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13-JUL-12 1235 PM FEE \$1.00 DEP SPY  
REC FOR: OGDEN CITY

## LAND TRANSFER AND DEVELOPMENT AGREEMENT

THIS LAND TRANSFER AND DEVELOPMENT AGREEMENT ("Agreement") is made and entered into by and between the **OGDEN CITY REDEVELOPMENT AGENCY** (the "Agency"), and **SHONIK, LLC**, a Utah limited liability company, or its assigns (the "Developer"). The Agency and the Developer are sometimes individually referred to in this Agreement as a "Party" and sometimes collectively referred to as the "Parties".

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### RECITALS

- A. On or about August 27, 2002, the Agency approved the creation of the Ogden River Redevelopment Project Area ("ORRPA"), approximately a 60 acre area between Washington and Wall, 18<sup>th</sup> and 20<sup>th</sup> streets, Ogden, Utah, for the purpose of creating a mixed-use, mixed income neighborhood in Ogden's downtown district.
- B. On or about June 2006, Ogden City ("City") and/or the Agency purchased, subdivided, and improved approximately 11 acres within the ORRPA known as the Ogden River Drive Subdivision ("Subdivision").
- C. On or about December 2010, the Agency entered into an agreement with Urban Design Associates to develop a Master Plan (as such term is defined hereafter) which pertains to the entire ORRPA.
- D. On or about April 2012, the Agency and Developer entered into negotiations pertaining to the purchase and development of approximately 1.10 acres of real property located within the Subdivision, which is more particularly identified and defined in Exhibit A - Land and Legal Description ("Land").
- E. On or about April 2012, the Agency and a third-party business ("Proposed Tenant") entered into discussions pertaining to the Tenant's desire to lease approximately 10,000 square feet of retail space that could be located upon the Land.
- F. The Agency desires to provide for the redevelopment of the Land in accordance with the elements of the Master Plan, to assist in the establishment of new retail business within the Subdivision by supporting the Proposed Tenant, and maximize any long term financial benefit in connection with such redevelopment.
- G. Pursuant to local ordinance, the Agency has elected to enter into this Agreement with Developer along with certain other property related agreements and documents pertaining to the redevelopment of the Land, as further set forth herein.
- H. Elements of the Master Plan have been incorporated into this Agreement, along with current zoning, and design guidelines.
- I. Developer desires to acquire the Land, construct infrastructure (e.g., utilities, parking) and vertical improvements (i.e. buildings and structures) in phases, and lease these

improvements individually to the Proposed Tenant as well as other separate tenants ("Project").

- J. The purpose of this Agreement is to set forth the terms and conditions under which the Developer will acquire the Land from the Agency and to set forth certain conditions in regards to the redevelopment of the Project.

IN CONSIDERATION of the mutual promises and covenants set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Agency and Developer hereby agree and covenant as follows:

I. GENERAL.

A. Purpose of Agreement; Previous Agreements.

1. Purpose. The purpose of this Agreement is to establish the terms and conditions for the purchase of the Land and the development of the Project as has been set forth in the foregoing Recitals and as is more specifically set forth hereafter. The Agency has determined that the development of the Project in accordance with the terms of this Agreement is in the vital and best interests of the City and provides for the health, safety, morals and welfare of its residents in accordance with appropriate public purposes and the provisions of applicable federal, state and local laws and requirements.

B. Parties to the Agreement.

1. Agency. The Agency is a public body, corporate and politic, exercising governmental functions and powers and organized and existing under Section 17C-1-101 et seq., Limited Purpose Local Government Entities – Community Development and Renewal Agencies, Utah Code Annotated, 1953, formerly known as the Redevelopment Agencies Act (the "Act").

2. Developer. The Developer is ShoniK, LLC, a Utah limited liability company. Developer hereby initially appoints Brad L. Knowlton as the representative of Developer ("Developer's Representative") to represent, speak for and bind Developer in all matters pertaining to this Agreement. Developer shall have the right under this Agreement to identify and designate another party selected by Developer to develop the Project and in such event such party shall become the "Developer" for purposes of this Agreement. Developer may designate such new "Developer" by written notice to Agency, along with a signed written addendum to this Agreement designating the new Developer and properly acknowledging that such party has agreed to be bound by the terms of this Agreement and to fulfill the Developer's obligations hereunder. However, in such event, Developer shall remain jointly and severally liable for the Developer's obligations under this Agreement after such delegation, unless specifically released from its obligations, at the sole discretion of the Agency, which release shall not be unreasonably withheld.

C. Definitions. When used herein, the following terms shall have the meanings set forth below:

1. The Project Plan. "Project Plan" for purposes of this Agreement shall mean the mixed-use project plan established on the Land which has been determined to be consistent with the design standards for the ORRPA. The Project Plan is specifically set forth on Exhibit B – Project Plan. The Project Plan will be divided into two (2) development areas, Phase 1 and Phase 2. "Phase 1" shall include, but is not limited to, one (1) approximately thirteen thousand square foot building, asphalt, curb, gutter, and sidewalk for entire site, landscaping, and all underground utilities required for both Phases. "Phase 2" shall include, but is not limited to, one (1) four to six thousand square foot building, sidewalks, and landscaping. Details of each Phase are more specifically depicted on Exhibit B.

2. Tax Increment. As used in this Agreement, the term "Tax Increment" means the monies which the Agency actually receives from the Project pursuant to the provisions of Subsections 17C-1-404 and 17C-2-204 of the Act, as amended, as a result of the improvements and equipment Developer constructs and installs or causes to be constructed and installed on the Land. The Tax Increment does not include any property tax monies which the Agency may receive from real or personal property within the ORRPA lying outside the geographic boundaries of the Land. The Tax Increment from the Project shall be calculated as prescribed by the Act but is generally calculated as the positive difference between the total "base year" or pre-development ad valorem real property and personal property taxes (the "Property Taxes") in regards to the Project and the post-development Property Taxes for the Project for each year going forward during the Tax Increment Period (as such term is hereinafter defined).

3. Tax Increment Year/Period. The term "Tax Increment Year" means a calendar year beginning January 1 (which is the "tax lien date" when real property is deemed to be assessed for purposes of taxation by the Office of the Weber County Assessor pursuant to law), through and including December 31 of the same calendar year. The term "Tax Increment Period" means the statutory length of time the Taxing Entity Committee (the "TEC") has authorized the Tax Increment Finance Area to exist, including a beginning date and a termination date. For purposes of this Agreement the Tax Increment Period is currently scheduled to end on **December 31, 2027**. The Tax Increment Period may not be extended beyond its current termination date without the approval of the TEC as authorized by Utah State Law.

4. Improvements and Permitted Uses. The "Improvements" shall generally mean those assets and improvements required and approved by local zoning and further authorized by the Master Plan and the Project Plan. If the Project Plan is modified in any material manner by the Developer (or the City) such changes shall be subject to the reasonable approval of the Agency, which approvals shall not be unreasonably withheld, conditioned or delayed. The uses allowed on the Land are limited to uses permitted by the Master Plan and all applicable Federal, State, County and Ogden City laws and ordinances (the "Permitted Uses").

5. Master Plan: The "Master Plan" shall mean the Master Plan and Design Guidelines prepared by the firm Urban Design Associates which have been previously adopted for the ORRPA. The Master Plan may be modified by the consent of the City and Agency, but the Master Plan currently anticipates the location of buildings, roads, parks, amenities, pathways, etc. in the ORRPA. The Master Plan also designates types of buildings allowed in certain areas

of the ORRPA, and provides architectural guidelines that the Developer shall follow in regards to any vertical construction of buildings and structures.

6. Closing: The conveyance by the Agency of ownership of any portion of the Land to Developer and the acceptance of such conveyance by the Developer in accordance with this Agreement. Each such conveyance is referred to as a "**Closing**" for purposes of this Agreement.

7. Closing Date: The business day on which a Closing occurs.

8. Title Company: means EPEK Title, Inc. ("**Title Company**"), its successors and assigned or any other title company mutually approved by the Agency and Developer.

D. Conditions Precedent to Effectiveness of Agreement. This Agreement, shall not take effect until

(i) This Agreement has been executed by the Agency and the Developer; and

(ii) This Agreement has been approved by the governing board of the Agency; and

(iii) The Project Plan has been approved by Ogden City.

Agency shall promptly notify the Developer in writing as to date on which all of the foregoing conditions precedent have been satisfied and such date shall become the "**Effective Date**" of this Agreement.

E. Representations of the Agency. The Agency represents to Developer as follows:

1. Title: The Agency presently has and will convey to Developer good and marketable title to all property within the Project Area upon the terms and at such times as are provided herein.

2. Availability of Tax Revenues. Prior to the Effective Date, the Agency has created a Tax Increment Finance District and is entitled to collect the Tax Increment related to the Project Area.

3. Environmental. To the Agency's best knowledge, the Agency has delivered copies, or has otherwise made available to Developer, any environmental documents in the Agency's control or possession associated with the Project Area.

4. Broker. The Agency has not authorized any broker or finder to act on its behalf in connection with the transactions contemplated herein and it has not dealt with any broker or finder purporting to act on behalf of any other party.

5. Compliance with Laws. The Agency represents to Developer that the Agency is a duly authorized Redevelopment Agency under the laws of the State of Utah. The Agency further represents and warrants to Developer that the Agency is duly authorized under the Act and under all other laws, regulation, and ordinances applicable to the Agency to enter into this Agreement and that the performance of the Agency's obligations as provided herein are permitted activities of the Agency under all applicable laws and ordinances. Furthermore, the Agency represents and warrants to Developer that all contracts and relationships between the Agency and the City shall in all regards conform to the requirements of all applicable laws governing the conduct of the Agency and the City, respectively. The Agency shall indemnify and hold the Developer harmless from and against any claims and/or damages suffered by the Developer as the result of the breach of the representations of the Agency made in this Section 5.

F. Representations of the Developer. Developer represents to Agency as follows:

1. Authorization. Developer is duly organized and legally existing under the laws of Utah and is duly qualified to conduct business in the State of Utah.
2. Performance. Performance of the Agreement will not result in any breach of, or constitute any default under any agreement or other instrument to which Developer is a party or to which Developer might be bound. Developer further agrees that it shall use commercially reasonable efforts to expedite the build out of the Improvements to the Project Area (in phases, as applicable) as is contemplated in the Project Plan. Developer will promptly notify Agency in the event that Developer determines that it will be permanently unable to proceed with the development.
3. Broker. Developer has not authorized any broker or finder to act on its behalf in connection with the transaction contemplated herein and it has not dealt with any broker or finder purporting to act on behalf of any other party. Developer agrees to hold harmless and indemnify Agency from and against any and all claims, losses, damages, costs, or expenses of any kind or character arising out of or resulting from any agreement, arrangement, or understanding alleged to have been made by such party or on its behalf with any broker or finder in connection with this Agreement.

G. No Other Representations or Warranties: Except as is otherwise expressly set forth in this Agreement, it is understood and agreed that the real property contemplated for transfer herein shall be transferred and conveyed in an "as-is" condition with any and all faults and latent and patent defects without any express or implied representation or warranty by Agency. Except as is otherwise expressly set forth herein and as is set forth in the deeds by which the Agency will convey the Land, Agency has not made, does not hereby make, and hereby specifically disclaims any representations or warranties of any kind or character whatsoever, express or implied, with respect to the Land, the condition of such Land (including without limitation any representation or warranty regarding suitability or fitness for any particular purpose), compliance of such property with environmental laws or other laws, or any other matter or thing relating to or affecting the property. Developer acknowledges and agrees that it is entering into this Agreement without relying (except as is expressly set forth in this Agreement) upon any such representation, warranty, statement or other assertion oral or written,

made by Agency or any representative of Agency or any other person acting or purporting to act for or on behalf of agency with respect to the Project but rather is relying upon its own examination and inspection of the Land. Developer represents that it is a knowledgeable purchaser of real estate and that outside of the express representation and warranties of the Agency set forth herein, it is relying solely on its own expertise and that of its consultants in acquiring the property.

## **II. CONDITION OF THE LAND.**

A. Zoning of the Project. The Agency represents that the Land is currently zoned MU (mixed-use) and that such classification will permit the development, use, operation and maintenance of a mixed-use project plan as contemplated in the Project Plan and according to the Permitted Uses.

B. Physical Condition of the Land. It shall be the sole responsibility of Developer prior to the execution of this Agreement to investigate and determine the suitability and adequacy of the Land for the Developer's proposed development and improvements. Developer shall bear sole responsibility for any and all environmental issues pertaining to the Land, with the exception of the soil compaction related issues which are the responsibility of the Agency as specifically provided herein. The Agency has, prior to the execution of this Agreement, provided Developer with copies of any and all environmental studies in the possession of either the Agency or the City. Reliance by Developer on such studies shall be the sole responsibility of the Developer. As to soil compaction issues, Agency has provided to Developer a current copy of that certain comprehensive geotechnical study which is attached to and made part of this Agreement as Exhibit D (the "AGEC Soils Report") which attempts to define the physical conditions and suitability of the soils found upon the Land. Reliance by Developer on such study shall be the sole responsibility of Developer. Any obligations by Agency to mitigate soils issues as recommended in Exhibit D, which is attached to and made part of this Agreement, are expressly as are set forth in Section III.A.1 of this Agreement.

## **III. DEVELOPMENT INCENTIVES.**

A. Incentives from Agency. It is agreed by the Parties that, except for the availability of certain incentives from the Agency, the Project would not be feasible to develop and the Developer would not be willing to enter into this Agreement and would not be willing to proceed with development of the Project. Therefore, the Parties agree to the following incentives to be provided by the Agency:

1. Soil Mitigation Activities. Agency, in coordination with Developer, shall address and assist in resolving the issues with soils and their suitability to support structures as indicated in the engineering analysis contained in the AGEC Soils Report, and shall be performed with the cooperation of the Developer using the most cost effective, efficient, and sustainable manner available. Subject to the limitations of the Soil Mitigation Cost Cap set forth in Section III.A. (a), Agency shall, at its sole discretion and expense, contract with a qualified entity under a separate Agreement to acquire, transport, and stockpile appropriate engineered fill soils to the Project for Developer to use in the compaction model outlined in the AGEC Soils

Report. Agency will assume all risk and liability associated with their contract with the third-party entity performing the work and shall indemnify and hold Developer harmless from any and all claims such party may have or bring which is in any way related to the Agency's responsibilities or conduct outlined in this Section. Developer shall be solely responsible for excavation of non-suitable soils and the placing, compacting, and testing of the imported engineering fill that is delivered to the Project by Agency. Developer will assume any and all risk and liability associated its obligations under this section or with any third party contract they may enter into in relation to its obligations under this section and shall indemnify and/or hold Agency harmless from any and all claims Developer or any third party contractor may have against any liability associated with the Developer's responsibilities set forth herein.

a. Agency's Soil Mitigation Cost Cap: The Agency has estimated in good faith that the total cost for trucking, labor, materials, and equipment in regards to the Agency's soil mitigation activities upon the Land will be up to \$1.49 per square foot of soil mitigated, and the Agency has used and relied upon this estimate in agreeing to enter into this Agreement. As such, Developer agrees that the Agency's financial obligations to the Developer to perform the Agency's obligations under in this Subsection III.A.1 for the mitigation of soils upon the Land shall be limited to the total sum of SEVENTY-NINE THOUSAND DOLLARS (\$79,000.00) (the "**Soil Mitigation Cost Cap**"). Any other trucking, labor, materials, and equipment expenses required for the suitable mitigation of the soil as indicated in the AGECE Soils Report that exceeds the Mitigation Cost Cap, and any costs incurred by Developer for the placement, compacting, and testing of the imported material provided by Agency, shall be the sole responsibility of the Developer. No later than five (5) business days following receipt of Developer's written request, Agency shall provide a report to Developer as to amounts paid for trucking, labor, materials, and equipment pertaining to Agency's mitigation activities. Developer shall have the right to reasonably audit the costs related to the Soil Mitigation Cost Cap and Agency shall cooperate with such audit activities. If at any time it becomes clear that the total cost to the Agency for trucking, labor, materials, and equipment will exceed the Soil Mitigation Cost Cap, and sufficient soil mitigation according to the AGECE Soils Report has not been completed, then Agency shall promptly notify Developer of the same. If Agency and Developer agree that Developer shall perform the work associated with the Agency's obligation under this Section, then Agency shall submit payment to Developer within 30 days from the date of completion of the soil mitigation work. If the Soil Mitigation Cost Cap is reached, and sufficient soil mitigation according to the AGECE Soils Report has not been completed, Agency and Developer covenant that they will work together in good faith to determine a reasonable solution that addresses any remaining remediation work and that is consistent with the mutual desires of the Developer and the Agency to complete this Project in an expeditious manner. In the event no such solution is agreed upon, either Party may, in its discretion, elect upon written notice to the other to terminate this Agreement whereupon neither party shall have claim upon the other for costs incurred as part of the Project or for work described in this Section III.

2. Utility Stubs. Agency and Developer agree that Agency shall provide, within the adjacent rights-of-way, adequate MAIN LINE utility capacity including: sanitary

sewer, storm sewer, water, and electrical. This provision shall include main line stubs ten (10) feet into Project at pre-determined locations and capped for future tie-in to be completed by Developer.

3. Site Work. Agency shall pay to Developer a maximum amount of NINETY-THOUSAND DOLLARS (\$90,000.00) towards the cost of site work, which shall be applied in full by Developer to Phase I work. Site work includes, but is not limited to, asphalt paving, underground utilities, concrete sidewalks, landscaping, grading, drainage, curb and gutter, signage, and striping. Payment from Agency to Developer shall occur within 30 days from the date of completion of the site work.

#### IV. ACQUISITION AND PHASING.

A. Development Phasing. Development of the Land will be conducted in two (2) Phases as further depicted in Exhibit B and generally described below:

1. **Phase 1:** comprising all of Building 1 and any and all onsite improvements associated with the Project and encompassing the Land. These onsite improvements include, but are not limited to: asphalt and associated sub-base, striping, curb/gutter, sidewalks, landscaping, main line utilities, site electrical and lighting, grading, draining, signage, and site apparatus.
2. **Phase 2:** comprising all of Building 2 and its associated lateral utility connections, sidewalks, and landscaping.

B. Acquisition of Land. The total purchase price for all Phases which comprise the total Land shall be THREE HUNDRED FOURTY-NINE THOUSAND NINE HUNDRED SEVENTY-ONE DOLLARS AND NO CENTS (\$349,971.00) ("Purchase Price"). The Developer's portion of the Purchase Price is as follows:

1. Payment #1: The cash portion of Purchase Price payable by Developer at Closing shall be \$111,376.00 (ONE HUNDRED ELEVEN THOUSAND THREE HUNDRED SEVENTY-SIX DOLLARS) payable in cash or certified funds.
  - Closing Date: Developer shall pay to Agency at the office of the Title Company the Payment #1 cash portion at the time the Developer receives a Certificate of Occupancy for at least 50% of Building 1, or by November 2, 2012, whichever is sooner. Closing of the Land shall occur as is usual and customary for commercial transactions of this nature as conducted by the Title Company.
  - Amount of Land Conveyed: All of the Land as depicted in Exhibit A – Land and Legal Description, subject to a mutual cross easement in favor of lot #7 to the south, as depicted on Exhibit B – Phasing Plan.



2. **Payment #2:** \$111,376.00 (ONE HUNDRED ELEVEN THOUSAND THREE HUNDRED SEVENTY-SIX DOLLARS) payable in accordance with the terms of a Trust Deed and Note as described below:

- **Trust Deed:** A portion of the Purchase Price not payable by Developer at closing shall be paid by means of a Trust Deed substantially in the form of the attached **Exhibit E – Trust Deed and Note**, which contains the following general terms: Developer shall pay to Agency at the office of the Title Company the Payment #2 portion at the time the Developer receives a Certificate of Occupancy for at least 50% of Building 2, or by November 2, 2014, whichever is sooner. Closing of the Land shall occur as is usual and customary for commercial transactions of this nature as conducted by the Title Company. The Trust Deed shall accrue no interest and shall be secured by a second position lien on the Land. In the event Developer does not meet the requirements as set forth in this Section IV (B), Agency shall

3. **Balance:** The portion of the Purchase Price not paid by Developer in Payment #1 or Payment #2 is \$127,219.00 (ONE HUNDRED TWENTY-SEVEN THOUSAND TWO HUNDRED NINETEEN DOLLARS) and shall be paid to the Agency from the Tax Increment received from the Project during the Tax Increment Period. In the event that Tax Increment revenues generated through the Tax Increment Period are insufficient to fund the Balance value stated herein, then in no event shall the Developer be required to make any cash payment from the Developer's funds towards the Purchase Price to the Agency.

C. **Conditions of Closing.** The following are conditions precedent to the Agency's obligations to enter into each Title Transfer with Developer and Developer's obligations to receive the same:

1. No un-cured default exists under the terms of this Agreement on the part of Developer and/or Agency, as applicable.
2. A subdivision plat creating the Phase to be conveyed acceptable to the Agency has been approved and recorded.
3. Developer shall have obtained all required initial development approvals from the City pertaining to the Phase which is the subject of the Closing.

D. **Agency's Closing Obligations.** At each Closing, the Agency shall:

1. Deliver to the Title Company a full executed and acknowledged Special Warranty Deed to Developer for the applicable Phase of the Land.

2. Deliver physical possession of the applicable Land to Developer.
3. Deliver such other documentation or instruments reasonably required by the Title Company for the Closing to occur in accordance with this Agreement.

E. Developer's Closing Obligations. At Closing, the Developer shall:

1. Take possession of the applicable Phase of the Land from Agency.
2. Deliver such other documentation or instruments reasonably required by the Title Company or Agency for the Closing to occur in accordance with this Agreement.

V. DEVELOPMENT OF PROJECT.

A. Construction and Operation of Improvements. Developer shall, prior to its acquisition of the Land, at Developer's expense and within the times set forth in the Schedule of Performance, which is attached to and made part of this Agreement as **Exhibit C**, construct, install, maintain, lease, operate, improve and market the Improvements on the Land consisting of all items shown or described on the Project Plan (**Exhibit B**) including, but not limited to:

- a. Construction and operation of a commercial development in two Phases to include, but not limited to, approximately 16,000 square feet of commercial retail space and its associated parking facilities as illustrated and/or described on the Project Plan.
- b. Construct, coordinate and utilize all on-site utilities to include sewer, water, telephone, electric and gas as may be necessary or required to construct and/or acquire for the Project, and as illustrated and/or described on the Project Plan.
- c. Market, advertise, and lease and maintain Project as set forth herein.

B. General Requirements and Rights of Agency.

1. Schematic drawings and construction plans (both preliminary and final) for the Improvements to be constructed by the Developer (the "**Construction Documents**") shall be prepared by a licensed Architect and/or Civil Engineer in the State of Utah. The Construction Documents shall conform to the Project Plan and this Agreement and all applicable federal, state and local laws and regulations (collectively the "**Development Standards**").

2. The Architect retained or to be retained by Developer to design the Improvements shall utilize, as necessary, members of associated design professions, including appropriate civil engineers.

3. The Improvements to be constructed shall be constructed by Developer in strict compliance with the Construction Documents and also in strict compliance with all applicable local, state and federal laws and regulations, including all applicable federal and state labor standards.

4. The Developer, for itself and its successors and assigns, agrees that in the construction of the Improvements provided for in this Agreement, the Developer will not discriminate against any employee or applicant for employment because of race, color religion, sex or national origin.

C. Issuance of Permits

1. Developer shall have the responsibility for obtaining all necessary permits and for paying all required engineering and planning escrows. Developer shall make application for such permits and make payment for such escrows directly to the City and to other appropriate agencies. Developer shall, prior to the date scheduled for construction, submit an application for building permits and thereafter diligently fulfill all requirements of such application. If Developer intends to proceed at first with only a general permit for the Project, Developer shall nevertheless timely apply for and thereafter diligently pursue the issuance of the building permits or other intermediate permits to the end that construction may proceed without interruption once it has commenced. Failure to timely file and to diligently pursue issuance of all required permits shall be a breach of this Agreement and grounds for termination of this Agreement at the option of the Agency upon not less than thirty (30) days written notice to Developer.

2. The Agency shall act as liaison where necessary and shall provide reasonable assistance to the Developer in securing required building permits. In no event shall Developer be obligated to commence construction (the dates set forth in Exhibit C – Schedule of Performance notwithstanding) if any such permit is not issued despite good faith efforts by the Developer to secure it. In the event there is a delay beyond the usual time for obtaining any such permits due to no fault of the Developer, the dates set forth in Exhibit C shall be extended accordingly to dates that are mutually agreed upon by the parties.

D. Times for Construction. Developer agrees to promptly begin and diligently execute to completion the development of the Project Area, in accordance with the Project Plan, through the Construction of the Improvements thereon, and that such construction shall in any event commence and thereafter be diligently pursued and shall be completed no later than the dates specified in Exhibit C, attached hereto, unless such dates are extended by the Agency or the Developer is unable to undertake or complete the Improvements because of any of the reasons set forth in Section X hereof.

E. Continuous Development of the Project Area. In addition to Developer's obligations to use commercially reasonable efforts to diligently execute to completion the development of the Project, Developer agrees that once a Closing has occurred in regards to a Phase within the Project, as referenced under Section III above, as well as under Exhibit B to this Agreement, Developer shall complete the development on each such received Phase within EIGHTEEN (18) MONTHS of such Closing. Failure to timely complete the Improvements on any conveyed property pursuant to the Agreement shall constitute a default of this Agreement, upon which default Agency may terminate the Agreement on not less than thirty (30) days written notice to the Developer and cancel its obligations to convey any additional property hereunder.

F. Hold Harmless. Developer waives, releases, and forever discharges all claims against Agency for any injuries, damages, losses or claims, whether known and unknown, which arise during or result from any activity of or services provided for Developer, its assignees, employees, consultants, or contractors under or in connection with the execution of the terms and conditions of this Agreement.

## VI. TAXES AND ASSESSMENTS.

### A. Tax Increment Used as Incentive

1. Tax Increment is Essential to Agreement. It is agreed by the parties that except for the availability of Tax Increment revenues or funds and resources from other identified Agency sources, the Project would be financially infeasible to develop and the Developer would not be willing to enter into this Agreement or to not proceed with the development of the Project. Therefore, the parties agree that Tax Increment from the Project Area as set forth in this Agreement will be used to pay Agency a portion of the Purchase Price of the property as defined in Section IV. As a result, Agency shall retain, during the full Tax Increment Period, or any extension mutually agreed upon and legally allowed, 60% of the Tax Increment revenue generated from the Project. The remaining 40% of the Tax Increment revenue generated from the Project shall be contributed to the Developer during the full Tax Increment Period in the form of yearly payments.

2. Timely Payment of Taxes. Subject to Developer's right to protest or appeal as provided below, through the Tax Increment Period (or any extension thereof), all ad-valorem taxes and assessments levied or imposed on a property within the Project Area owned by the Developer from time to time, any of the Improvements thereon, and any personal property on such a property within the Project Area for any period commencing after acquisition by Developer of such property within the Project Area shall be paid annually by Developer for the period of Developer's ownership during such tax year on or before the property tax due date ("**Tax Due Date**") which is currently set by law as November 30th.

### B. Tax Increment Right to Appeal

Upon Developer's acquisition of the Land, Developer shall have the right to protest or appeal the amount of assessed taxable value levied against such property located within the Project Area by the County Assessor, State Tax Commission or any lawful entity authorized by law to determine the ad valorem assessment against the Project, the Improvements, personal property on such property within the Project in the same manner as any other taxpayer as provided by law. Developer shall, however, notify the Agency in writing within ten (10) calendar days of Developer's filing of any protest or appeal to such assessment determination and provide a copy to the Agency of any protest or appeal of such assessment and information submitted as part of the protest or appeal. In addition, Developer shall give to the Agency written notice at least fifteen (15) calendar days prior to the time and date that such protest or appeal is to be heard. The Agency shall have the right, without objection by Developer, to appear at the time and date of such protest or appeal and to present oral or written information or evidence in support of or objection to the amount of assessment which should or should not be

assessed against the real or personal property within the Project Area and the amount of the Agency's Project Area indebtedness outstanding.

## **VII. USE OF LAND WITHIN THE PROJECT AREA.**

A. Covenants in Agreement. Developer covenants and agrees for themselves, and their successors and assigns to or of the Project Area or any part thereof, that Developer, and such successors and assigns shall:

FIRST: Devote the Project Area to, and only to and in accordance with, the uses specified in the Project Plan, Master Plan, and this Agreement, as hereafter amended and extended from time to time, but never without the prior written consent of the Agency for uses other than the Permitted Uses, which are the only uses permitted by this Agreement. At the eventual dissolution of the redevelopment area, uses within the Project Area shall be governed only by applicable federal, state and municipal codes and regulations relating to such uses.

SECOND: Pay on or before the Tax Due Date, all ad valorem taxes or assessments on or relating to any part of the Land under the ownership of the Developer.

THIRD: Commence promptly the construction and installation of the Improvements on the Land in accordance with this Agreement and the Project Plan and diligently pursue the construction of the Improvements to completion.

FOURTH: Not discriminate against any person or group on any unlawful basis in the sale, lease, rental, sublease, transfer, use, occupancy, tenure or enjoyment of the Project or any Improvements located therein. Neither shall Developer, or any person claiming under or through it, establish or permit any such practice or practices of unlawful discrimination or segregation with reference to the selection, location, number, use, or occupancy of tenants, lessees, sub-lessees or vendees in the Project.

B. Enforcement of Covenants. It is intended and agreed that the agreements and covenants provided in this Section VII shall be covenants running with the land and without regard to technical classification or designation, legal or otherwise, be to the fullest extent permitted by law and equity, binding for the benefit and in favor of, and enforceable by the Agency against Developer, their successors and assigns, to or of the Project Area or any part thereof or any interest therein, and any party in possession or occupancy of the Project Area or any part thereof. The Parties agree that the Agency shall be deemed a beneficiary of the agreements and covenants provided in Section VI (A) above, both for and in its own right and also for the purposes of protecting the interest of the community and other parties, public or private, in whose favor or for whose benefit these agreements and covenants have been provided.

# **VIII. ASSIGNMENT PROVISIONS**

Developer shall not have the right to assign or transfer this agreement to any other entity without the consent of Agency, which consent shall not be unreasonably withheld, conditioned, or delayed.

## **IX. MORTGAGE FINANCING; RIGHTS OF MORTGAGEES.**

A. **Limitation Upon Encumbrance of Property.** Prior to the completion of the Improvements, neither Developer or any successor in interest to the Project or any part thereof shall engage in any financing or any other transaction creating any mortgage or other encumbrance or lien upon the Land or Improvements, whether by express agreement or operation of law, or suffer any encumbrance or lien to be made on or attached to the Land except for the purposes of obtaining funds only to the extent necessary for making the Improvements (i.e., cost of construction, financing, property acquisition, architectural fees, permits, etc., and any other costs in connection with the physical Improvements). It is further agreed that the Developer, or successor in interest, shall notify the Agency in advance of any mortgage financing it proposes to enter into with respect to the Land and the Improvements and in any event that it shall promptly notify the Agency of any encumbrance or lien that has been created on or attached to the Land, whether by involuntary act of the Developer or otherwise.

B. **Mortgagee Not Obligated to Construct.** Notwithstanding any of the provisions of this Agreement, the holder of any mortgage authorized by this Agreement, including any such holder who obtains title to the Land or any part thereof as a result of foreclosure proceedings or action in lieu thereof, but not including (1) any other party who thereafter obtains title to the Land or such part from or through such holder, or (2) any other purchaser at foreclosure sale other than the holder of the mortgage itself, shall in no way be obligated by the provisions of this Agreement to construct or complete the Improvements or to guarantee such construction or completion; provided, that nothing in this section or any other section or provision of this Agreement shall be deemed or construed to permit or authorize any such holder to devote the Land or any part thereof to any uses, or to construct any improvements thereon, other than those uses or improvements provided or authorized in the Master Plan.

C. **Copy of Notice of Default to Mortgagee; Mortgagee's Option to Cure Defaults.** Whenever the Agency shall deliver or make any notice or demand to Developer with respect to any breach or default by Developer in its obligations or covenants under this Agreement, the Agency shall at the same time deliver to each holder of record of any mortgage authorized by this Agreement, if any, a copy of such notice or demand, and each such holder shall insofar as the rights of the Agency are concerned, have the right, at its option, to cure or remedy such breach or default to the extent that it relates to the part of the Project Area covered by its mortgage, and to add the cost thereof to the mortgage debt and the lien of its mortgage; Provided, that if the breach or default is with respect to construction of the Improvements, nothing contained in this section or any other section or provision of this Agreement shall be deemed to permit or authorize such holder, either before or after foreclosure or action in lieu thereto, to undertake or continue the construction or completion of the Improvements, beyond the extent necessary to conserve or protect Improvements or construction already made, without first having expressly assumed the obligation to the Agency to complete, in the manner provided in

this Agreement, the Improvements on the Land or the part thereof to which the lien or title of such holder relates, and submitted evidence satisfactory to the Agency that it has the qualifications and financial responsibility necessary to perform such obligation. Any such holder who shall properly complete the Improvements relating to the Project or applicable part thereof shall be entitled, upon written request made to the City to a certificate of occupancy by the City to such effect, in the manner provided in this Agreement.

D. Mortgage and Holder. For the purpose of this and other sections of this Agreement, the term "mortgagee" shall be deemed to include "beneficiary of deed of trust," or any insurer or guarantor of any obligation or condition secured by such mortgage or deed of trust.

## **X. DEFAULT; REMEDIES; TERMINATION**

A. Definition of Default. A party shall be in default hereunder when it has not properly performed any one or more of its obligations under this Agreement in a timely manner, including within the applicable dates set forth in Exhibit C or other time requirements of this Agreement, as applicable, and as such times as may be extended by any other applicable provision of this Agreement.

B. Notice of Default; Stay of Legal Proceeding. If Developer or the Agency defaults with respect to any of the provisions of this Agreement, the non-defaulting party shall send written notice of such default to the defaulting party. The defaulting party must immediately commence to cure, correct or remedy such failure or delay, and shall proceed diligently to complete such cure, correct or remedy such failure or delay, and shall proceed diligently to complete such cure within thirty (30) days after service of the notice of default. The defaulting party shall be liable to the other party for any damages caused by such default and the non-defaulting party may thereafter (but not before) commence an action for damages against the defaulting party with respect to such default. If the default is not commenced to be cured by the defaulting party within twenty(20) days of service of the notice of default, the non-defaulting party at its option may thereafter (but not before) commence an action for specific performance of the terms of this Agreement.

### **C. Legal Actions.**

1. Institution of Legal Actions. Subject to the express limitations set forth elsewhere in this Agreement, in addition to any other rights or remedies available at law or in equity, either party may institute legal action to cure, correct or remedy any default, to recover damages for any default, or to obtain any other remedy consistent with the purposes of this Agreement. Such legal actions must be instituted in the District Court of the County of Weber, State of Utah, or in the United States District Court for the District of Utah.

2. Service of Process.

(a) Service On Agency. In the event that any legal action is commenced by Developer against the Agency, service of process on the Agency shall be made as provided by law.

(b) Service On Developer. In the event that any legal action is commenced by the Agency against Developer, service of process on Developer shall be made as provided by law, whether made within or without the State of Utah.

D. Rights and Remedies Are Cumulative. Except as otherwise expressly stated in this Agreement, the rights and remedies of the parties whether provided by law or equity or under this Agreement are cumulative, and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same time or different times, of any other rights or remedies for the same default or any other default by the other party.

E. Rights of Termination.

1. Termination by Developer. Developer has the right to terminate this Agreement within thirty (30) days of the Effective Date of this Agreement if the Developer shall furnish evidence satisfactory to the Agency that it has been unable, after and despite diligent effort, to obtain the necessary funding commitments sufficient to enable it to fund the construction of the Improvements contemplated to be constructed on the Project Area under this Agreement on or before the date therefore set forth in the Schedule of Performance. In the event that Developer terminates this Agreement under this provision prior to receiving any benefit from the Agency, neither party shall have any further rights or liabilities against the other.

2. Termination by Agency. The Agency at its option may terminate this Agreement; (a) If Developer improperly assigns this Agreement (or any rights therein) in violation of this Agreement; (b) If the Developer does not provide to Agency Construction Drawings and related documents, as required by this Agreement, and such breach is not cured within thirty (30) days after the date of written demand therefore by the Agency; (c) If Developer improperly encumbers the Land (or any portion thereof) in violation of this Agreement; (d) If Developer is unable or unwilling to comply with Master Plan; (e) If Developer fails to timely perform any obligation required by this Agreement. Time is of the essence in this Agreement.

Upon any termination under this Section X. E(2), the Agency shall be relieved of all further unperformed responsibilities under this Agreement.

F. Survival of Obligations. The obligations and burdens imposed upon Developer hereunder to complete the Improvements shall not, with respect to any portion of the Project Area, survive the unconditional delivery of a Certificate of Completion by the City with respect to that portion of the Project Area. All other obligations and burdens imposed upon the Developer under this Agreement shall survive the delivery of the Certificate of Completion.



## **XI. GENERAL PROVISIONS.**

A. Notices, Demands and Communications Between the Parties. Formal notices, demands and communications between the Agency and the Developer shall be deemed sufficiently given if given in person or if dispatched by registered or certified mail, postage prepaid, return receipt requested, or if delivered by a recognized national courier service (i.e. UPS, Federal Express, etc.) to the following addresses:

**IF TO THE AGENCY:**

Ogden City Redevelopment Agency  
 Attention: Executive Director  
 2549 Washington Boulevard, Suite 900  
 Ogden, Utah 84401  
 With copy to:  
 Ogden City Attorney  
 2549 Washington Boulevard Suite 800  
 Ogden, Utah 84401-3111

**IF TO DEVELOPER:**

ShoniK, LLC.  
 Attention: Brad Knowlton  
 25 South Main  
 Suite 200  
 Centerville, Utah 84014

Notices, demands and communications shall be deemed delivered on the date delivered in person or on the date postmarked when mailed in the manner set forth in this Article X Section A. A party may change its address for purposes of notice by delivering to the other party notice of such change in the manner provided in this Section.

B. Warranty Against Payment of Consideration for Agreement; Conflict of Interest. The Developer warrants that it has not paid or given, and will not pay or give, any party who is not a party to this Agreement, any money or other consideration in exchange for obtaining this Agreement, other than normal costs of conducting business and costs of professional services such as Architects, Engineers and Attorneys. To the best knowledge of Developer, no member, official or employee of the Agency has or shall have any direct or indirect interest through the Developer in this Agreement, nor shall any such party participate in any decision relating to the Agreement which is prohibited by law.

C. Conflict of Interest – Agency. No member, official, employee, consultant, or agent of the Agency shall have any personal interest, direct or indirect, in this Agreement, nor shall any such member, official, employee, consultant or agent participate in any decision relating to this Agreement which affects his personal interest or the interests of any corporation, partnership, or association in which he is directly or indirectly interested.

D. Non-liability of Agency Officials and Employees. No member, official, employee, consultant or agent of the Agency shall be personally liable to the Developer, or any successor in interest, in the event of any default or breach by the Agency or for any amount which may become due to the Developer or its successor on any obligation under the terms of this Agreement.

E. Attachments/Recitals. All Exhibits and attachments to this Agreement and Recitals are incorporated herein and made a part hereof as if set forth in full and are binding upon the parties.

F. Headings. Any titles of the several parts and sections of this Agreement are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions. "Paragraph" and "Section" may be used interchangeably.

G. Successors and Assigns of Developer. This Agreement shall be binding upon Developer, and its successors and assigns and where the term "Developer" is used in this Agreement, it shall mean and include the successors and assigns of Developer except that: Agency shall have no obligation under this Agreement to any unapproved successor or assigns of Developer where Agency approval of such successor or assigns is required by this Agreement.

H. Enforced Delay; Extension of Times of Performance. In addition to specific provisions regarding extension of time for performance set forth elsewhere in this Agreement, performance by either party hereunder shall not be deemed to be in default where delays or defaults are due to war; insurrection; strikes; lock-outs; riots; floods; earthquakes; fires; casualties; acts of God; epidemics; quarantine restrictions; litigation (other than condemnation actions) over which Developer has no control; inability (when Developer is faultless) to secure necessary labor, materials or tools; delays (when Developer is faultless) of any contractor, subcontractor or supplier; wrongful acts of the other party; acts or failure to act of any public or governmental agency or entity not a party to this Agreement; or any other causes beyond the control or without the fault of the party claiming an extension of time to perform (each of the foregoing being hereinafter referred to as a "Forced Delay"); Provided, that in order to obtain the benefit of the provisions of this Section, within thirty (30) calendar days after the beginning of any such Forced Delay the party seeking the benefit of this Section shall have notified the other party thereof in writing stating the cause or causes for the Forced Delay. An extension of time of any such cause shall only be for the period of such Forced Delay, which period shall commence to run from the time of the commencement of the cause. Times of performance under this Agreement may also be extended by agreement in writing signed by the Agency and the Developer and as otherwise provided in this Agreement.

I. Approval by Agency and Developer. Wherever this Agreement requires the Agency or the Developer to approve any contract, document, plan, specification, drawing or other matter, such approval shall not be unreasonably withheld, conditioned or delayed.

J. Entire Agreement, Waivers and Amendments. This Agreement may be executed in one or more duplicate originals, each of which shall be deemed to be an original. This

Agreement integrates all of the terms and conditions mentioned herein or incidental hereto, and supersedes all negotiations or previous agreements between the parties with respect to all or any part of the subject matter hereof. All waivers of the provisions of this Agreement must be in writing and signed by the appropriate authorities of the Agency and of the Developer, and all amendments hereto must be in writing and signed by the appropriate authorized representatives of the Agency and the Developer.

K. Severability. In the event that any condition, covenant or other provisions herein contained is held to be invalid or void by any court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement and shall in no way affect any other covenant or condition herein contained. If such condition, covenant or other provision shall be deemed invalid due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.

L. Recitals and Exhibits. All Recitals at the beginning of this Agreement and Exhibits annexed to this Agreement and the documents to be delivered at or prior to the execution of this Agreement are expressly made a part of this Agreement as fully as though completely set forth in it. All references to this Agreement, either in the Agreement itself or in any of such writings, shall be deemed to refer to and include this Agreement and all such Exhibits and writings. Any breach of or default under any provisions of any such writings shall, for all purposes, constitute a breach or default under this Agreement and all other such writings.

## **XII. SPECIAL PROVISIONS.**

The Agency and the Developer shall not amend this Agreement in a manner that would violate the Project Plan or the Act.

## **XIII. TIME FOR ACCEPTANCE OF AGREEMENT BY AGENCY**

This Agreement, when executed by Developer and delivered to the Agency, must be authorized, executed and delivered by the Agency within ten (10) days after date of signature by the Developer or this Agreement shall be void, except to the extent that the Developer shall consent in writing to any further extension of time for the authorization, execution and delivery of this Agreement. The date of this Agreement shall be the date when the Agreement shall have been signed by the Agency (which date is the date set forth next to the signature on behalf of the Agency).

SIGNATURES ON FOLLOWING PAGE

IN WITNESS WHEREOF, the parties have executed this Agreement on the date set forth opposite their respective signatures below.

DATE: 7-12-12

AGENCY:

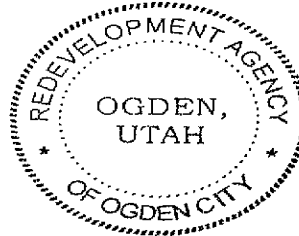
OGDEN CITY REDEVELOPMENT AGENCY

ATTEST:

BY Lee Ann Peterson  
Ogden City Recorder *Acting*

BY *[Signature]*  
Michael P. Caldwell, Executive Director

Approved As to Form:  
*[Signature]*  
Office of Agency Attorney



DATE: July 5, 2012

DEVELOPER:

Shonik, LLC, a Utah limited liability company

By: *Shondell Knowlton*

Printed Name: Shondell S. Knowlton

Title: Managing Member

Date: July 5, 2012

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**EXHIBIT B**  
**PROJECT PLAN**

The following documents are part of the Project Plan. The documents support the statements and findings incorporated in the Project Plan.

**Phase 1 – Building 1**

Site Plan

Phasing Plan

Utility Plans

Landscape Plans

Building Elevations

MU Zone Development Agreement *(recorded separately)*

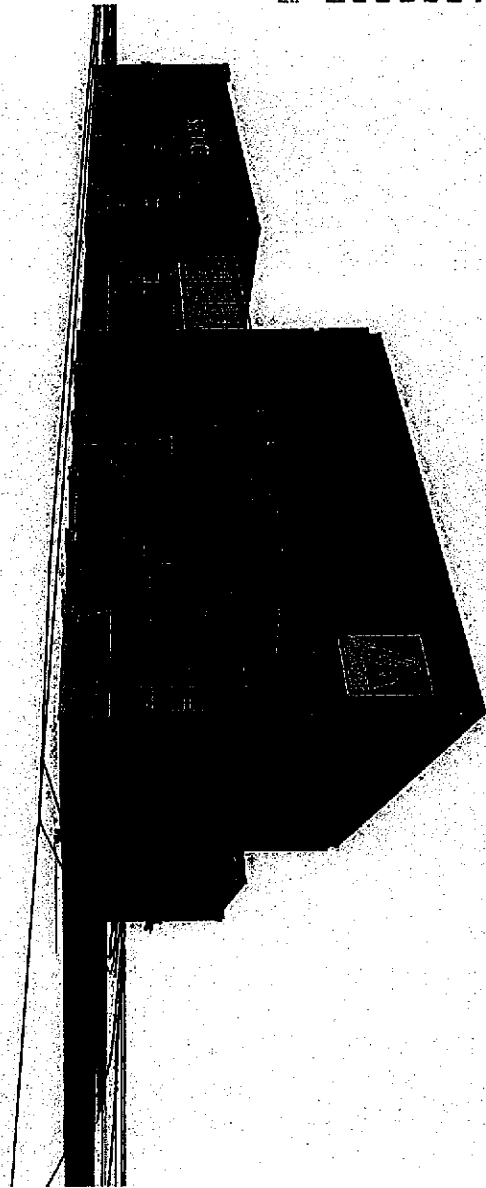
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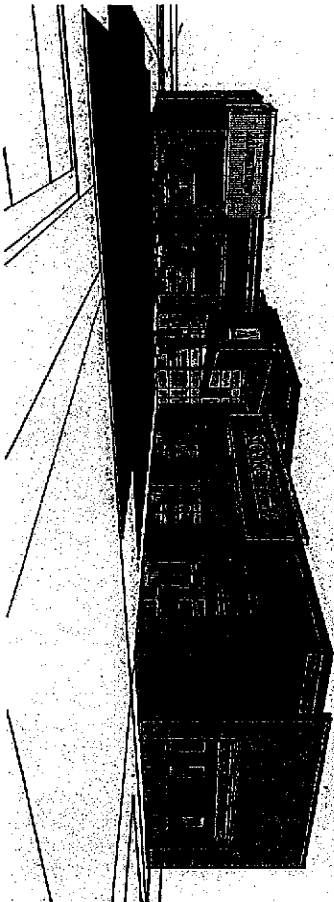








GEAR:30 RETAIL BUILDING  
WASHINGTON & PARK  
OGDEN, UTAH  
TRANSITIONAL MODERN

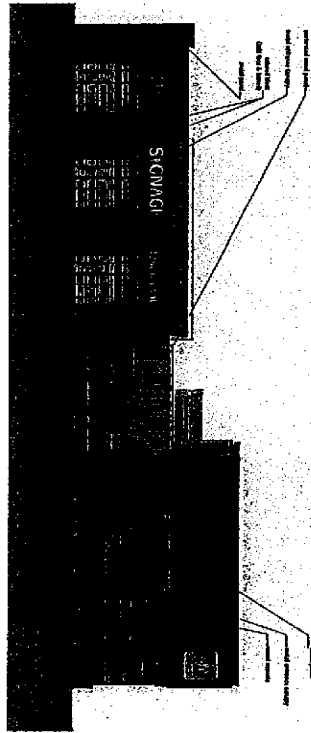


# GEAR:30 RETAIL BUILDING

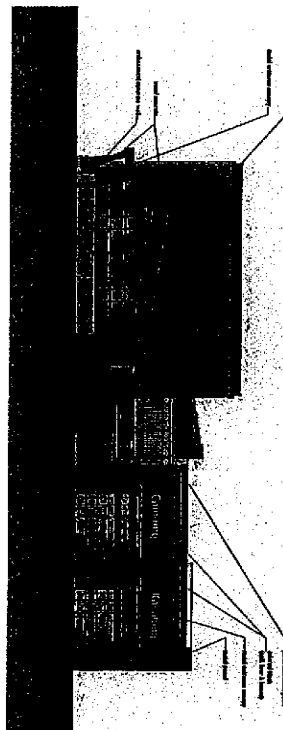
WASHINGTON & PARK

OGDEN, UTAH

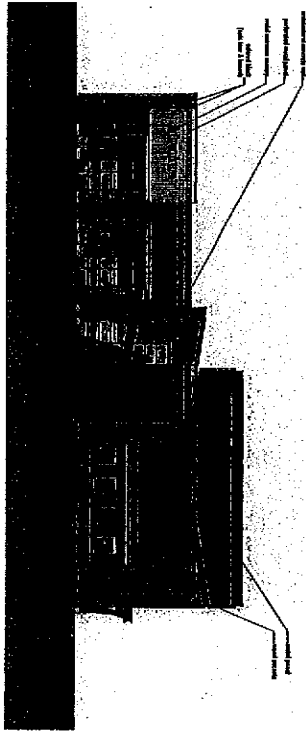
TRANSITIONAL MODERN



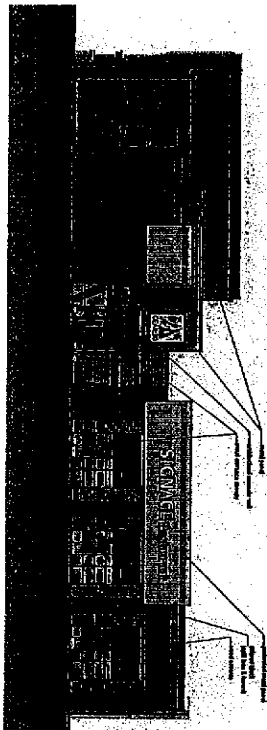
EAST ELEVATION  
(WASHINGTON BLVD)



NORTH ELEVATION  
(PARK BLVD)



SOUTH ELEVATION



WEST ELEVATION

**EXHIBIT C**  
**SCHEDULE OF PERFORMANCE**

The estimated development schedule for the **Phase 1** of the Project Area is as follows:

**MAY 8, 2012** – Discussion of RDA Development Agreement with Agency Board  
**MAY 22, 2012** – Final Approval of RDA Development Agreement from Agency Board  
**MAY 8-JUNE 6, 2012** – Design Phase – Site and Architectural  
**JUNE 6, 2012** – Final Approval of Site Plan by Planning Commission  
**JUNE 26, 2012** – Final Approval of Site Plan/Elevations by RDA Board  
**JUNE 27, 2012** – Site Permit – begin Site Work  
**JULY 24, 2012** – Site Work complete, ready for Kneaders opening  
**JUNE 20, 2012** – Building Permit – construction begins  
**SEPTEMBER 15, 2012** – Certificate of Occupancy, building turn-over

The estimated development schedule for the **Phase 2** of the Project Area is as follows:

**NOVEMBER 2, 2014** – Certificate of Occupancy, building turn-over

Any of the foregoing dates are subject to modification by the mutual written agreement of the Agency and Developer. To the extent that circumstances beyond the reasonable control of Developer do not permit the Developer to complete any required development activity within the time periods set forth above, Agency covenants that it will work with Developer in good faith to provide a reasonable extension to the foregoing dates consistent with the mutual desires of the Developer and Agency to complete this Project in an expeditious manner.

**EXHIBIT D**

**AGEC Soils Report**

**Attach AGEC Soils Report Here**



Applied Geotechnical Engineering Consultants, Inc.

**GEOTECHNICAL INVESTIGATION  
PROPOSED OGDEN RIVER MIXED-USE DEVELOPMENT  
20<sup>TH</sup> STREET AND GRANT AVENUE  
OGDEN, UTAH**

**PREPARED FOR:  
OGDEN CITY REDEVELOPMENT AGENCY  
2549 WASHINGTON BOULEVARD, SUITE 420  
OGDEN, UTAH 84401**

**ATTENTION: BRANDON COOPER**

**PROJECT NO. 1110347**

**JUNE 16, 2011**

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**EXECUTIVE SUMMARY**

1. Up to approximately 6½ feet of fill was encountered in the upper portion of the borings drilled and test pits excavated at the site. The fill consists of lean clay fill, silty and clayey gravel fill and debris. The natural soil encountered below the fill consists primarily of lean clay with occasional clayey sand. The soil at depth consists of sand and gravel with occasional lean clay layers.
2. Subsurface water was encountered in the borings and test pits at depths ranging from approximately 3 to 6½ feet below the existing ground surface when measured on June 6, 2011.
3. The site is suitable to support the proposed construction if the design and construction of the proposed development is performed in general accordance with the recommendations presented herein.

The proposed buildings may be supported on spread footings bearing on the undisturbed natural soil or on compacted structural fill extending down to the undisturbed natural soil. Footings bearing on the undisturbed natural soil may be designed using a net allowable bearing pressure of 1,200 pounds per square foot. Footings bearing on at least 2 feet of properly compacted structural fill extending down to the undisturbed natural soil or on at least 2 feet of the undisturbed natural sand and gravel may be designed using a net allowable bearing pressure of 2,500 pounds per square foot.

4. Up to approximately 6½ feet of fill was encountered in the upper portion of the borings drilled and test pits excavated at the site. The fill varies in material type ranging from lean clay to silty and clayey gravel with small to moderate amounts of debris. Generally, the fill is low and erratic in density.

Based on the subsurface conditions encountered at the site, the results of field and laboratory tests and the results of penetration resistance values obtained from the drilling, it is our professional opinion that the fill is not suitable to support proposed structures. The fill should be removed from below proposed foundation areas and be replaced with properly compacted structural fill or the foundation support be extended through the unsuitable fill down to suitable bearing material.

5. The existing fill and upper natural soil contains a moderate to high amount of fines (silt and clay). The upper fine-grained soil will be easily disturbed by construction traffic when it is very moist to wet such as in the winter or spring or at times of prolonged rainfall, or if excavations extend down near



**Executive Summary (continued)**

the subsurface water level. Placement of 1 to 2 feet of gravel will provide limited access for rubber-tired construction equipment when the subgrade consists of very moist to wet fine-grained soil.

6. Geotechnical information related to foundations, subgrade preparation, pavement design, materials and compaction is included in the report.



## SCOPE

This report presents the results of a geotechnical investigation for the proposed Ogden River Mixed-Use Development to be located at approximately 20<sup>th</sup> Street and Grant Avenue in Ogden Utah. The report presents the subsurface conditions encountered, laboratory test results and recommendations for foundations and pavement. The study was conducted in general accordance with our proposal dated May 13, 2011.

Field exploration was conducted to obtain information on the subsurface conditions. Samples obtained from the field investigation were tested in the laboratory to determine physical and engineering characteristics of the on-site soil. Information obtained from the field and laboratory was used to define conditions at the site for our engineering analysis and to develop recommendations for the proposed foundations and pavement.

This report has been prepared to summarize the data obtained during the study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to construction are included in the report.

## SITE CONDITIONS

The proposed development is planned to extend between 20<sup>th</sup> Street and the Ogden River and between Grant Avenue and Washington Boulevard. There are two existing parcels which are not part of this study as shown on Figure 1.

The site currently consists of vacant land with no existing structures or pavement. Park Boulevard has been constructed in an east/west direction along the northern portion of the site (see Figure 1). We understand that buildings, sidewalks and utilities were previously demolished and removed from the site.



APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

1110347

The ground surface at the site is relatively flat with a gentle slope down to the southwest. Vegetation at the site consists primarily of grass and weeds with several tall trees along the banks of the Ogden River. There are several small piles of fill and boulders across the site.

The site is bordered to the north by the Ogden River and a pedestrian path which extends along the south bank. Water was observed in the river at the time of our site visit. Washington Boulevard, which is a six-lane, Portland cement concrete-paved roadway, extends along the east side of the site. 20<sup>th</sup> Street, which is a two-lane, asphalt-paved road in good conditions, extends along the south side of the site. Grant Avenue, which is a two-lane, asphalt-paved road, extends along the west side of the site. A single-story, slab-on-grade steel-frame structure (Bingham Cyclery) is located in the northeast corner of the site.

#### **FIELD STUDY**

Twelve test pits were excavated at the approximate locations indicated on Figure 1 on May 24 and 25, 2011. The test pits were excavated using a rubber-tired backhoe. The test pits were backfilled without significant compaction. The backfill in the test pits should be properly compacted where it will support buildings, floor slabs or pavement.

Six borings were drilled at the approximate locations indicated on Figure 1 on May 26 and 27, 2011. The borings were drilled using 8-inch diameter, hollow-stem auger powered by an all-terrain drill rig.

The test pits and borings were logged and soil samples obtained by an engineer from AGECE. Logs of the subsurface conditions encountered in the test pits and borings are graphically shown on Figures 2 through 5 with legend and notes on Figure 6.



## SUBSURFACE CONDITIONS

Up to approximately 6½ feet of fill was encountered in the upper portion of the borings drilled and test pits excavated at the site. The fill consists of lean clay fill, silty and clayey gravel fill and debris. The natural soil encountered below the fill consists primarily of lean clay with occasional clayey sand. The soil at depth consists of sand and gravel with occasional lean clay layers.

A description of the various materials encountered in the test pits and borings follows:

Debris - The debris consists of pieces of asphalt, glass, wood, metal and concrete with small amounts of soil. It is moist and gray.

Clayey Fill - The fill consists of lean clay and occasional clayey sand and gravel. It is moist to wet, brown to gray and contains occasional small debris (wood, metal, etc.).

The results of in-place moisture and density tests conducted on the clayey fill during the field study indicate that the areas tested have moisture contents ranging from 15 to 27 percent and dry densities ranging from 78 to 108 pounds per cubic foot (pcf) as measured with a nuclear density gauge.

Laboratory tests conducted on samples of the clayey fill indicate that it has moisture contents ranging from 18 to 24 percent.

Results of laboratory gradation and moisture/density relationship (Proctor) tests indicate that the fill has a maximum dry density of 110.5 pcf and an optimum moisture content of 13.0 percent as determined by ASTM D 1557. The results of the gradation and Proctor tests are presented on Figure 8.



Granular Fill - The granular fill consists of silty and clayey gravel with occasional sand and cobbles up to approximately 10 inches in size. It is moist to wet, brown to dark gray and contains occasional concrete debris.

The results of in-place moisture and density tests conducted on the granular fill during the field study indicate that the areas tested have moisture contents ranging from 8 to 12 percent and dry densities ranging from 99 to 122 pounds per cubic foot (pcf) as measured with a nuclear density gauge.

Laboratory tests conducted on a sample of the granular fill indicate that it has a moisture content of 7 percent.

Results of laboratory gradation and moisture/density relationship (Proctor) tests indicate that the fill has a maximum dry density of 128.6 pcf and an optimum moisture content of 8.8 percent as determined by ASTM D 1557. The results of the gradation and Proctor tests are presented on Figure 7.

Lean Clay - The clay contains small to moderate amounts of sand and occasional sand layers. It is soft to stiff, moist to wet, brown to dark gray and contains occasional roots and organics.

Laboratory tests conducted on samples of the clay indicate that it has natural moisture contents ranging from 22 to 34 percent and natural dry densities ranging from 83 to 97 pcf.

Unconfined compressive strengths of 865 and 1,295 pounds per square foot (psf) were measured for samples of the clay tested in the laboratory.

Consolidation tests conducted on samples of lean clay indicate that the clay will compress a small to moderate amount with the addition of light to moderate loads.

Results of the consolidation tests are presented on Figures 10, 11 and 12.



Poorly-Graded Sand with Clay - The clay contains small to moderate amounts of clay and occasional lean clay layers. It is medium dense, moist to wet and brown to orangish brown.

Poorly-Graded Sand with Silt - The sand contains small to moderate amounts of silt and occasional thin clayey sand layers. It is medium dense, moist to wet and brown.

Poorly-Graded Sand - The sand contains small to moderate amounts of gravel and small amounts of clay and silt. It is medium dense to dense, moist to wet and brown.

Poorly-Graded Gravel - The gravel contains small to large amounts of sand and small amounts of clay and silt. It is medium dense to very dense, wet and brown to gray.

Laboratory tests conducted on a sample of the gravel indicate a natural moisture content of 9 percent and a natural dry density of 125 pcf.

Results of a gradation test conducted on a sample of the gravel are presented on Figure 9.

Results of laboratory tests are summarized on Table I and included on the logs of the test pits and borings.

## **SUBSURFACE WATER**

Subsurface water was encountered in the borings and test pits at depths ranging from approximately 3 to 6 ½ feet below the existing ground surface when measured on June 6, 2011.



Slotted PVC pipe was installed in all the test pits and borings, with the exception of Test Pit TP-10, to facilitate future measurement of the subsurface water level. Fluctuations in the water level will occur over time. Water levels are expected to be highest in the spring and summer and lowest in the fall and winter months and may be influenced by the close proximity of the Ogden River. An evaluation of such fluctuations in the subsurface water level is beyond the scope of this report.

## **PROPOSED CONSTRUCTION**

We understand that the proposed development is planned to be a mixed-use development. The southwest portion of the development is planned for a townhome development. The structures are planned to be three-story, wood-frame buildings. Paved parking and access roads are planned to extend through the proposed townhome area.

The areas north of Park Boulevard and east of the proposed townhome development are planned for future mixed-use development. These areas will likely consist of light commercial, retail and multi-family residential development. We anticipate that buildings will consist of two to four-story, wood-frame slab-on-grade structures. Paved parking and access areas are planned to extend through the proposed future development.

We have assumed building loads will consist of wall loads up to 5 kips per lineal foot and column loads of up to 100 kips.

We have assumed two traffic conditions for pavement to be constructed through the proposed development. Traffic Condition No. 1 consists primarily of relatively light, passenger vehicles, occasional delivery trucks and two garbage trucks per week. Traffic Condition No. 2 consists of up to 2,000, relatively light, passenger vehicles and 5 delivery trucks per day and 5 busses and 2 garbage trucks per week.





If the proposed construction, building loads or anticipated traffic is significantly different from what is described above, we should be notified to reevaluate the recommendations given.

## RECOMMENDATIONS

Based on the subsurface conditions encountered, laboratory test results and our understanding of the proposed construction, the following recommendations are given:

### A. Site Grading

Site grading plans were not available at the time of investigation. We anticipate that there will be minor amounts (less than 3 feet) of change in elevation at the site. Fill placed for the project should be placed as soon as possible prior to construction.

Topsoil, organics, unsuitable fill, debris, pavement materials and other deleterious materials should be removed from below proposed building areas.

#### 1. Existing Fill

Up to approximately 6½ feet of fill was encountered in the upper portion of the borings drilled and test pits excavated at the site. The fill varies in material type ranging from lean clay to silty and clayey gravel with small to moderate amounts of debris. Generally, the fill is low and erratic in density. The results of the field and laboratory tests conducted on the fill indicate that the fill is compacted to approximately 75 to 95 percent (average of 84 percent) of the maximum dry density as determined by ASTM D 1557.

Based on the subsurface conditions encountered at the site, the results of field and laboratory tests and the results of penetration resistance values obtained from the drilling, it is our professional opinion that the fill is not



suitable to support proposed structures or pavement. The fill should be removed from below proposed foundation areas and be replaced with properly compacted structural fill or the foundation support be extended through the unsuitable fill down to suitable bearing material.

Ideally, the unsuitable fill would be removed from below proposed floor slab and pavement areas and be replaced with properly moisture conditioned and compacted fill. However, if the owner is willing to accept some risk of floor slab and pavement distress due to differential densification of the existing fill, a portion of the fill could be left below floor slabs and pavement areas. If a portion of the existing fill is left in-place, we recommend that at least the upper 2 feet of this be removed and replaced with properly compacted structural fill below the proposed floor slab and pavement areas. The risk of potential floor slab and pavement distress may be further reduced by removing and replacing increased amounts of the existing fill.

The existing fill, exclusive of organics, debris and over-sized particles, may be considered for reuse as fill below floor slabs and pavement areas if the material is properly moisture conditioned and compacted. Recommendations for fill material are included in the Materials section of this report.

2. Pavement Subgrade Preparation

Prior to placing site grading fill or base course, the topsoil, organics, unsuitable fill, debris and other deleterious material should be removed from below proposed pavement areas.

The subgrade in proposed pavement areas and areas to receive site grading fill should be proof-rolled to identify soft areas. Soft areas should be removed and replaced with gravel containing less than 15 percent passing the No. 200



sieve. If the subgrade is very moist to wet, the subgrade should not be proof-rolled, but cut to undisturbed natural soil below the topsoil or fill and a sufficient thickness of gravel placed to provide construction equipment access.

Construction equipment access difficulties can be expected when the subgrade consists of fine-grained soil and is very moist to wet. Placement of 1 to 2 feet of gravel will provide limited support for moderately loaded rubber-tired construction equipment and facilitate pavement construction during times when the subgrade consists of very moist to wet clay. A support fabric may be placed between the clay and gravel to facilitate construction.

3. Excavation

Excavation at the site can be accomplished with typical excavation equipment. Consideration should be given to using excavation equipment with a flat cutting edge when excavating for building foundations to minimize disturbance of the bearing soil.

Excavations that extend below the free water level should be dewatered. The water level should be maintained below the base of the excavation during initial fill and concrete placement. Free-draining gravel with less than 5 percent passing the No. 200 sieve should be used for fill or backfill below the original water level.



**4. Materials**

Listed below are materials recommended for imported structural fill.

Fill to Support	Recommendations
Footings	Non-expansive granular soil Passing No. 200 Sieve < 35% Liquid Limit < 30% Maximum size 4 inches
Floor Slab (Upper 4 inches)	Sand and/or Gravel Passing No. 200 Sieve < 5% Maximum size 2 inches
Slab Support	Non-expansive granular soil Passing No. 200 Sieve < 50% Liquid Limit < 30% Maximum size 6 inches

Material placed as fill to support structures should be non-expansive granular soil. The on-site clay and existing clayey fill are not recommended for use as fill below structures but may be used as site grading fill, below pavement areas or as utility trench backfill if the topsoil, organics and other deleterious material are removed or they may be used in landscape areas. The on-site gravel and granular fill meeting the criteria above may be considered for use as structural fill.

The on-site soil is generally moist to wet and will likely require drying prior to use as fill. Drying of the soil may not be practical during cold or wet times of the year.

Free-draining gravel with less than 5 percent passing the No. 200 sieve should be used as fill or backfill below the original water level.



5. Compaction

Compaction of materials placed at the site should equal or exceed the minimum densities as indicated below when compared to the maximum dry density as determined by ASTM D1557.

Fill To Support	Compaction
Foundations	≥ 95%
Concrete Slabs and Pavement	≥ 90%
Landscaping	≥ 85%
Retaining Wall Backfill	85 - 90%

To facilitate the compaction process, fill should be compacted at a moisture content within 2 percent of the optimum moisture content.

Base course should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557.

Fill and pavement materials placed for the project should be frequently tested during construction for compaction. Fill should be placed in thin enough lifts to allow for proper compaction.

6. Drainage

The ground surface surrounding the proposed buildings should be sloped away from the buildings in all directions. Roof downspouts and drains should discharge beyond the limits of backfill.

The collection and diversion of drainage away from the pavement surface is important to the satisfactory performance of the pavement section. Proper drainage should be provided.



**B. Foundations****1. Bearing Material**

With the proposed construction and the subsurface conditions encountered, the buildings may be supported on spread footings bearing on the undisturbed natural soil or on compacted structural fill extending down to the undisturbed natural soil. Structural fill should extend out away from the edge of the footings at least a distance equal to the depth of fill beneath footings.

Unsuitable fill, topsoil, organics and other deleterious materials should be removed from below proposed foundation areas.

**2. Bearing Pressure**

Footings bearing on the undisturbed natural soil may be designed using an allowable net bearing pressure of 1,200 psf. Footings bearing on at least 2 feet of properly compacted structural fill extending down to the undisturbed natural soil or on at least 2 feet of undisturbed natural sand or gravel may be designed using an allowable net bearing pressure of 2,500 psf.

Footings should have a minimum width of 18 inches and a minimum depth of embedment of 10 inches.

**3. Temporary Loading Conditions**

The allowable bearing pressures indicated above may be increased by one-half for temporary loading conditions such as wind or seismic loads.

**4. Settlement**

Based on the subsurface conditions encountered and the assumed building loads, we estimate that total settlement for foundations designed and constructed as described above will be less than 1 inch. Differential settlement is estimated to be less than  $\frac{1}{4}$  inch.



5. Frost Depth

Exterior footings and footings beneath unheated areas should be placed at least 30 inches below grade for frost protection.

6. Foundation Base

The base of footing excavations should be cleared of loose or deleterious material prior to structural fill or concrete placement.

7. Construction Observation

A representative of the geotechnical engineer should observe footing excavations prior to structural fill or concrete placement.

**C. Concrete Slab-on-Grade**

1. Slab Support

Concrete slabs may be supported on the undisturbed natural soil or on compacted structural fill extending down to the natural undisturbed soil. Unsuitable fill, topsoil, organics and other deleterious materials should be removed from below proposed floor slabs.

2. Underslab Sand and/or Gravel

A 4-inch layer of free draining sand and/or gravel (less than 5 percent passing the No. 200 sieve) should be placed below the concrete slabs for ease of construction and to promote even curing of the slab concrete.

3. Vapor Barrier

A vapor barrier should be placed under the concrete floor if the floor will receive an impermeable floor covering. The barrier will reduce the amount of water vapor passing from below the slab to the floor covering.



**D. Lateral Earth Pressures****1. Lateral Resistance for Footings**

Lateral resistance for spread footings placed on the natural soil or on compacted structural fill is controlled by sliding resistance between the footing and the foundation soils. Friction values of 0.35 and 0.45 may be used in design for ultimate lateral resistance for footings placed on the undisturbed natural clay and natural gravel or structural fill extending down to the gravel, respectively.

**2. Subgrade Walls and Retaining Structures**

The following equivalent fluid weights are given for design of subgrade walls and retaining structures. The active condition is where the wall moves away from the soil. The passive condition is where the wall moves into the soil and the at-rest condition is where the wall does not move. The values listed below assume a horizontal surface adjacent the top and bottom of the wall.

Soil Type	Active	At-Rest	Passive
Clay & Silt	50 pcf	65 pcf	250 pcf
Sand & Gravel	40 pcf	55 pcf	300 pcf

**3. Seismic Conditions**

Under seismic conditions, the equivalent fluid weight should be increased by 33 pcf for active and at-rest conditions and decreased by 33 pcf for the passive condition. This assumes a short period spectral response acceleration of 1.40g for a 2 percent probability of exceedance in a 50-year period (IBC 2009).





4. Safety Factors

The values recommended above assume mobilization of the soil to achieve soil strength. Conventional safety factors used for structural analysis for such items as overturning and sliding resistance should be used in design.

E. **Seismicity, Faulting and Liquefaction**

1. Seismicity

Listed below is a summary of the site parameters for the 2009 International Building Code:

- |    |   |       |
|----|---|-------|
| a. | Site Class  | D     |
| b. | Short Period Spectral Response Acceleration, $S_s$      | 1.40g |
| c. | One Second Period Spectral Response Acceleration, $S_1$ | 0.57g |

2. Faulting

There are no mapped active faults extending through the project site. The closest mapped fault considered active is the Wasatch Fault located approximately 2 miles northeast of the site (Black and others, 2003).

3. Liquefaction

The site is located in an area mapped as having a "high" potential for liquefaction (Anderson and others, 1994). Research indicates that the soil type most susceptible to liquefaction during a large magnitude earthquake is loose, clean sand. The liquefaction potential for soil tends to decrease with an increase in fines content and density.

A site specific evaluation of the liquefaction potential at the site was conducted in conjunction with this study. The subsurface soil encountered



at the site to the maximum depth investigated, approximately 30 feet, consists of clay, sand and gravel layers. Subsurface water was encountered at depths ranging from approximately 3 to 6 ½ feet below the existing ground surface.

Based on the subsurface conditions encountered to the depth investigated and the results of the site specific liquefaction analysis, it is our professional opinion that approximately 1 inch or less of settlement will occur during an IBC 2009 design seismic event. The project structural engineer should consider the potential for liquefaction at the site.

**F. Water Soluble Sulfates**

One sample of the natural soil was tested in the laboratory for water soluble sulfate content. Test results indicate there is less than 0.1 percent water soluble sulfate in the sample tested. Based on the results of the test and published literature, the natural soil possesses a negligible sulfate attack potential on concrete. No special cement type is needed for concrete placed in contact with the natural soil. Other conditions may dictate the type of cement to be used in concrete for the project.

**G. Pavement**

Based on the subsoil conditions encountered, laboratory test results and the assumed traffic as indicated in the Proposed Construction section of the report, the following pavement support recommendations are given:

1. Subgrade Support

We anticipate that the subgrade material will consist of clay. We have assumed a California Bearing Ratio (CBR) value of 3 percent which assumes a clay subgrade.



## 2. Pavement Thickness

Based on the subsurface conditions encountered at the site, the anticipated traffic as described in the Proposed Construction section of this report, a design life of 20 years for flexible pavement and 30 years for rigid pavement and methods presented by the Utah Department of Transportation, the following pavement sections are calculated:

Traffic Condition	<u>Rigid Pavement</u>	<u>Flexible Pavement</u>		
	Portland Cement Concrete Thickness	Asphaltic Concrete Thickness	Base Course Thickness	Granular Borrow Thickness
No. 1	5"	3"	6"	—
No. 2	5"	3"	10"	—
	—	3"	6"	6"

The near surface soil consists predominantly of natural lean clay and clayey fill. Granular borrow may be needed to provide equipment access and to facilitate construction of the pavement section when the subgrade is very moist to wet.

## 3. Pavement Materials and Construction

### a. Flexible Pavement (Asphaltic Concrete)

The pavement materials should meet the specifications for the applicable jurisdiction. Other materials may be considered for use in the pavement section. The use of other materials may result in the need for different pavement material thicknesses.

### b. Rigid Pavement (Portland Cement Concrete)

The rigid pavement thickness assumes that the pavement will have aggregate interlock joints and that a concrete shoulder or curb will be provided.



The pavement materials should meet the specifications for the applicable jurisdiction. The pavement thickness indicated above assumes that the concrete will have a 28-day compressive strength of 4,000 pounds per square inch. Concrete should be air entrained with approximately 6 percent air. Maximum allowable slump will depend on the method of placement but should not exceed 4 inches.

4. Jointing

Joints for concrete pavement should be laid out in a square or rectangular pattern. Joint spacings should not exceed 30 times the thickness of the slab. The joint spacings indicated should accommodate the contraction of the concrete and under these conditions steel reinforcing will not be required. The joints should be approximately one-fourth of the slab thickness.

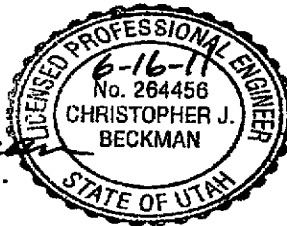


**LIMITATIONS**

This report has been prepared in accordance with generally accepted soil and foundation engineering practices in the area for the use of the client for design purposes. The conclusions and recommendations included within the report are based on the information obtained from the test pits excavated and borings drilled at the approximate locations indicated on Figure 1 and the data obtained from laboratory testing. Variations in the subsurface conditions may not become evident until additional exploration or excavation is conducted. If the subsurface conditions or groundwater level is found to be significantly different from what is described above, we should be notified to reevaluate the recommendations given.

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

  
Christopher J. Beckman, P.E.



  
Reviewed by Douglas R. Hawkes, P.E., P.G.

CJB/dc



APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

1110347

#### REFERENCES

Anderson, L.R., Keaton, J.R., and Bay, J., 1994; Liquefaction Potential Map for Weber County, Utah; Utah Geological Survey Contract Report 94-1.

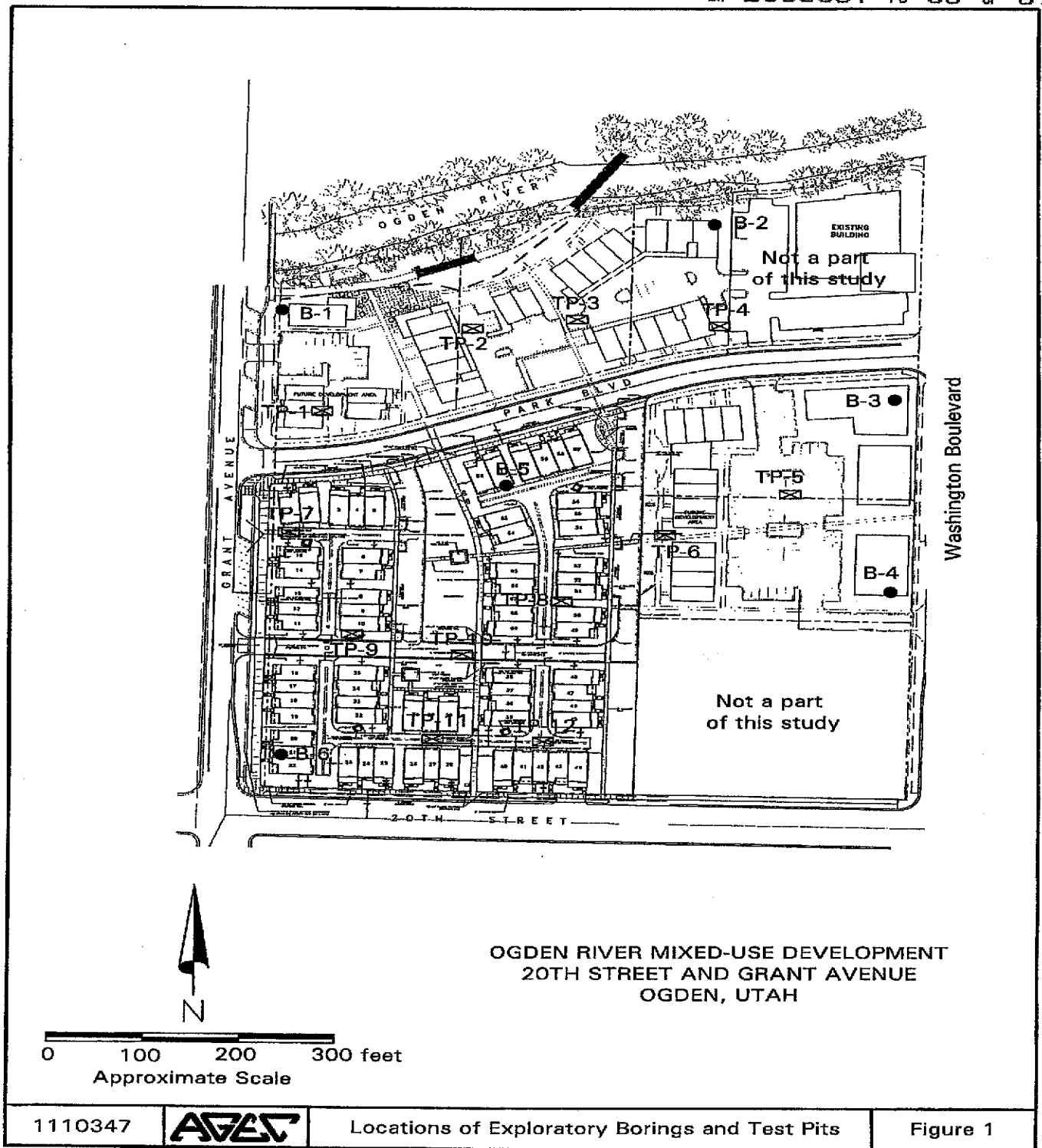
Black, B.D., Hecker, S., Hylland, M.D., Christenson, G.E., and McDonald, G.N., 2003; Quaternary fault and fold database and map of Utah; Utah Geological Survey Map 193DM.

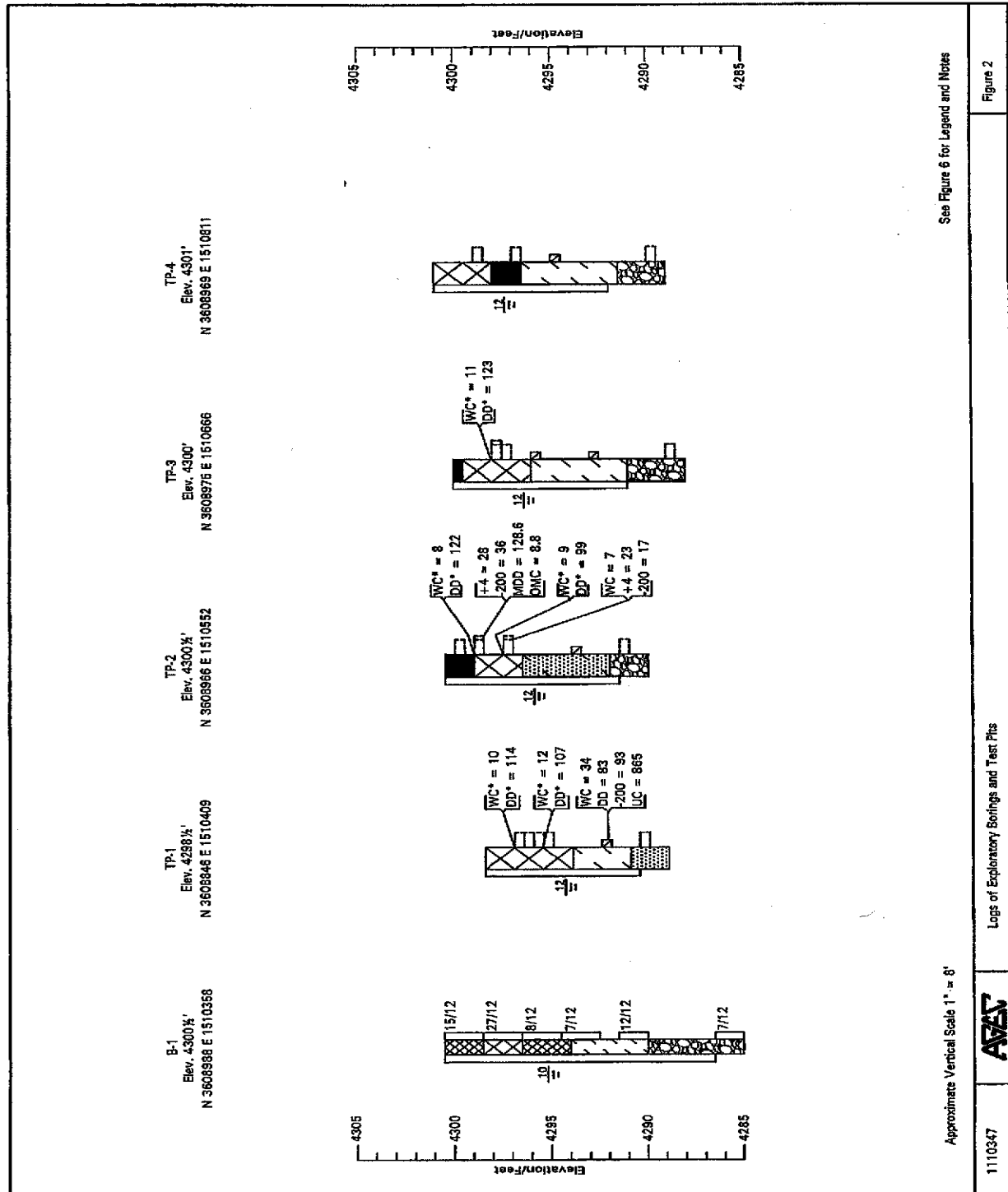
International Building Code, 2009; International Code Council, Inc., Falls Church, Virginia.



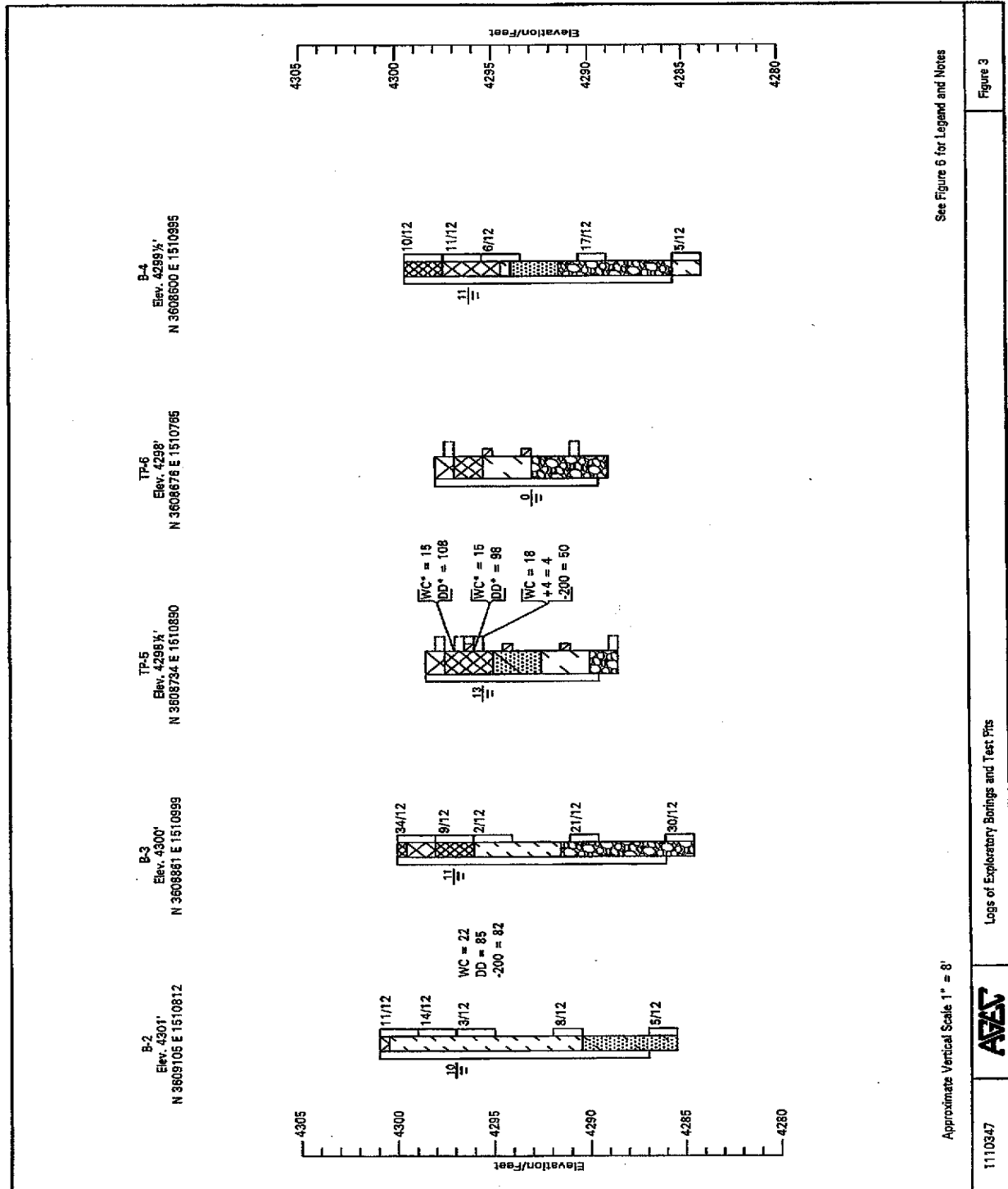
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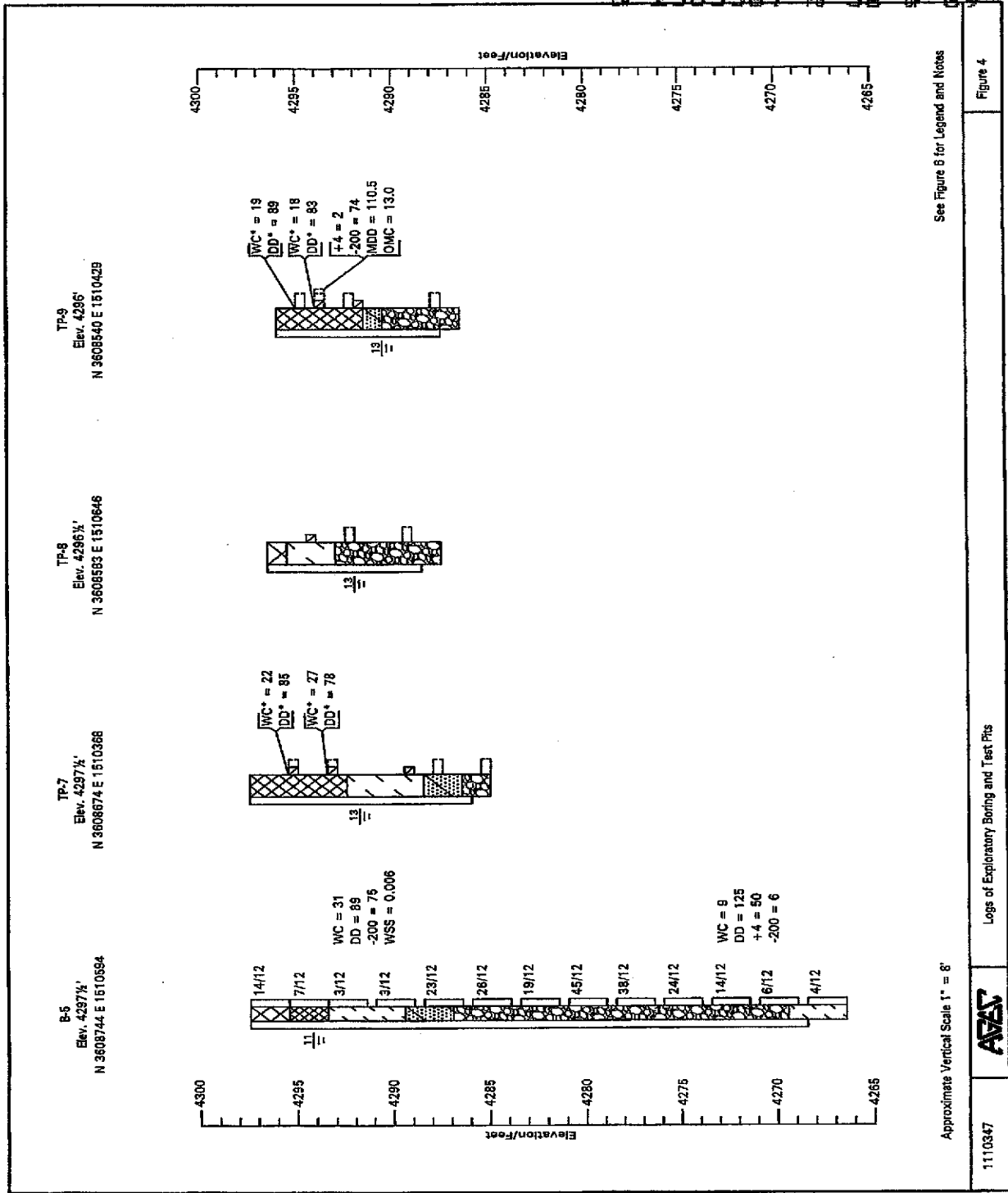
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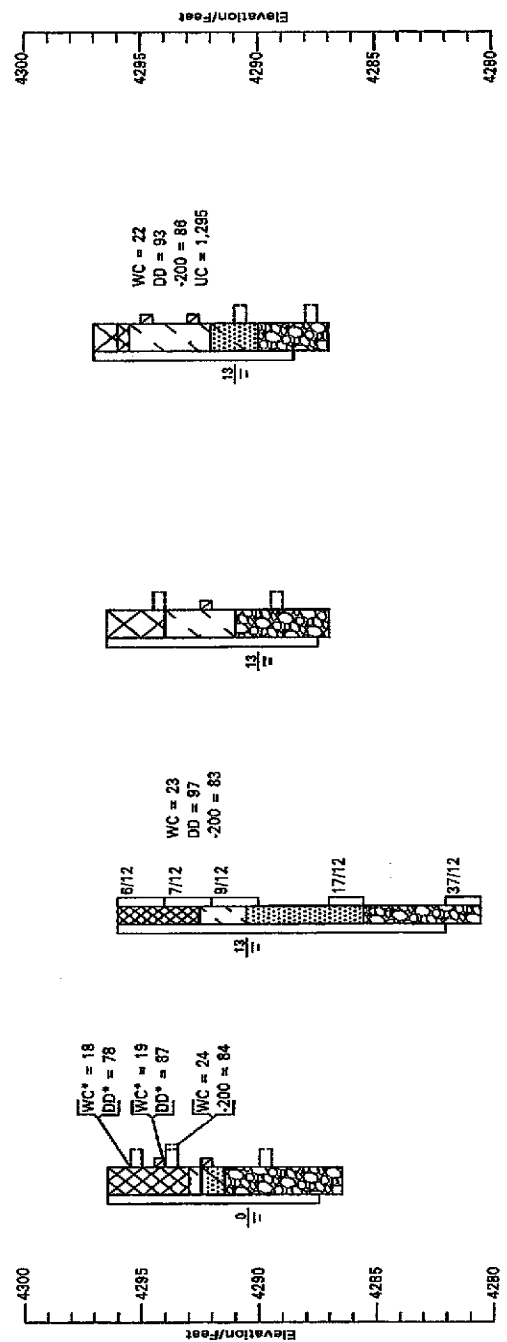
See Figure 8 for Legend and Notes

TP-12  
Elev. 4297'  
N 3608388 E 1510695

TP-11  
Elev. 4286 1/2'  
N 3608393 E 1510519

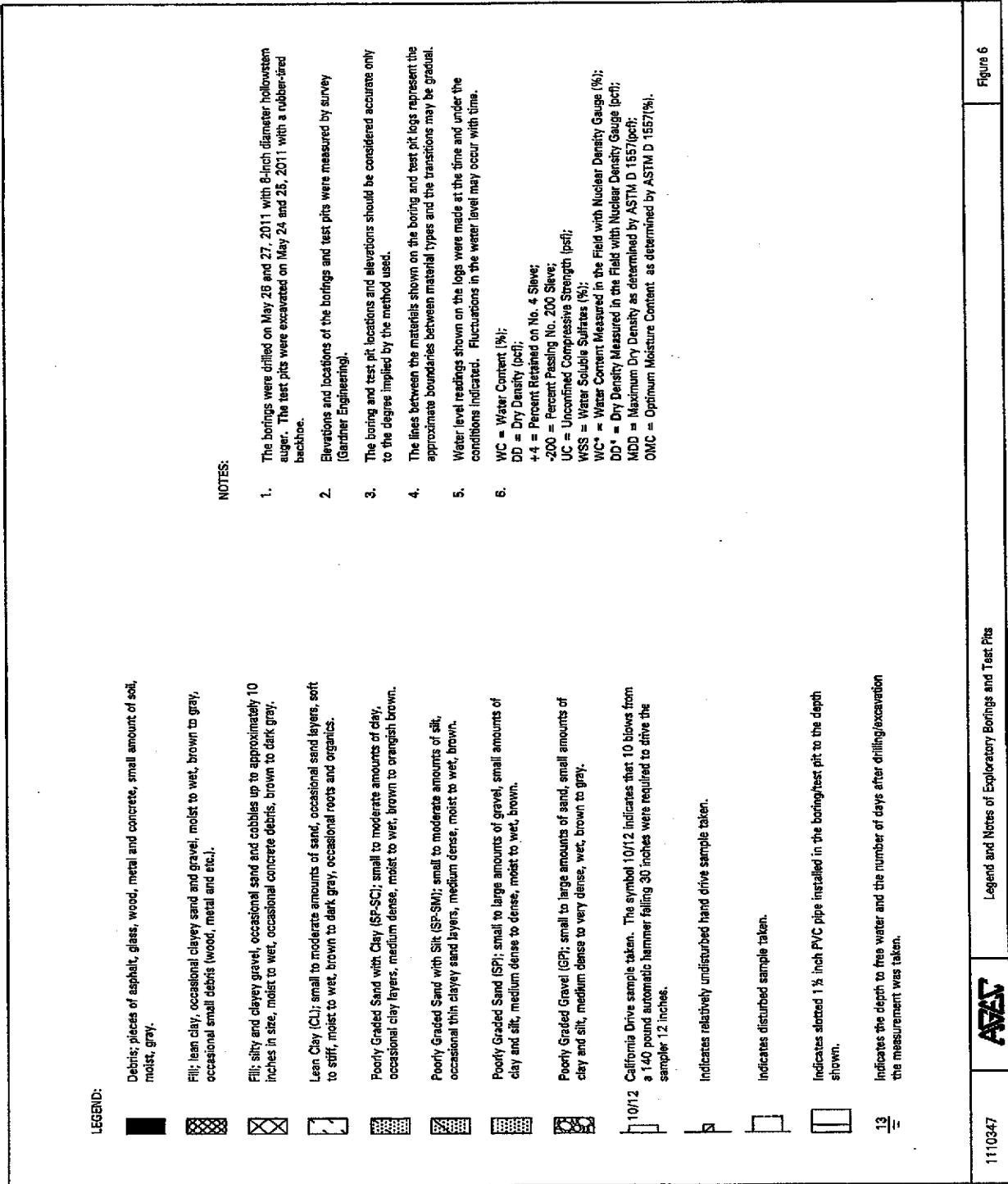
B-6  
Elev. 4296'  
N 3608372 E 1510362

TP-10  
Elev. 4296 1/2'  
N 3608514 E 1510544

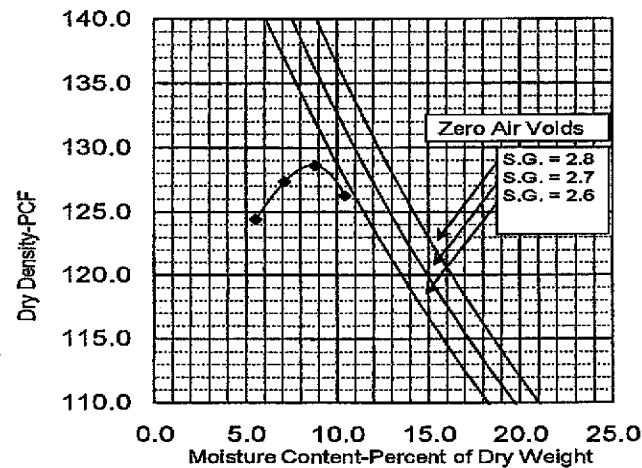


Approximate Vertical Scale 1" = 8'

See Figure 6 for Legend and Notes



**APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, Inc.**  
 Moisture - Density Relationship, Gradation, & Classification Results

**SAMPLE IDENTIFICATION**

Project Name: Ogden River Development

Project No. 1110347

Sample No. 10667

Sample Location: TP-2, 1.5'

Date Sampled: -

Sampled By: -

**PROCTOR RESULTS**

Maximum Dry Density 128.6 pcf  
 Optimum Moisture 8.8%

**SAMPLE DESCRIPTION**

Fill; Clayey Sand with Gravel

**GRADATION RESULTS**

Sieve Designation	Sieve Opening Size (mm)	Percent Passing (%)	Project Specification (%)
5"	127	100	-
3"	76.2	100	-
1 1/2"	38.1	91	-
3/4"	19.1	83	-
3/8"	9.52	77	-
#4	4.76	72	-
#8	2.38	69	-
#16	1.19	65	-
#30	0.59	60	-
#50	0.297	49	-
#100	0.149	41	-
#200	0.074	36	-
GRAVEL		SAND	SILT & CLAY
28%		36%	36%

**TESTING INFORMATION**

Date Tested: 06/07/11

Tested By: BS

Reviewed By: KBB

Test Procedure: ASTM D1557 C

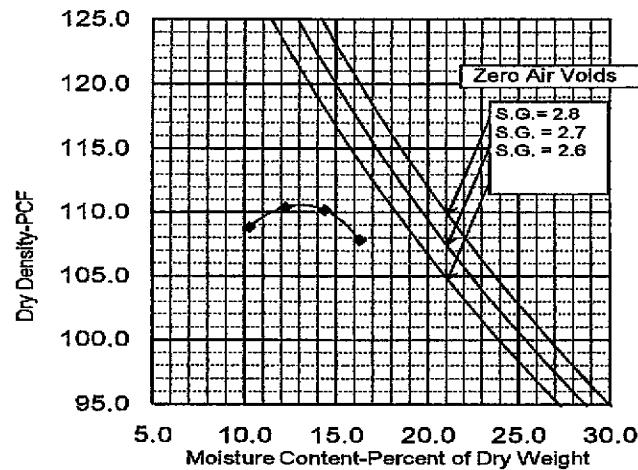
Specific Gravity: Assumed 2.6

**ATTERBERG DATA**

Plasticity Determined by ASTM D 2488

Figure 7

**APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, Inc.**  
 Moisture - Density Relationship, Gradation, & Classification Results

**SAMPLE IDENTIFICATION**

Project Name: Ogden River Dev.

Project No. 1110347

Sample No. 10668

Sample Location: TP-9 @ 2'

Date Sampled: -

Sampled By: -

**TESTING INFORMATION**

Date Tested: 06/07/11

Tested By: BS

Reviewed By: KBB

Test Procedure: ASTM D1557 A

Specific Gravity: Not Used

**ATTERBERG DATA**

Plasticity Determined by ASTM D 2488

**PROCTOR RESULTS**

Maximum Dry Density

110.5 pcf

Optimum Moisture

13%

**SAMPLE DESCRIPTION**

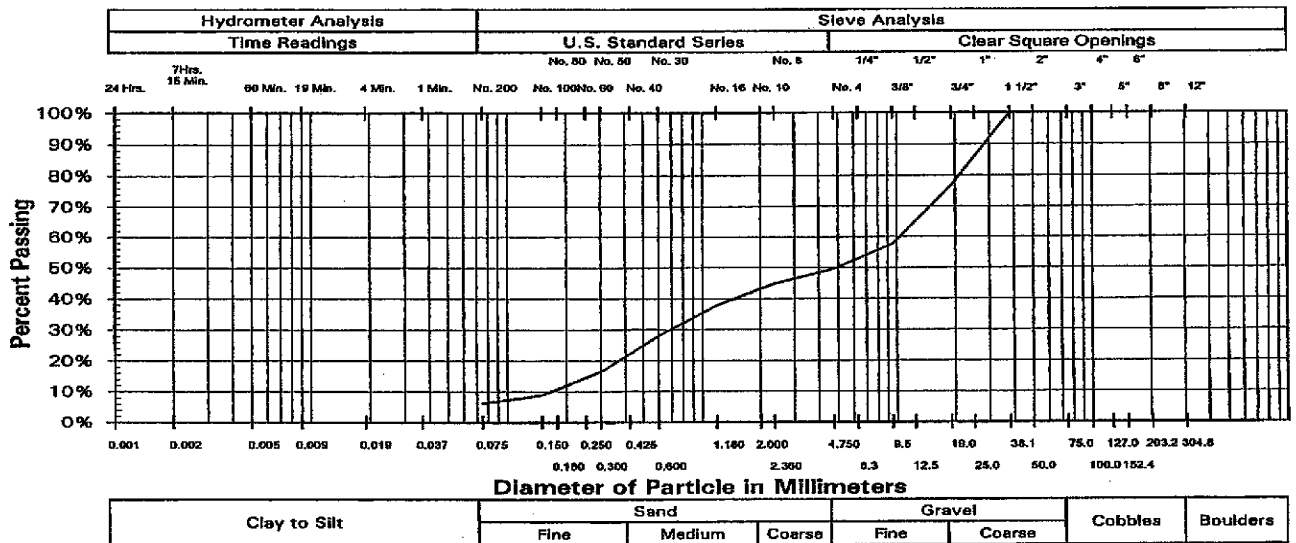
Fill; Lean Clay with Sand

**GRADATION RESULTS**

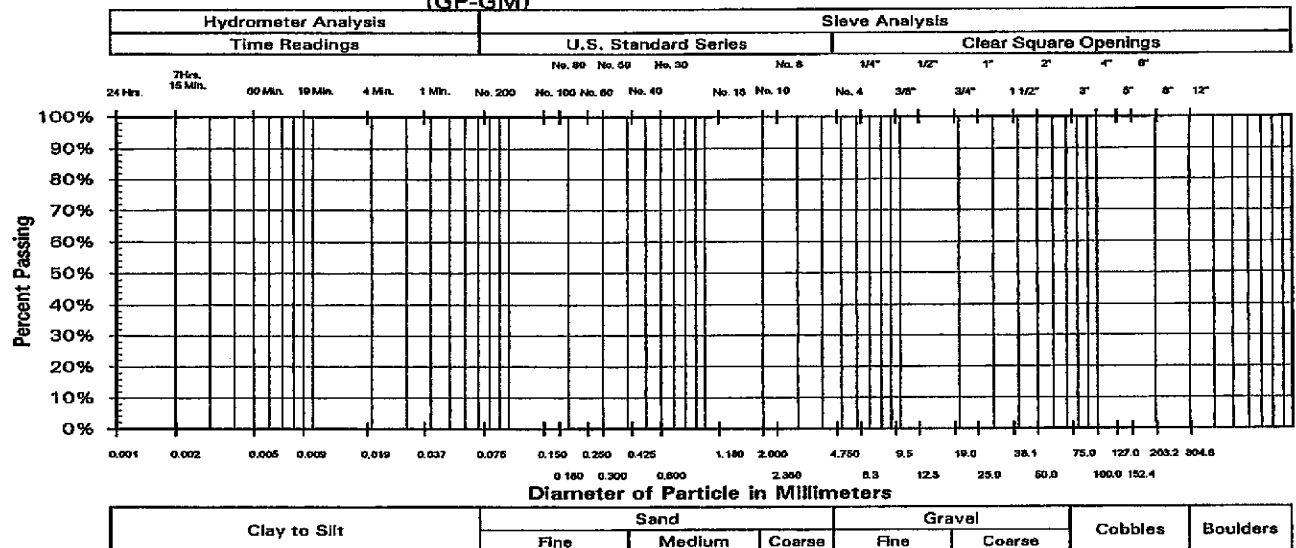
Sieve Designation	Sieve Opening Size (mm)	Percent Passing (%)	Project Specification (%)
5"	127	100	-
3"	76.2	100	-
1 1/2"	38.1	100	-
3/4"	19.1	99	-
3/8"	9.52	99	-
#4	4.76	98	-
#8	2.38	98	-
#16	1.19	97	-
#30	0.59	95	-
#50	0.297	90	-
#100	0.149	82	-
#200	0.074	74	-
GRAVEL		SAND	SILT & CLAY
2%		24%	74%

Figure 8

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

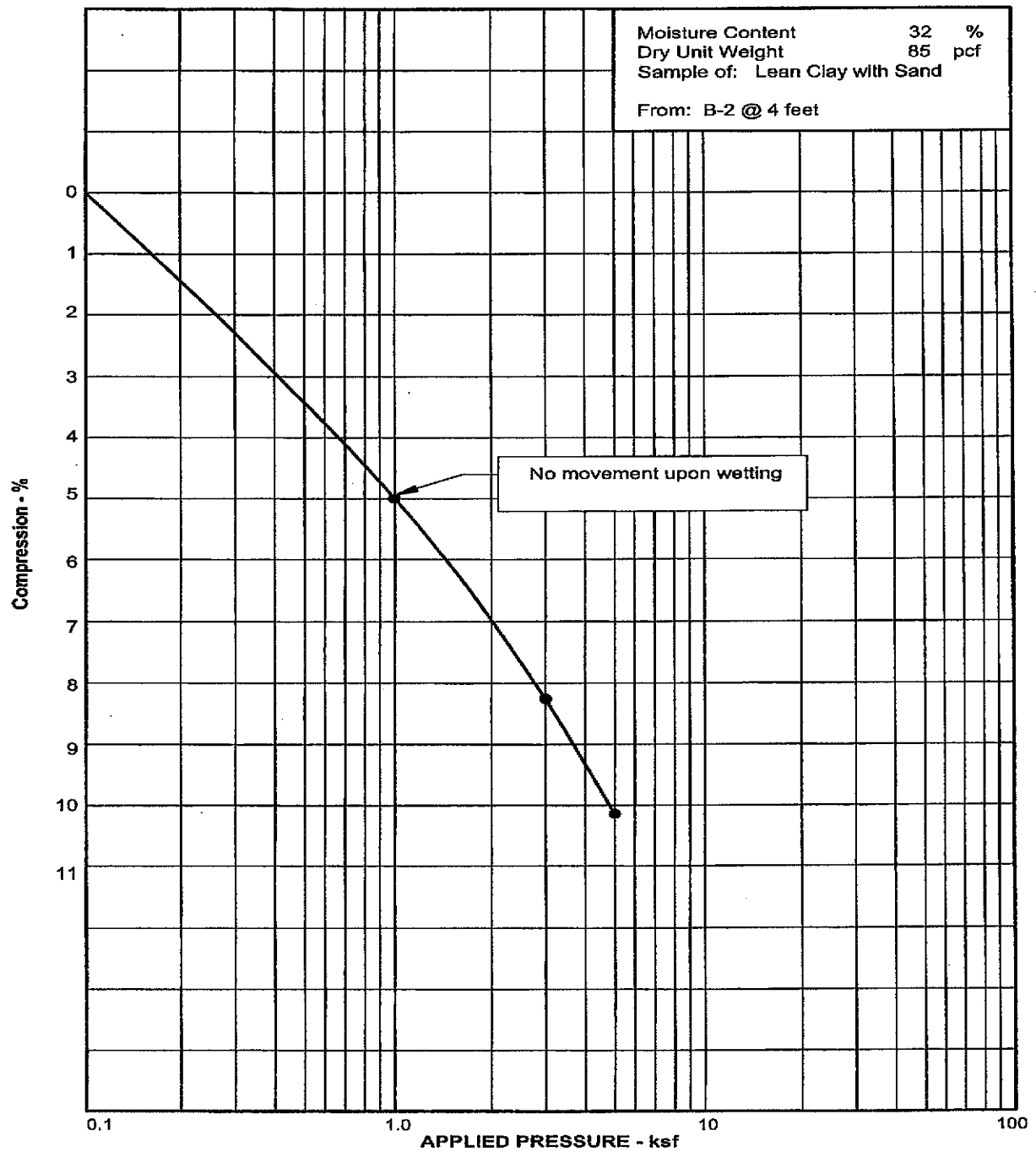


Liquid Limit -  
 Plasticity Index -  
 Sample Location B-5 @ 24 feet



Liquid Limit -  
 Plasticity Index -  
 Sample Location

## Applied Geotechnical Engineering Consultants, Inc.



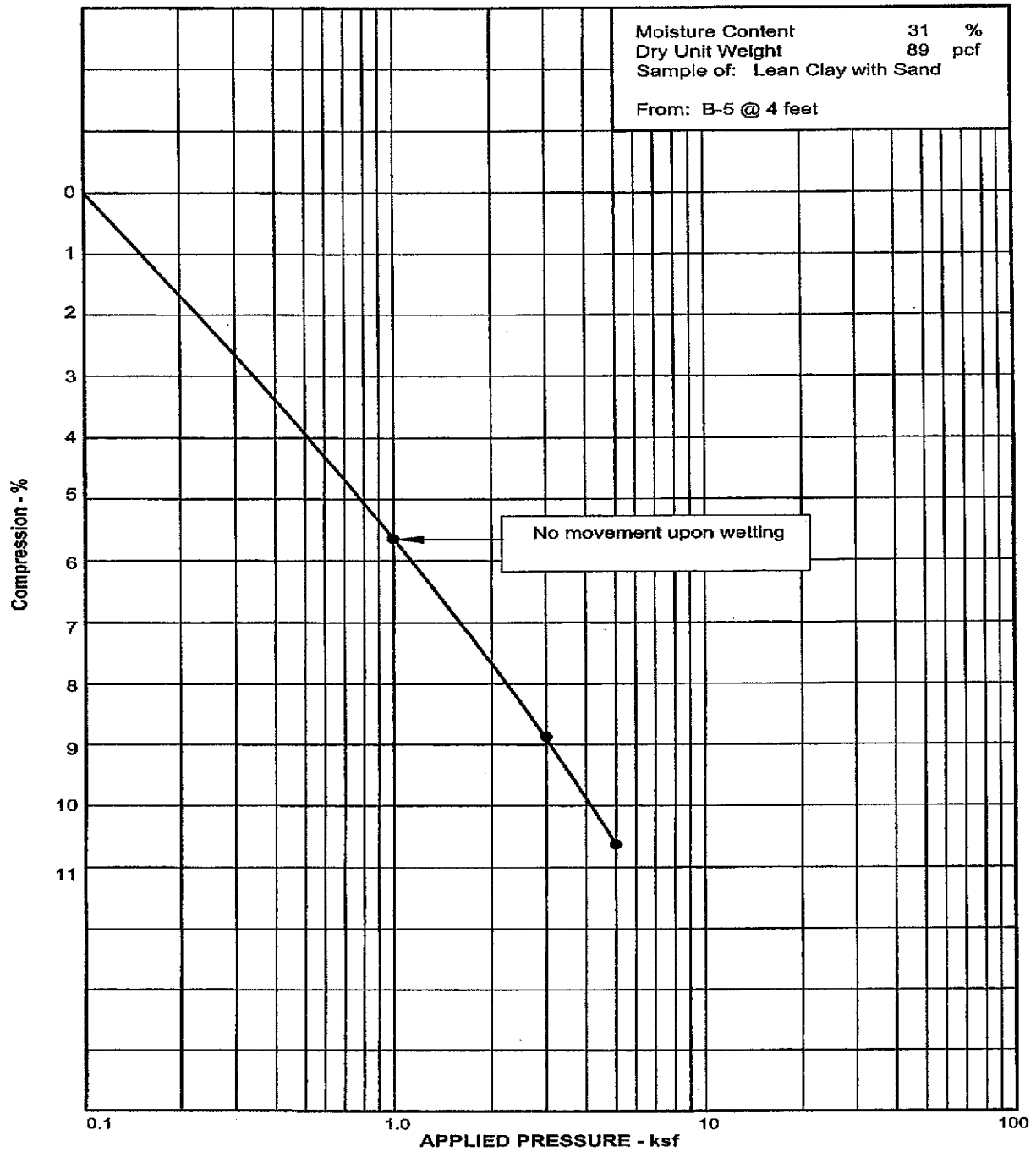
Project No. 1110347

CONSOLIDATION TEST RESULTS

Figure 10



**Applied Geotechnical Engineering Consultants, Inc.**

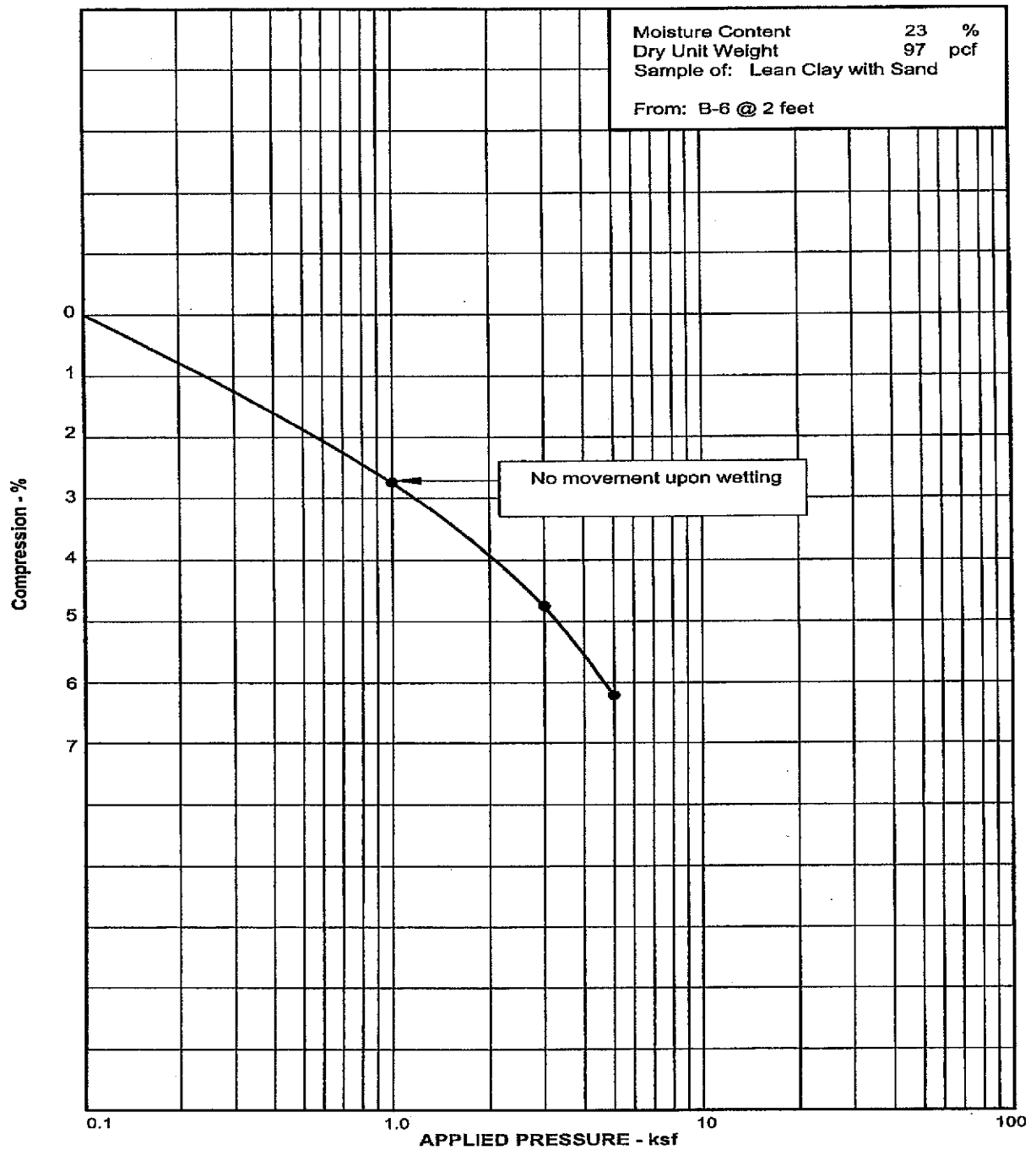


Project No. 1110347

**CONSOLIDATION TEST RESULTS**

Figure 11

Applied Geotechnical Engineering Consultants, Inc.



Project No. 1110347

CONSOLIDATION TEST RESULTS

Figure 12

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I

SUMMARY OF LABORATORY TEST RESULTS

Page 1 of 2  
PROJECT NUMBER 1110347

SAMPLE LOCATION	BORING/ DEPTH (FEET)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	GRADATION			MODIFIED PROCTOR		UNCONFINED COMPRESSIVE STRENGTH (PSF)	WATER SOLUBLE SULFATE (%)	SAMPLE CLASSIFICATION
				GRAVEL (%)	SAND (%)	SILT/ CLAY (%)	MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)			
TP-1	2½	*10	*114								Fill; Clayey Gravel with Sand
	3	*12	*107								Fill; Clayey Gravel with Sand
	6	34	83			93			865		Lean Clay (CL)
TP-2	1½	*8	*122								Fill; Clayey Gravel with Sand
	1½-2			28	36	36	128.6	8.8			Fill; Clayey Sand with Gravel
	3	*9	*99								Fill; Silty Gravel with Sand
TP-3	3	7		23	60	17					Fill; Silty Gravel with Sand
	2	*11	*123								Fill; Silty Gravel with Sand
	4	32	85			82					Lean Clay with Sand (CL)
TP-5	1½	*15	*108								Fill; Clayey Gravel with Sand
	2½	*15	*98								Fill; Silty Gravel with Sand
	2½	18		4	46	50					Fill; Silty Gravel with Sand
B-5	4	31	89			78				0.006	Lean Clay with Sand (CL)
	24	9	125	50	44	6					Poorly Graded Gravel with Silt and Sand (GP-GM)

\*Indicates measurement obtained in the field with a nuclear density gauge.

TABLE I  
SUMMARY OF LABORATORY TEST RESULTS

[illegible]

\*Indicates measurement obtained in the field with a nuclear density gauge.

**EXHIBIT E**

**Trust Deed and Note**

*(Recorded Separately)*