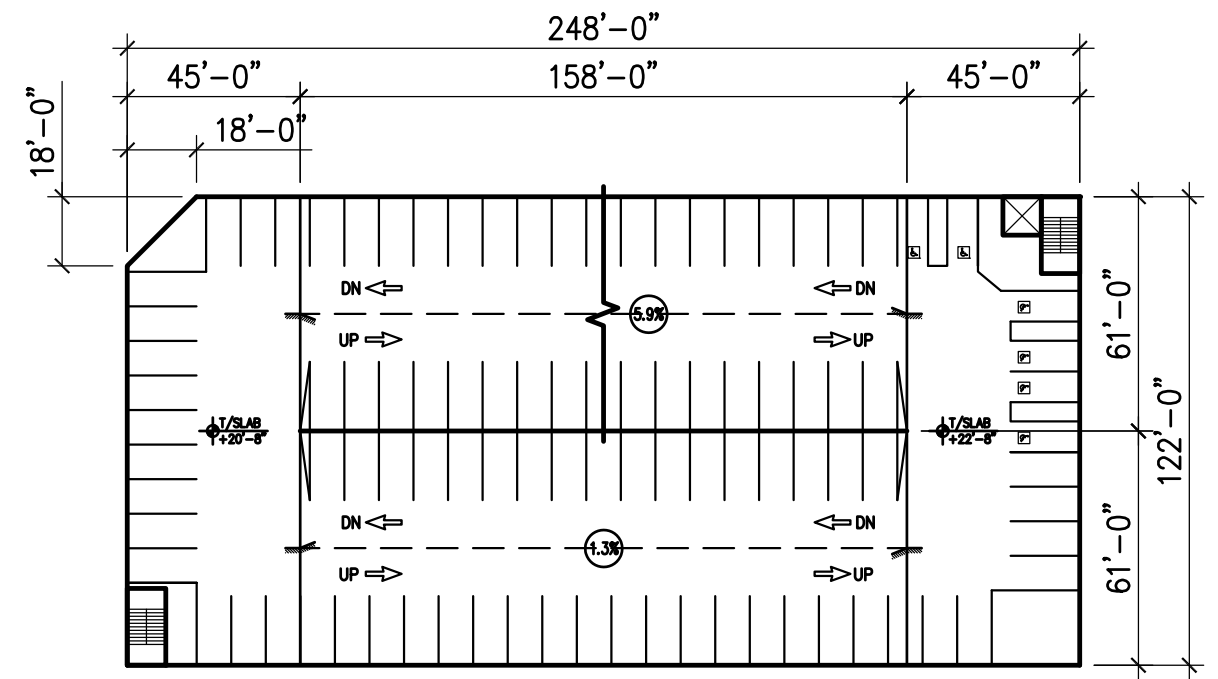
Isometric View

Parking Summary

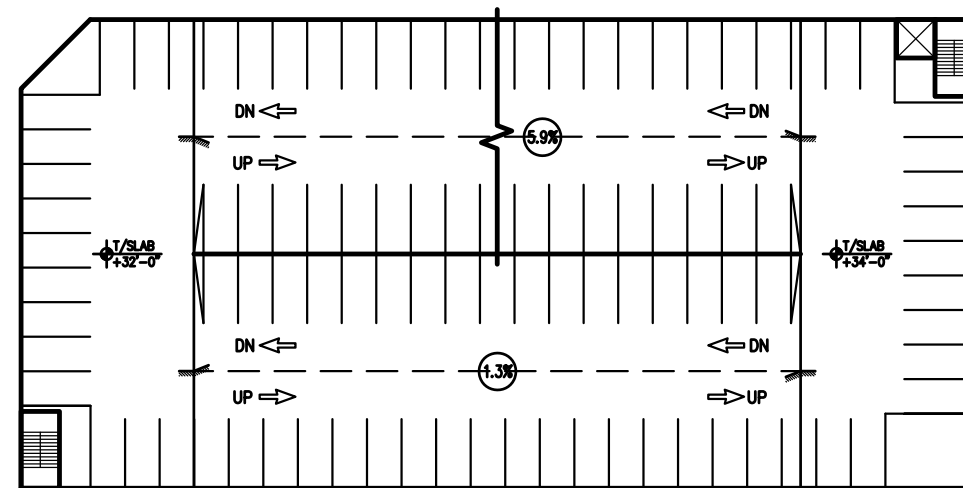
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 5	44	0	0	44
LEVEL 4	98	0	0	98
LEVEL 3	90	0	6	96
LEVEL 2	86	0	4	90
LEVEL 1	68	0	2	70
GARAGE TOTAL	386	0	12	398
NEW SURFACE LOT	29	0	0	29
SPACES LOST	126	0	0	126
NET GAIN	289	0	12	301



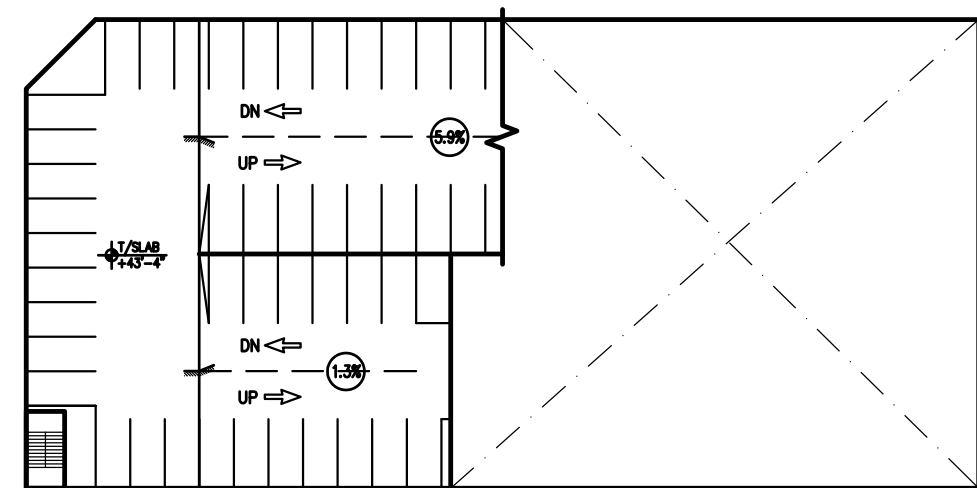
Level 2 Plan



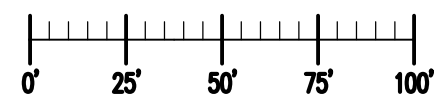
Level 3 Plan



Level 4 Plan



Level 5 Plan

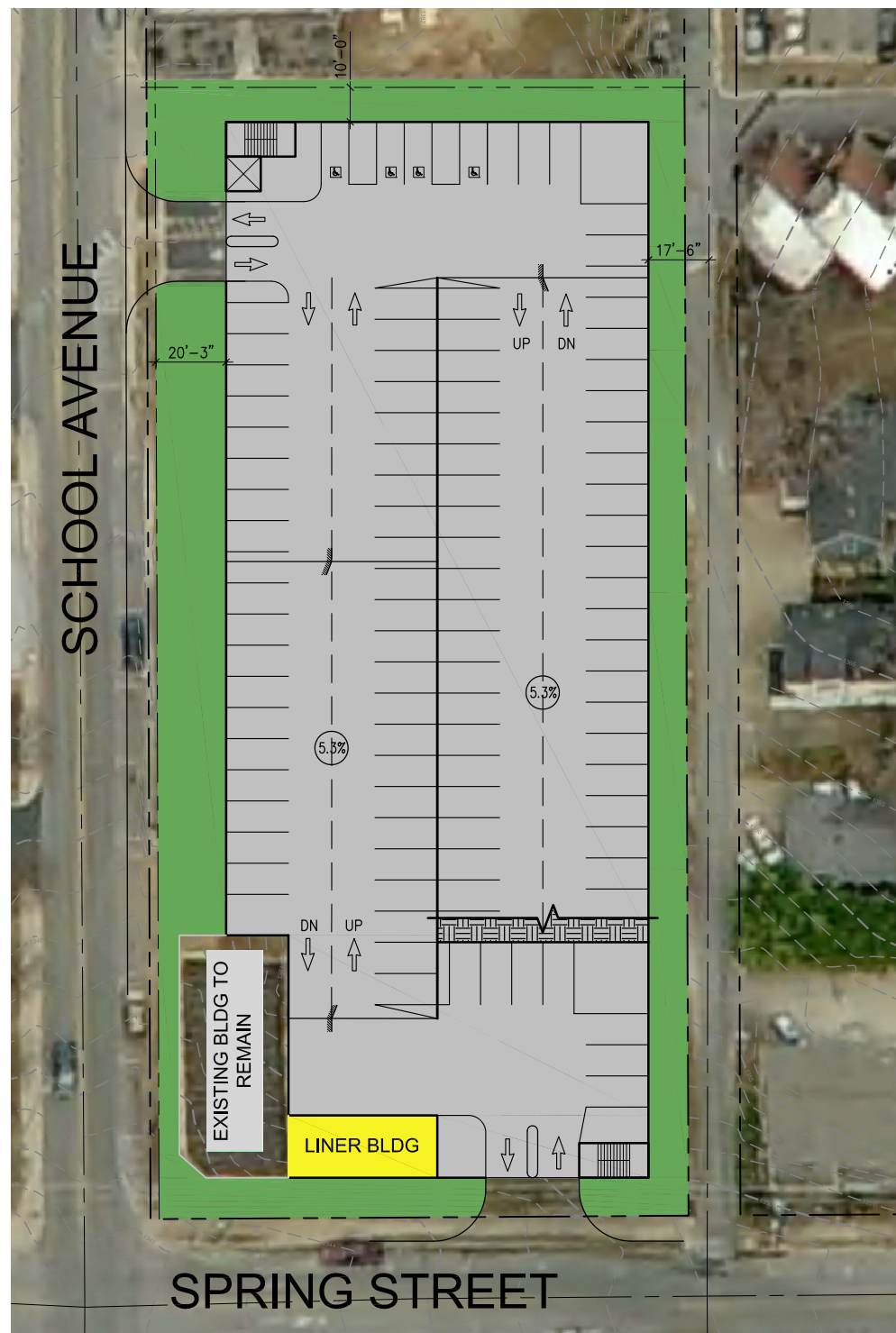


SCALE: 1" = 50'-0"

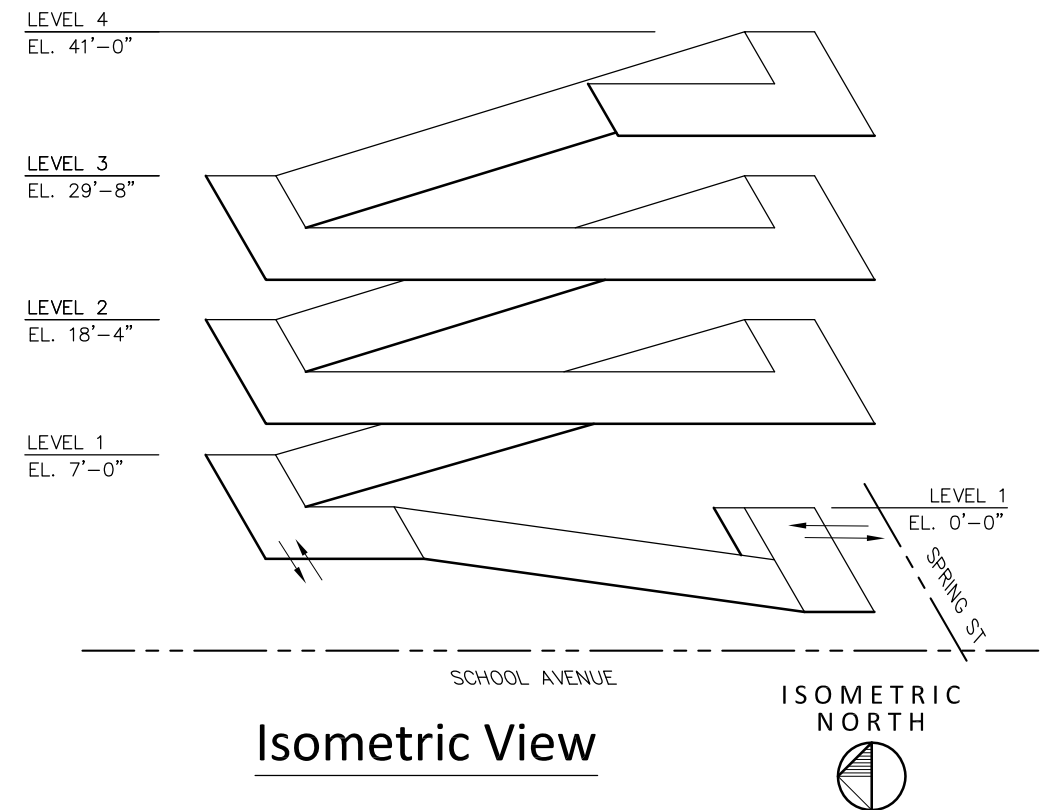


August 14, 2012

WAC Lot Site Recommended Option - Sheet 2



Site and Level 1 Plan



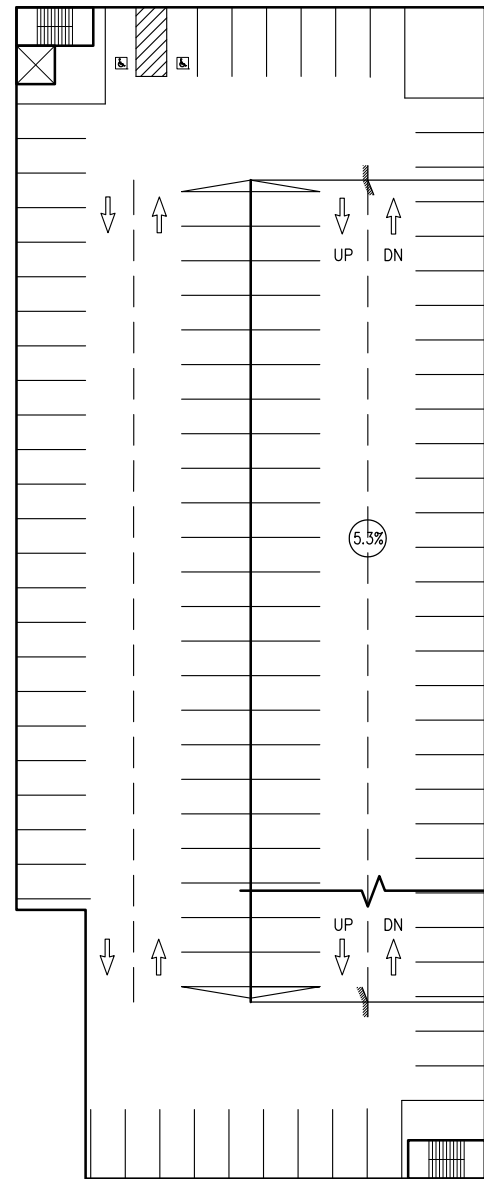
Isometric View

Parking Summary

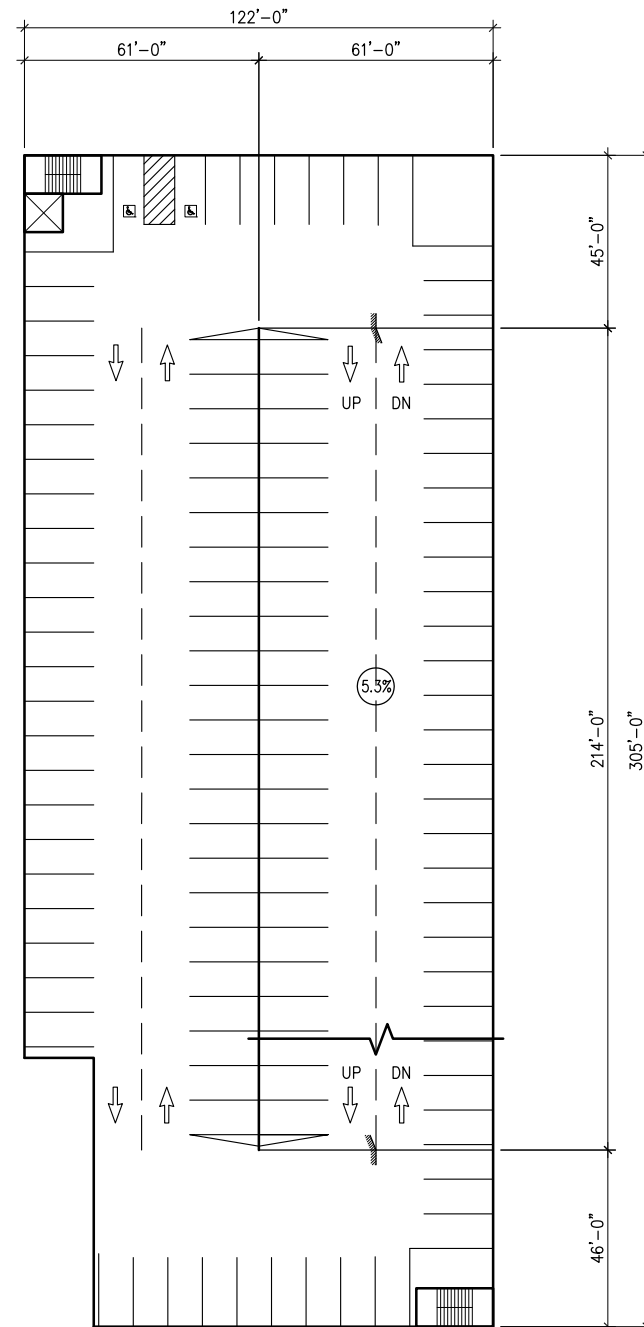
DESCRIPTION	STANDARD	SMALL CAR	ADA	TOTAL
LEVEL 4	33	0	0	33
LEVEL 3	113	0	2	115
LEVEL 2	113	0	2	115
LEVEL 1	96	0	4	100
GARAGE TOTAL	355	0	8	363
SPACES LOST	60	0	0	60
NET GAIN	295	0	8	303

October 30, 2012

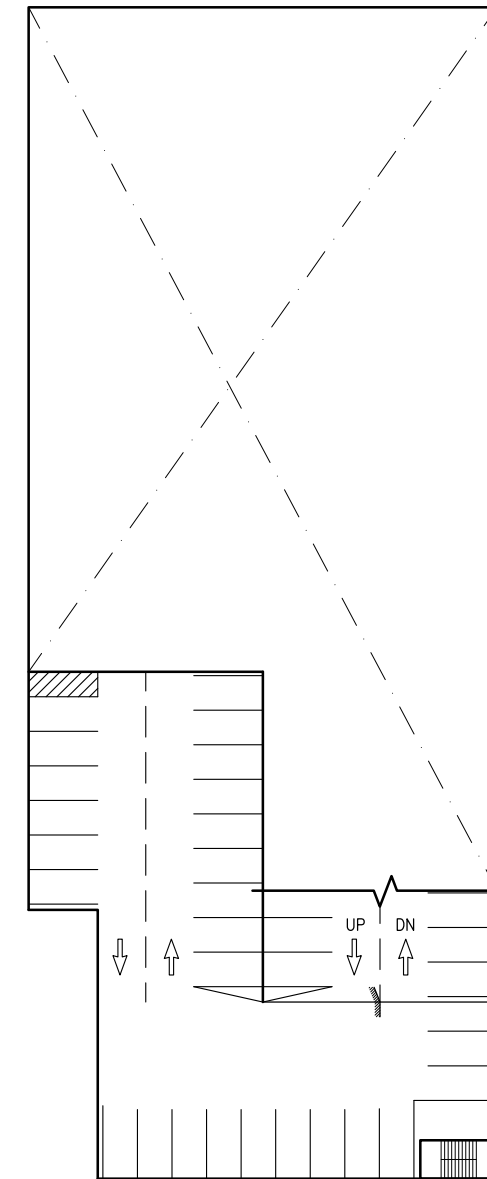
School Avenue/East Site - Recommended Option - Sheet 1



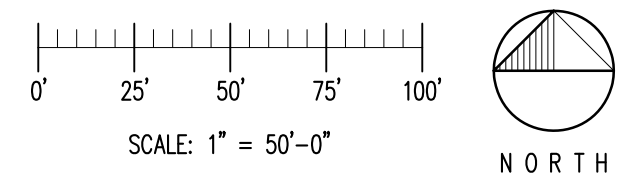
Level 2 Plan



Level 3 Plan



Level 4 Plan



October 30, 2012

School Avenue/East Site - Recommended Option - Sheet 2

APPENDIX D

Detailed Cost Breakdown

City of Fayetteville Downtown Parking Structure
Fayetteville, Arkansas

Site Selection Phase

November 16, 2012

OPINION OF PROBABLE CONSTRUCTION COST -

Bare Bones/Meets Planning Requirements - Net 300 Car Min.

WORK ITEM	UNIT	UNIT COST	THEATER SITE		WAC SITE		EAST SITE	
			QUANTITY	TOTAL COST	QUANTITY	TOTAL COST	QUANTITY	TOTAL COST
Site Demolition	Allowance	\$ -	1	\$ 25,000	1	\$ 25,000	1	\$ 40,000
Water Utilities Upgrades	Allowance	\$ -	1	\$ 133,000	1	\$ 166,000	1	\$ 100,000
Site Utilities Relocations	Allowance	\$ -	1	\$ 265,000	1	\$ 30,000	1	\$ 250,000
Double Barrel 6'X6' RCB Relocation	LF	\$ 185.00	0	\$ -	500	\$ 92,500	0	\$ -
Streetscape (C&G, Trees & Grates, Sidewalk, Irrigation)	LF	\$ 100.00	440	\$ 44,000	200	\$ 20,000	490	\$ 49,000
Stormwater Control Devices	Allowance	\$ -	1	\$ 30,000	1	\$ 15,000	1	\$ 25,000
Driveways	SY	\$ 40.00	50	\$ 2,000	50	\$ 2,000	50	\$ 2,000
Surface Lot Restoration	Allowance	\$ -	0	\$ -	1	\$ 30,000	0	\$ -
Bulk Excavation	CY	\$ 10.00	12,000	\$ 120,000	0	\$ -	8,000	\$ 80,000
Backfill/Compaction	CY	\$ 7.75	500	\$ 3,875	1,000	\$ 7,750	500	\$ 3,900
Glass at Stair Tower	SF	\$ 65.00	0	\$ -	0	\$ -	0	\$ -
Rails at Stair Tower	LF	\$ 100.00	140	\$ 14,000	310	\$ 31,000	400	\$ 40,000
Rails to replace glass panels	LF	\$ 100.00	235	\$ 23,500	0	\$ -	165	\$ 16,500
Display windows (formerly green screen)	SF	\$ 45.00	1,440	\$ 64,800	0	\$ -	1,715	\$ 77,200
Skin Finish Cementitious Coating outside face only	SF	\$ 7.00	5,100	\$ 35,700	6,500	\$ 45,500	8,500	\$ 59,500
Display windows to replace lower liner buildings	SF	\$ 45.00	800	\$ 36,000	1,000	\$ 45,000	675	\$ 30,400
Display windows to replace upper liner buildings	SF	\$ 45.00	600	\$ 27,000	0	\$ -	0	\$ -
Purchase of South Properties	Allowance	\$ -	0	\$ -	0	\$ -	1	\$ 800,000
WAC Administration Building	SF	\$ 140.00	6,000	\$ 840,000	0	\$ -	0	\$ -
WAC Administration Stairs	SF	\$ 80.00	400	\$ 32,000	0	\$ -	0	\$ -
Elevator	Per Landing	\$ 22,000.00	4	\$ 88,000	4	\$ 88,000	3	\$ 66,000
Foundation Concrete - Driller Piers & Caps	CY	\$ 223.30	450	\$ 100,500	0	\$ -	630	\$ 140,700
Foundation Concrete - Pile Caps	CY	\$ 217.80	0	\$ -	130	\$ 28,400	0	\$ -
Foundations - Micro Piles	Each	\$ 10,500.00	0	\$ -	35	\$ 367,500	0	\$ -
Foundation Concrete - Grade Bms	CY	\$ 217.80	125	\$ 27,300	175	\$ 38,200	175	\$ 38,200
Retaining walls	CY	\$ 423.50	890	\$ 377,000	195	\$ 82,600	240	\$ 101,700
Slab on grade & Subbase	SF	\$ 4.13	28,970	\$ 119,600	25,995	\$ 107,300	37,210	\$ 153,500
CIP Concrete Pour strips	SF	\$ 3.41	1,464	\$ 5,000	1,281	\$ 4,400	0	\$ -
CIP P/T Concrete Superstructure	SF	\$ 24.20	88,660	\$ 2,145,600	104,272	\$ 2,523,400	85,217	\$ 2,062,300
CIP Concrete Stair Risers + Landings	Flight	\$ 4,180.00	14	\$ 58,600	14	\$ 58,600	12	\$ 50,200
Structural steel	TN	\$ 2,750.00	20	\$ 55,000	20	\$ 55,000	20	\$ 55,000

City of Fayetteville Downtown Parking Structure
Fayetteville, Arkansas

Site Selection Phase

November 16, 2012

OPINION OF PROBABLE CONSTRUCTION COST -

Bare Bones/Meets Planning Requirements - Net 300 Car Min.

WORK ITEM	UNIT	UNIT COST	THEATER SITE		WAC SITE		EAST SITE	
			QUANTITY	TOTAL COST	QUANTITY	TOTAL COST	QUANTITY	TOTAL COST
Pipe bollards - concrete filled	Each	\$ 275.00	98	\$ 27,000	98	\$ 27,000	98	\$ 27,000
Barrier cable (5, 1/2" cables & fence)	LF	\$ 14.03	800	\$ 11,300	1,329	\$ 18,700	1,135	\$ 16,000
Barrier cable (11, 1/2" cables w/o fence)	LF	\$ 25.00	2,227	\$ 55,700	2,590	\$ 64,800	1,590	\$ 39,800
CIP Bumper Walls	CY	\$ 302.50	20	\$ 6,100	76	\$ 23,000	55	\$ 16,700
Miscellaneous Steel	Allowance	\$ 7,700.00	1	\$ 7,700	1	\$ 7,700	1	\$ 7,700
Expansion joints - traffic	LF	\$ 93.50	290	\$ 27,200	161	\$ 15,100	475	\$ 44,500
40% Silane Concrete sealer	SF	\$ 0.55	26,300	\$ 14,500	30,094	\$ 16,600	37,210	\$ 20,500
Sealants	LF	\$ 2.75	8,500	\$ 23,400	9,070	\$ 25,000	8,524	\$ 23,500
Traffic Bearing Waterproofing Membrane	SF	\$ 4.13	5,025	\$ 20,800	3,525	\$ 14,600	3,500	\$ 14,500
Parking Control Equipment	Allowance	\$ 231,000.00	1	\$ 231,000	1	\$ 231,000	1	\$ 231,000
Unit Masonry Walls (interior partition)	SF	\$ 13.20	8,470	\$ 111,900	4,050	\$ 53,500	3,750	\$ 49,500
Striping	CAR	\$ 19.80	330	\$ 6,600	427	\$ 8,500	363	\$ 7,200
Signage	CAR	\$ 71.50	330	\$ 23,600	427	\$ 30,600	363	\$ 26,000
Parking Garage Mechanical - Plumbing, Fire Protection	SF	\$ 1.38	113,130	\$ 156,000	130,267	\$ 180,000	122,427	\$ 168,400
Parking Garage Electrical	SF	\$ 1.65	113,130	\$ 187,000	130,267	\$ 215,000	122,427	\$ 202,100
	SUBTOTAL			\$ 5,582,275		\$ 4,794,250		\$ 5,135,500
	CONTINGENCY (10%)			\$ 558,725		\$ 479,750		\$ 514,500
	TOTAL			\$ 6,141,000		\$ 5,274,000		\$ 5,650,000

This Opinion of Probable Construction Cost is approximate. Actual construction bids may vary significantly from this Opinion of Probable Construction Cost due to timing of construction, market conditions, labor rate changes, or other factors beyond the control of the estimators.

City of Fayetteville Downtown Parking Structure Fayetteville, Arkansas

Site Selection Phase

November 16, 2012

OPINION OF PROBABLE CONSTRUCTION COST

THEATER SITE (Bare Bones - 302 Car Net Gain) 330 cars	
Opinion of Probable Construction Cost - Conceptual	\$ 6,141,000
Estimated Design / Construction Management	\$ 700,000
Total Direct Costs	\$ 6,841,000

Deducted \$15,703 per car (Based on Construction Cost above / Does not include constructing new Walton Arts Center Administration Building)

THEATER SITE (Bare Bones - 218 Car Net Gain) 246 cars	
Total Direct Costs	\$ 5,521,948
<i>Cost per Space:</i>	<i>\$ 22,447</i>

Liner buildings only (no storage)	
3000 SF x \$66	\$ 198,000
Deduct lower display windows	\$ (36,000)
Deduct upper display windows	\$ (27,000)
Subtotal Additional Direct Costs	\$ 135,000
Estimated Contingency	\$ 14,000
Total Liner building	\$ 149,000
Total Direct Costs	\$ 5,670,948
<i>Cost per Space:</i>	<i>\$ 23,053</i>

Skin, Main facades only, open stairs, liner building	
South 2,685 x \$50	\$ 134,250
East 2,300 x \$50	\$ 115,000
Deduct barebone finish 2,270 x \$7	\$ (15,890)
Subtotal Additional Direct Costs	\$ 233,360
Estimated Contingency	\$ 23,640
Total facade	\$ 257,000
Total Direct Costs	\$ 5,927,948
<i>Cost per Space:</i>	<i>\$ 24,097</i>

Add Skin to West Face	
Screen 3,300 SF x \$50	\$ 165,000
Glass at stairs 1230 SF x \$55	\$ 67,650
Deduct barebone finish 1,150 x \$7	\$ (8,050)
Subtotal Additional Direct Costs	\$ 224,600
Estimated Contingency	\$ 23,400
Total facade	\$ 248,000
Total Direct Costs	\$ 6,175,948
<i>Cost per Space:</i>	<i>\$ 25,105</i>

Indirect Costs:	
WAC Moving Expenses (x2)	\$ 10,000
WAC Office Rental (Temp. 1 yr. @ 6,000 SF)	\$ 100,000
Loss of Parking Revenue, WAC Staff Parking (Temp. 1 yr., 28 spaces at \$4.32/day)	\$ 44,200
Loss of Parking Revenue - Temporary Staging Area for Construction (Temp. 1 yr., 25 spaces at \$4.32/day)	\$ 39,500
Total Indirect Costs:	\$ 193,700
Total Comparison Cost:	\$ 6,369,648
<i>Total Cost per Space:</i>	<i>\$ 25,893</i>

WAC SITE (Bare Bones - 301 Car Net Gain) 398 cars	
Opinion of Probable Construction Cost - Conceptual	\$ 5,274,000
Estimated Design / Construction Management	\$ 600,000
Total Direct Costs	\$ 5,874,000

Deducted \$13,251 per car (Based on Construction Cost above)

WAC SITE (Bare Bones - 242 Car Net Gain) 339 cars	
Total Direct Costs	\$ 5,092,191
<i>Cost per Space:</i>	<i>\$ 15,021</i>

Liner buildings only (no storage) 2-story liner	
3000 SF x \$66	\$ 198,000
Deduct lower display windows	\$ (45,000)
Deduct upper rails	\$ (8,000)
Subtotal Additional Direct Costs	\$ 145,000
Estimated Contingency	\$ 15,000
Total Liner building	\$ 160,000
Total Direct Costs	\$ 5,252,191
<i>Cost per Space:</i>	<i>\$ 15,493</i>

Skin, Main facades only, glass on stairs, 2-story liner	
Glass on stairs on West Avenue 2450x \$55	\$ 134,750
East 2,100 x \$50	\$ 105,000
Deduct barebone finish 740 x \$7	\$ (5,180)
Subtotal Additional Direct Costs	\$ 234,570
Estimated Contingency	\$ 24,430
Total facade	\$ 259,000
Total Direct Costs	\$ 5,511,191
<i>Cost per Space:</i>	<i>\$ 16,257</i>

Add Skins to North and South Face	
Screen south and north 6,160 x2 x \$50	\$ 616,000
Deduct barebone finish 1,490 x \$7	\$ (10,430)
Subtotal Additional Direct Costs	\$ 605,570
Estimated Contingency	\$ 61,430
Total facade	\$ 667,000
Total Direct Costs	\$ 6,178,191
<i>Cost per Space:</i>	<i>\$ 18,225</i>

Indirect Costs:	
Loss of Parking Revenue (Deck Construction Site, Temp. 1 yr., 97 spaces at \$4.32/day)	\$ 153,000
Loss of Parking Revenue - Temporary Staging Area for Construction (Temp. 1 yr., 29 spaces at \$4.32/day)	\$ 46,000
Total Indirect Costs:	\$ 199,000
Total Comparison Cost:	\$ 6,377,191
<i>Total Cost per Space:</i>	<i>\$ 18,812</i>

EAST SITE (Bare Bones - 303 Car Net Gain) 363 cars	
Opinion of Probable Construction Cost - Conceptual	\$ 5,650,000
Estimated Design / Construction Management	\$ 630,000
Total Direct Costs	\$ 6,280,000

Deducted \$13,019 per car ((Based on Construction Cost above / Does not include property purchase or demolition of two residential structures)

EAST SITE (Bare Bones - 233 Car Net Gain) 293 cars	
Total Direct Costs	\$ 5,368,670
<i>Cost per Space:</i>	<i>\$ 18,323</i>

Liner buildings only (no storage) 1-story liner + Bike shop	
600 SF x 66	\$ 39,600
Bike shop renovation 2,400 SF X \$30	\$ 72,000
Deduct Display windows	\$ (14,000)
Subtotal Additional Direct Costs	\$ 97,600
Estimated Contingency	\$ 10,400
Total Liner building	\$ 108,000
Total Direct Costs	\$ 5,476,670
<i>Cost per Space:</i>	<i>\$ 18,692</i>

Skin, Main facades only, glass on stairs	
Glass on West stairs 1125x \$55	\$ 61,875
Screen south and west 4185 SF x \$50	\$ 209,250
Deduct barebone finish 1500 SF x \$7	\$ (10,500)
Subtotal Additional Direct Costs	\$ 260,625
Estimated Contingency	\$ 26,375
Total facade	\$ 287,000
Total Direct Costs	\$ 5,763,670
<i>Cost per Space:</i>	<i>\$ 19,671</i>

Add Skins to East and North Face	
Screens east and north 7340 SF x \$50	\$ 367,000
Deduct barebone finish 2240 SF x \$7	\$ (15,680)
Subtotal Additional Direct Costs	\$ 351,320
Estimated Contingency	\$ 35,680
Total facade	\$ 387,000
Total Direct Costs	\$ 6,150,670
<i>Cost per Space:</i>	<i>\$ 20,992</i>

Indirect Costs:	
Loss of Parking Revenue (Deck Construction Site, Temp. 1 yr., 60 spaces at \$4.32/day)	\$ 95,000
Loss of Parking Revenue - Temporary Staging Area for Construction (Temp. 1 yr., 25 spaces at \$4.32/day)	\$ 39,500
Total Indirect Costs:	\$ 134,500
Total Comparison Cost:	\$ 6,285,170
<i>Total Cost per Space:</i>	<i>\$ 21,451</i>

